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SUBJECT: Forwards "IEEE Reliability Qualification Rept," Revision A, "Mechanical Design Rept," Revision A, "Dynamic Testing Rept," & "Thermal Cycle Test Performance." Repts available in Central Files only. SEE REPORTS 2/VOLS

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G02-80-201
September 16, 1980

Docket No. 50-397

Director,
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. B. J. Youngblood, Chief
Licensing Branch 1
Division of Licensing

Gentlemen:

Subject: WPPSS Nuclear Project No. 2
Post-LOCA Hydrogen Recombiner
Supplemental Information

Reference: Letter, DL Renberger to SA Varga, same subject, G02-78-227, dated September 28, 1978

The following Air Products and Chemicals, Inc. reports applicable to the WNP-2 Post-LOCA Hydrogen Recombiners are hereby transmitted for your information:

1) IEEE Reliability Qualfication Report, Revision A, dated January 7, 1980 (one copy)

2) Mechanical Design Report, Revision A, dated January 9, 1980 (one copy)

3) Dynamic Testing Report, dated January 3, 1980 (two copies)

4) Thermal Cycle Test Performance, dated December 14, 1978 (two copies)

Boo 1/1
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A

Please note that items 1) and 2) are revisions to reports previously transmitted via the reference letter. If you have any questions, please contact Mr. O. K. Earle, Project Licensing Engineer.

Very truly yours,

D L Renberger

D. L. RENBERGER
Assistant Director
Technology

DLR:TRM:cph

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WPPSS CORRESPONDENCE NO. 201

G02-80-201
September 16, 1980

Reference

Docket No. 50-397

Director,
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. B. J. Youngblood, Chief
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2) Mechanical Design Report, Revision A, dated January 9, 1980 (one copy)

3) Dynamic Testing Report, dated January 3, 1980 (two copies)

4) Thermal Cycle Test Performance, dated December 14, 1978 (two copies)

Dupe 8009230352

AUTHOR:	TR McKinney TRMcKinney 9/10/80		FOR SIGNATURE OF: DL Renberger DL Renberger		
SECTION					
FOR APPROVAL OF	OK Earle	AN Kugler	WG Conn	SN Holm	
APPROVED	OK Earle	AN Kugler	WG Conn	SN Holm	
DATE	9/10/80	9/10/80	9/11/80	9/11/80	

WP-387

MECHANICAL DESIGN REPORT
00-4-1371-54.30-04A
Addenda No. 1

Post LOCA Hydrogen Recombiner System
Washington Public Power Supply System
WPPSS Nuclear Proj. #2 - Contract #2808-71

Air Products & Chemicals, Inc.

Computer Output
Book 1 of 3

8009230352

2. Revisions to Appendices:

2.1 Appendix A.1.d - Remove existing two (2) pages; insert revised title sheet and General Controls report 58072.

2.2 Appendix A.3.b - Add RTD Model Number clarification sheet.

2.3 Appendix B.2.b - Add tag number to Dwg. No. cross reference sheet.

2.4 Appendix B.10.c - Add heater contactor Certificate of Compliance.

2.5 Appendix C.1.a - Remove existing two (2) pages; insert Test Procedure Index and Test Procedures 00-4-1371-25.10-02A, 500122A and 500134A.

2.6 Appendix C.2.a - Remove existing page and insert Test Report List.

Air Products

Nuclear Stamp (if req'd)

NUCLEAR SYSTEMS
ENGINEERING CHANGE NOTICE

ECN No. E-8684
Date 7 Jan. 1980
Sheet 1 of 1

Document(s),Nos,Titles 500028A

Reason For Change

Incorporate additional vendor literature and APCI Test Procedures and results.

Details of Change

1. Table of Contents. Add Thermal Cycle Test & Dynamic Test Procedure to C.1.
2. Section III A, Note 5. Add Dynamic Testing Procedure
3. Section III B, Note 4. Change radiation environmental conditions to 5×10^3 rads total integrated dose for 40 years.
4. Section III B, Note 5. Add Dynamic Testing Procedure.
5. Section IV. Add D.2.
6. Section V. Add references to thermal cycle and dynamic test procedures.
7. Conclusion add IEEE 344-1975.
8. Appendix A.1.d. Add Seismic Test Report 58072.
9. Appendix A.3.b. Add sheet clarifying ThermoElectric Model Numbers.
10. Appendix B.2.b. Add sheet identifying switches to vendor drawings.
11. Appendix B.10.c. Add heater contactor certification, UL 508
12. Appendix C.1.a. Add test procedures.
13. Appendix C.2.a. Add listing of completed testing reports.

By Tom Weiss 7 Jan 80
Checked R M Reller 9 Jan 80
Eng. Approval R M Reller 9 Jan 80
Q.A. Approval (if required) J R Van Langen 10 Jan 80

APD Form N002

	MGR. RE. SIGN. (IF REQ'D.)

ALLENTOWN PA.

5030284

SH. 1 OF

IEEE RELIABILITY QUALIFICATION REPORT

Post LOCA Hydrogen Recombiner System
WPPSS Nuclear Project No. 2

Contract No. 2808-71
Project No. 00-4-1371

Prepared by Air Products and Chemicals, Inc.
Allentown, PA

for

Washington Public Power Supply System

REV	ECN NO.	SHEET NO'S REVISED	DATE	SIGN QUALITY ASSURANCE (IF REQ'D.)	DATE	BY	ENGRG. MGR.	P.E. SIGN. (IF REQ'D.)
A	E-8684	See ECN			1/7/80	T.S. Weiss		

DESIGN APPROVAL

P.E. SIGN IF REQ'D.	BY H. Thomas	ENGRG. MGR. R.M. Reb
	DATE 25 Apr. 1977	Q. A. APP'D. (IF REQ'D.)
	TITLE	

Air Products
ALLENTOWN PA.

NO. 500028A

SH. 1 OF ___

FORM 8229 (REV. 9/76)

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INTRODUCTION

This Report was assembled by Air Products and Chemicals, Inc. to document conformance of the Post LOCA Hydrogen Recombiner System furnished on the Washington Public Power Supply System (WPPSS), Contract No. 2808-71, with the intent of the Institute of Electrical and Electronic Engineers (IEEEE) Standard 279-1971.

The Recombiner System shall be used to maintain the hydrogen/oxygen content in the primary containment of WPPSS Project No. 2 reactor below the flammable limit in the event of the Loss-Of-Coolant Accident. This service is safety-related; hence, the need to assure satisfaction of the minimum performance and reliability requirements for protection systems as identified in the Standard is mandatory.

The specific design basis for the Post LOCA Hydrogen Recombiner is defined in Division 15, Section 15A, of Specification 2808-71 which was prepared for WPPSS by Burns and Roe, Inc., Hempstead, New York, in January, 1974. The Specification describes the intended system service, normal ambient environmental conditions including radiation conditions, accident conditions, seismic conditions, and mechanical design requirements and construction features.

Air Products and Chemicals, Inc. used these specified design bases together with the IEEE 279-1971 criteria to select components for the Recombiner System.

SECTION II

SCOPE

The scope of this report is to verify that the skid electrical and instrumentation components as well as the complete Hydrogen Recombiner System will meet the design criteria of Specification 2808-71 by presenting individual component test documentation and system structural analyses which meet the intent of IEEE 279-1971.

This report is structured as follows:

A. Section III presents the environmental and process design parameters for the Hydrogen Recombiner System.

B. Section IV references the applicable guides and standards used for this report.

C. Section V describes Air Product's procedures for documenting system conformance to the design and IEEE standards.

D. Appendices A, B, and C present the actual documentation and test reports which substantiate Air Products and Chemical's, Inc. claim that the Catalytic Recombiner System meets the design specification and the intent of IEEE 279-1971.

ENVIRONMENTAL DESIGN CONDITIONS

A. Skid and Skid Mounted Equipment

1. General

All components of the Hydrogen/Oxygen Recombiner Skid shall be suitable for continuous operations when subjected to the accident ambient conditions tabulated in paragraph C following 40 years of periodic cyclic testing under normal environmental conditions.

2. "Normal" Environmental Conditions

Ambient Temperature Range, °F	50 to 120
Pressure, inches of water gauge	-0.25 to 7.0
Relative Humidity range, percent	0-90

3. "Accident" Environmental Conditions

First Six Hours	
Ambient Temperature, °F	212
Relative Humidity, percent	100%
Pressure, inches of water gauge	-0.25 to + 7.0
Next Six Hours	
Ambient Temperature, °F	150
Relative Humidity, percent	100%
Pressure, inches of water gauge	-0.25 to + 7.0
12 Hours to 100 Days	
Ambient Temperature, °F	150
Relative Humidity, percent	90 maximum
Pressure, inches of water gauge	-0.25

SECTION III (cont'd.)

4. Radiation Environmental Conditions

Under normal operating conditions, the recombiner skid shall be subjected to gamma radiation field at a dose rate of 2.5 mr/hr. with an integrated dose, over 40 years, of 880 rads. Following a LOCA, the total integrated dose, over six months, for the skid and skid-mounted equipment, design is a maximum 3.1×10^7 rads.

5. Seismic Event

The skidded recombiner system is designed to maintain functional integrity after and structural integrity during and after the prescribed 1/2 SSE and SSE conditions required for the WPPSS Project No. 2. The details and levels of the seismic qualification approach of the skidded equipment are given in APCI Specifications 00-4-1371-54.30-01A, "Seismic Qualification Summary for Nuclear Components" and in 500134A, "Dynamic Testing Procedure".

B. Control Panel

1. General

The control panel is a free-standing, seismically rigid, completely enclosed structure remote from the skid and supplied with flush mounted instrumentation necessary for operation. All equipment and instrumentation has been located for front access with no access on the sides and rear. Signal and power wiring penetrate the control panel on top. The control panel and mounted instrumentation has been designed to meet normal environmental conditions and required seismic loadings.

2. Normal Environmental Conditions

Ambient Temperature, °F	50 to 104
Pressure, inches of water gauge	-0.25 to 7.0
Relative Humidity Range, Percent	0 to 90

3. Accident Environmental Conditions

Same as Normal Environmental Conditions.

4. Radiation Environmental Conditions

A 5×10^3 rads total integrated dose for 40 years.

5. Seismic Event

The control panel is designed to maintain functional integrity after and structural integrity during and after the prescribed 1/2 SSE and SSE conditions required for the WPPSS Project No. 2. The details and levels of the seismic qualification approach of the control panel and mounted equipment are given in APCI Specifications 00-4-1371-54.30-01A, "Seismic Qualification Summary for Nuclear Components" and "Dynamic Testing Procedure" 500134A.

A

C. Process Requirements

T design	= 340°F
T maximum (operating)	= 215°F
P design	= 45 psig
P maximum (operating)	= 18 psig
Flow	= 125 ACFM
Feed Concentration	= maximum of 4% H_2 by volume on a dry basis in a non-inerted containment atmosphere. Actual feed gas humidity will vary from 0 to 100%.

SECTION IV

APPLICABLE IEEE AND IPCEA STANDARDS, GUIDES

Applicable IEEE Standards and Guides

A. IEEE 279-1971 - "Criteria for Protection Systems for Nuclear Power Generating Stations".

B. IEEE 323-1971 - "General Guide for Qualifying Class 1 Electronic Equipment for Nuclear Power Generating Stations".

C. IEEE 334-1971 - "Trial Use Guide for Type Tests of Continuous Duty Class 1 Motors Installed Inside the Containment of Nuclear Power Generating Stations".

D.1 IEEE 344-1971 - "Trial Use Guide for Seismic Qualification of Class 1 Electric Equipment for Nuclear Power Generating Stations".

A D.2 IEEE 344-1975 - "Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generation Stations".

E. IEEE 382-1972 - "IEEE Trial Use Guide for Type Test of Class 1 Electric Valve Operators for Nuclear Power Generating Stations".

F. IPCEA S-19-81-1974 - "Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy".

G. IPCEA S-68-516-1973 - "Ethylene-Propylene-Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy".

SECTION V (Includes Appendices)

DOCUMENTATION

The Air Products and Chemicals, Inc. recombiner system is designed to operate and perform its intended function when subjected to the conditions stated in Section III. This design is verified in appendices A, B and C. Appendices A and B are comprised of reports and qualification data for the individual components of the skid and control panel respectively. Appendix C consists of the total system performance test procedure, performance test results, thermal cycle performance test procedure and results, and the dynamic test procedure and results.

Air Products meets the IEEE-279-1971 system redundancy requirement by providing two completely isolated, separate systems. Isolation is achieved through total physical separation with one system used as a back-up. The two systems are exact duplicates of each other, two control panels and two skidded recombiner systems, each system designed to independently handle the postulated design conditions.

The philosophy of qualification that Air Products and Chemicals, Inc. has followed is to purchase equipment that has been proven for the intended service. This means that the equipment purchased must be able to operate under the defined service conditions in Section III as a minimum. It is sufficient for the vendor to show that his equipment can withstand worse conditions than those specified in Section III.

Air Products and Chemicals, Inc. has taken the individual components and has made sure that each one, when installed per the manufacturer's recommendation, is capable of performing its intended function. The individual reports and certifications presented in the appendices confirm this fact. Since the individual components are shown to qualify, the first step towards system qualification is complete.

Although individual components are qualified, a look at the total system is necessary. Air Products and Chemicals, Inc. verifies by analysis and by physical testing, the structural integrity of the skid, associated piping, and the control panel. Air Products and Chemicals, Inc. proves by analysis and testing that the system frame and supports are rigid. Given the baseload forces generated and our defined service conditions, Air Products and Chemicals, Inc. has ascertained that the system does not adversely affect the components.

The final steps in the Air Products qualification procedure are the system performance test, thermal cycle test, and dynamic test. This demonstrates the system's ability to perform as a unit. Detailed procedures for these tests are given in Appendix C.1 with results available in Appendix C.2.

CONCLUSION

This qualification report satisfies the intent of IEEE 279-1971 for a safety-related system. Methods for qualification as suggested by specific IEEE standards (IEEE 323-1971, IEEE 344-1971, and IEEE 344-1975) have been used. The reports and certifications to verify APCI's conclusions are included in the Appendices of this report.

APPENDIX A.1.d

SEISMIC TEST REPORT

MANUFACTURER . . . . . ITT GENERAL CONTROLS

COMPONENT. . . . . VALVE ACTUATOR

REPORT NUMBER. 58072

TEST REPORT

WYLE LABORATORIES / Norco, California . 737-0871 , 689-2104 . TWX 910-332-1204 . Cable WYLAB

REPORT NO. 58072
OUR JOB NO. ND 58072
YOUR P. O. NO. 46291
CONTRACT ---

ITT GENERAL CONTROLS
801 Allen Avenue
Glendale, California 91201

36 - Page Report

DATE 8 June 1976

SEISMIC TESTING

OF

MILLIAMP HYDRAMOTOR ACTUATOR

PART NUMBER NH91 REVERSE, SERIAL NUMBER 7545B 135481-01-001

FOR

ITT GENERAL CONTROLS

REGISTERED PROFESSIONAL ENGINEER
GEORGE D. SHIPWAY
No. 12157
MECHANICAL
STATE OF CALIFORNIA

STATE OF CALIFORNIA
COUNTY OF RIVERSIDE } ss.

Ray C. Myrick, being duly sworn, deposes and says: That the information contained in this report is the result of complete and carefully conducted tests and is to the best of his knowledge true and correct in all respects.

Ray C. Myrick

SUBSCRIBED and sworn to before me this 9th day of June, 19 76

Catherine Kelty

Notary Public in and for the County of Riverside, State of California

My Commission Expires 14 July, 19 79

OFFICIAL SEAL
CATHERINE C. KELTY
NOTARY PUBLIC - CALIFORNIA
RIVERSIDE COUNTY
My comm. expires JUL 14, 1979

W-867A

DEPARTMENT DYNAMICS

DEPT. MGR. J. J. Anderson
J. J. Anderson

TEST ENGINEER W. Franz
W. R. Franz

Registered Professional Engineer S D Shipway
George D. Shipway

DCAS-QAR VERIFICATION

QUALITY CONTROL L. Housteau
L. Housteau

1.0 REFERENCES

1.1 ITT General Controls Purchase Order No. 46291 dated 20 May 1976.

1.2 Wyle Laboratories Test Plan ND 761021, dated 24 February 1976, Option B.

1.3 ITT General Controls letter dated 26 May 1976 from W. F. Keller, defining performance demonstrations to be conducted during each seismic test.

1.4 Telephone conversation on 4 June 1976 between Frank Domyan, ITT General Controls and Wayne Franz, Wyle Laboratories. Mr. Domyan specified the means to be used in monitoring the functions set forth in Reference 1.3.

2.0 TEST PROCEDURES

2.1 Receiving Inspection

Prior to testing, the specimen was subjected to a visual examination for evidence of shipping damage. Specimen identification information was recorded on a receiving inspection data sheet.

2.2 Test Fixture and Orientation

The test fixture, affixed to the test table by welding, was supplied by ITT General Controls. It consisted of a one and one-quarter inch thick steel base plate drilled and tapped to accept the standard specimen mounting bolts. Located at the center of the bolt pattern was a rod supported by a welded-on sleeve. The rod was threaded to simulate a valve stem. It was screwed into the specimen coupling to provide support for the main shaft. The fixture and shaft support simulated actual mounted conditions.

The specimen was oriented in its normal upright position throughout testing. The first principal horizontal specimen axis was aligned co-linear with the horizontal test table driver axis. For the second principal horizontal axis the specimen was rotated 90° about its vertical centerline. The vertical table drivers were excited for the vertical specimen axes.

2.2 (continued)

The setup is described in the attached photographs, and the axes are defined in Figure 1.

2.3 Instrumentation

Two control accelerometers were employed on the test table, one for each of the two drive axes.

2.4 Functional Tests

Functional monitoring of the operability of the specimen during seismic testing was accomplished visually. That is, the specimen was operated during each test and the stroking motion verified visually. The modulating 4-20 ma signal was monitored using a meter as was the specimen potentiometer position signal. Four internal auxiliary switches were monitored while powered with 115 vac. A lamp was connected in each switch circuit and the light output of each was visually monitored for proper switch actuations as well as for possible contact chatter.

During the X-Z axes plane SSE test, the specimen input power was interrupted to verify the fail-safe feature of the specimen.

2.5 Seismic Test

2.5.1 Waveform and Phase

The specimen was subjected to random seismic motion in each of two principal axes simultaneously; i.e., the vertical and one horizontal axis were excited simultaneously. The random motion of the vertical drivers was phase incoherent with respect to the horizontal driver since independent random signals were employed for each axis.

2.5.2 Amplitude and Frequency Range

The biaxial random excitation was amplitude controlled with a spectrum synthesizer consisting of a bank of one-third octave bandpass filters containing integral, independently adjustable attenuators. The center frequencies of the filters were tuned in one-third octave increments from 1.25 to 35 Hz.

2.5.2 (continued)

The test table motion was first iteratively calibrated (bare table) in each axis such that the maximum amplitude over a wide frequency band was obtained without going above a 3g acceleration input to the specimen (3.0g ZPA). ITT General Controls did not provide a specific RRS curve, but did request the maximum machine capability approach. The 3.0g ZPA limit was established to envelop a Bechtel generated "generic" spectrum ZPA level of 2.0g.

Once the maximum spectrum or SSE test spectrum was determined on the Wyle "G" machine, the main gain control was attenuated to provide a half level, or one-half SSE, test. Five each one-half SSE's were performed in each biaxial plane followed by a single SSE level test in each biaxial plane.

2.5.3 Duration

Each one-half or full SSE test consisted of 30 seconds of biaxial random excitation.

2.5.4 Data Analysis

Table accelerometer data, first recorded on magnetic tape, were analyzed at 2.0% damping with a shock spectra analyzer tuned to discrete frequencies in one-third octave intervals from 1.25 to 100 Hz. The data were formatted in the form of spectra plots.

3.0 TEST RESULTS

3.1 Receiving Inspection

Inspection of the specimen revealed no visible damage due to shipping. Receiving inspection data and specimen identification are shown on the attached data sheet.

3.2 Test Fixture

No anomalies in the test fixture or mounting methods occurred as a result of seismic testing.

3.3 Functional Testing

No functional anomalies occurred as a result of seismic testing.

3.4 Seismic Testing

Seismic test results, or test response spectra, are shown in the attached plots.

WYLE LABORATORIES

DATA SHEET

Report No. 58072

Page No. 6

CUSTOMER ITT GENERAL CONTROLS

Test Title: SEISMIC RANDOM

Specimen MILLIAMP HYDRAMOTOR

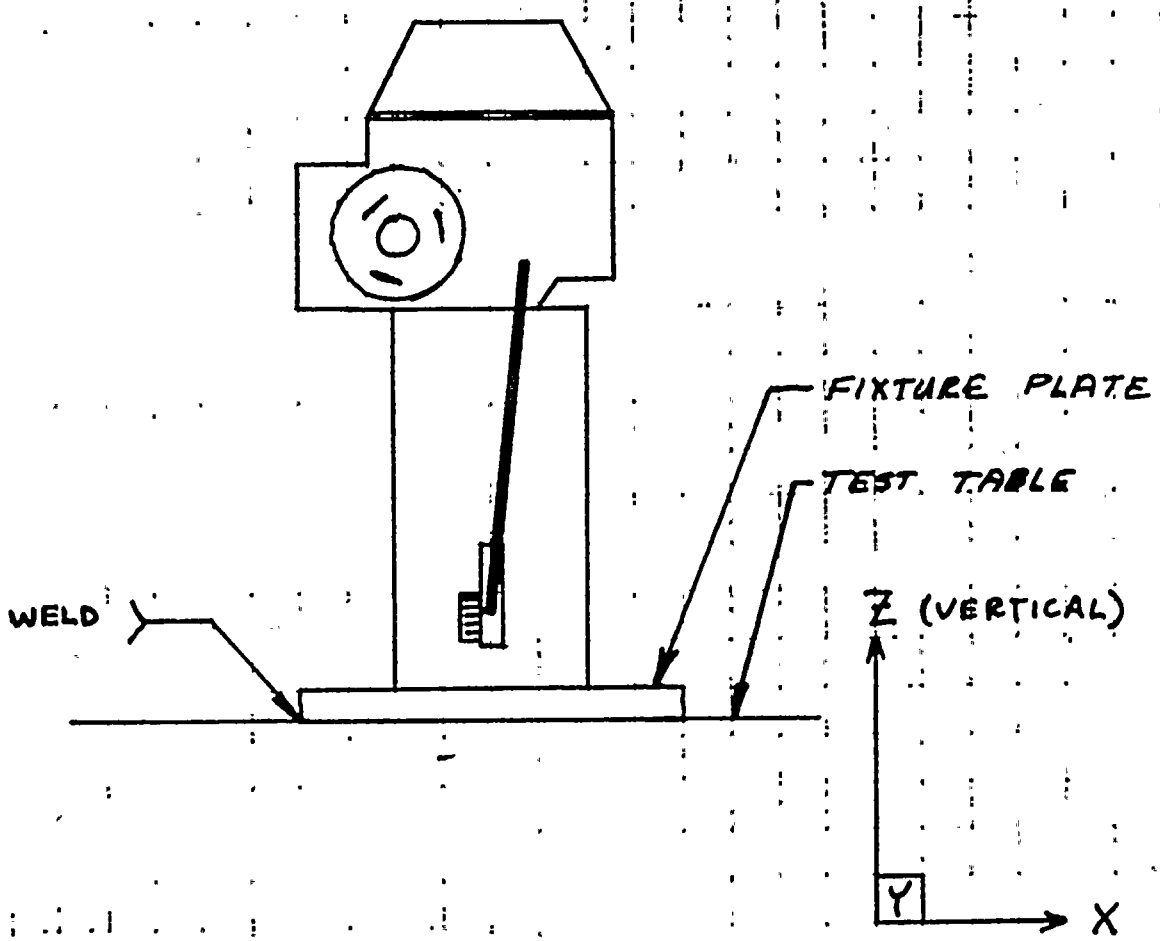
Job No. 58072

S/N SEE RECEIVING INSP

Part No. SEE RECEIVING INSP.

Date 6-4-76

FIGURE 1
AXES DEFINITIONS



W 614 B

QC Form Approval

SHEET ____ OF ____

DATA SHEET

Customer ITT GENERAL CONTROLS Job No. 58072

Date 6-3-76

Specimen MILLAMP HYDRAMOTOR ACTUATOR

RECEIVING INSPECTION

No. of Specimens Received: (1) ONE

Record identification information exactly as it appears on the tag or specimen:

Manufacturer ITT GENERAL CONTROLS

Part Numbers NH91 REVERSE

How does identification information appear: (name plate, tag, painted, imprinted, etc.)

NAME PLATE

Serial Numbers:* 7545B 135481-01-001

Examination: Visual, for evidence of damage, poor workmanship, or other defects, and completeness of identification.

Inspection Results: There was no visible evidence of damage to the specimens unless noted below.

NONE

* If additional space is required for serial numbers, use an additional page, or reference first functional test data sheet (if applicable).

Inspected By [signature]

Sheet No. _____ of _____

Approved W. Brown Date: 6/3/76

W-614

Q.C. Form Approval [signature]

WYLE LABORATORIES

DATA SHEET

Report No. 58072

Page No. 8

CUSTOMER ITT GENERAL CONTROLS

Test Title: SEISMIC RANDOM

Specimen MILLIAMP HYDRAMOTOR

Part No.

Job No. 58072

S/N SEE RECEIVING INSP

Date 6-4-76

DATE	TIME	AXIS	TEST	COMMENTS
6-4	1040	Y-Z	RANDOM	1ST 1/2 SSE
6-4	1045	Y-Z	RANDOM	2ND 1/2 SSE
6-4	1050	Y-Z	RANDOM	3RD 1/2 SSE
6-4	1100	Y-Z	RANDOM	4th 1/2 SSE
6-4	1110	Y-Z	RANDOM	5th 1/2 SSE
6-4	1125	X-Z	RANDOM	1st 1/2 SSE
6-4	1130	X-Z	RANDOM	2ND 1/2 SSE
6-4	1140	X-Z	RANDOM	3RD 1/2 SSE
6-4	1145	X-Z	RANDOM	4th 1/2 SSE
6-4	1150	X-Z	RANDOM	5th 1/2 SSE
6-4	1155	X-Z	RANDOM	FULL SSE.
6-4	1345	Y-Z	RANDOM	FULL SSE.

wf

W 614 B

QC Form Approval

SHEET ____ OF ____

WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 9

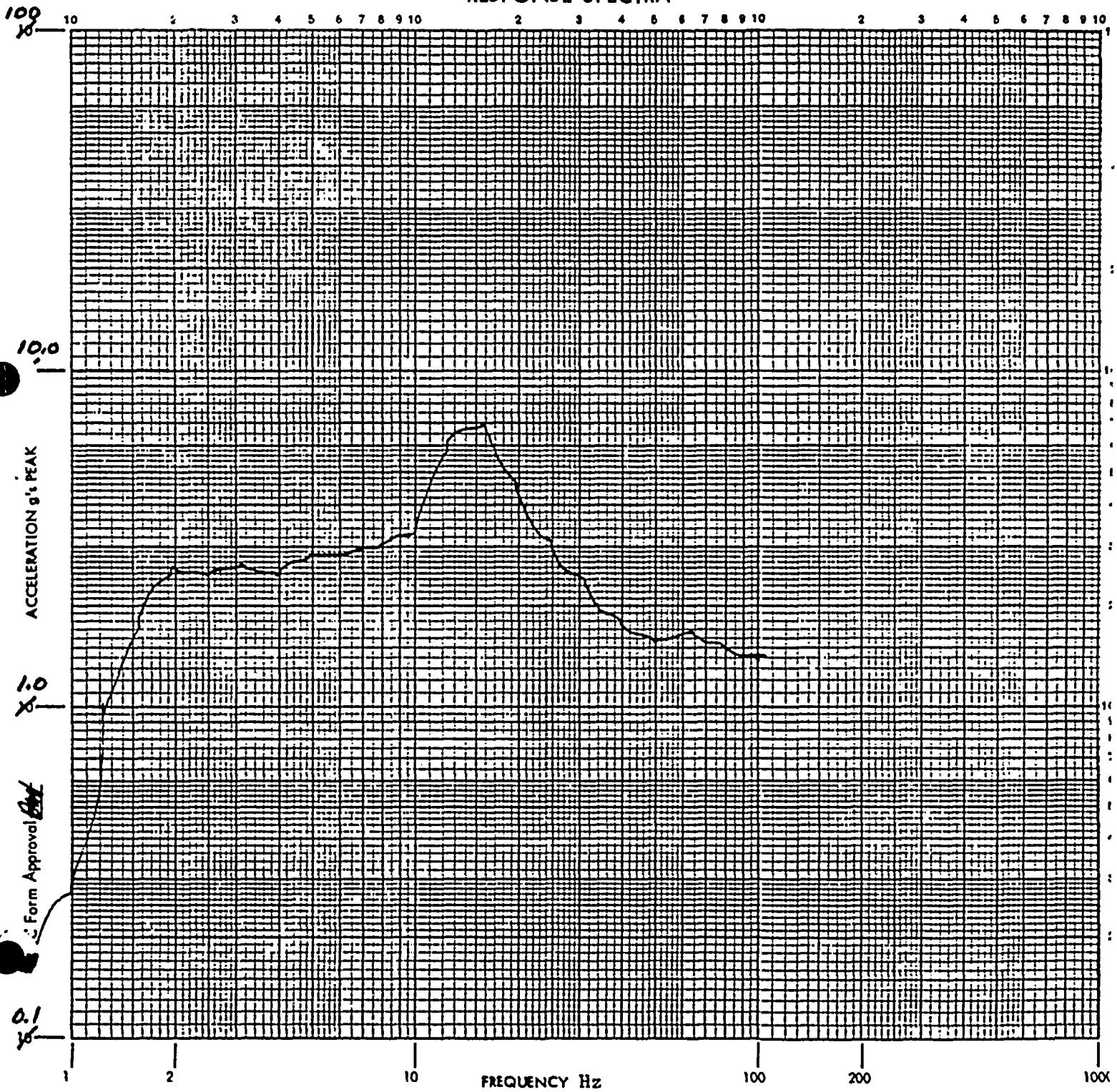
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6-4-76 Damping 2.0 % Axis of Test Y-Z HORIZ.

1ST 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 10

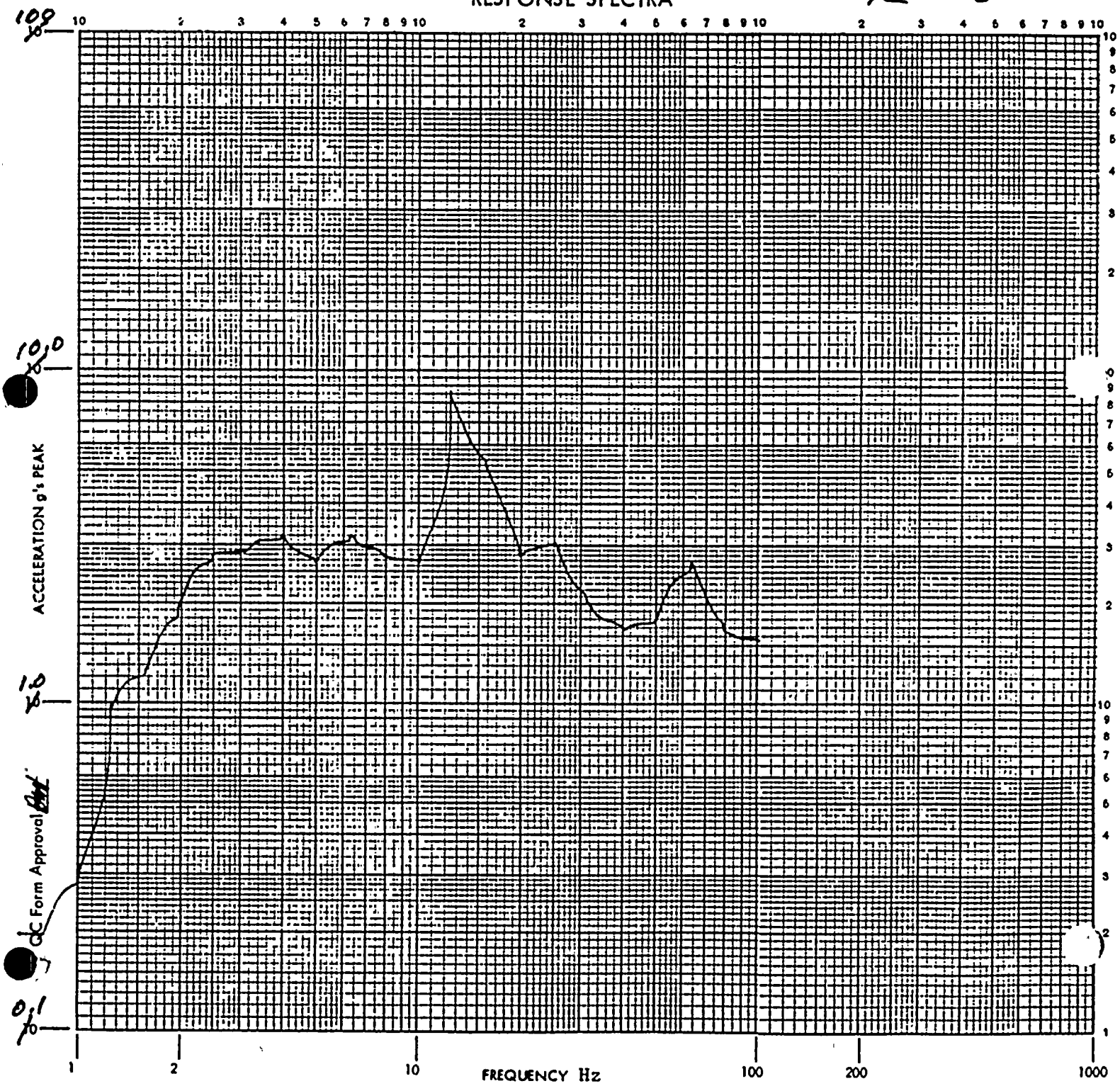
Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen

Date 6-4-76 Damping 2 % Axis of Test Y-Z VERT.

1ST 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

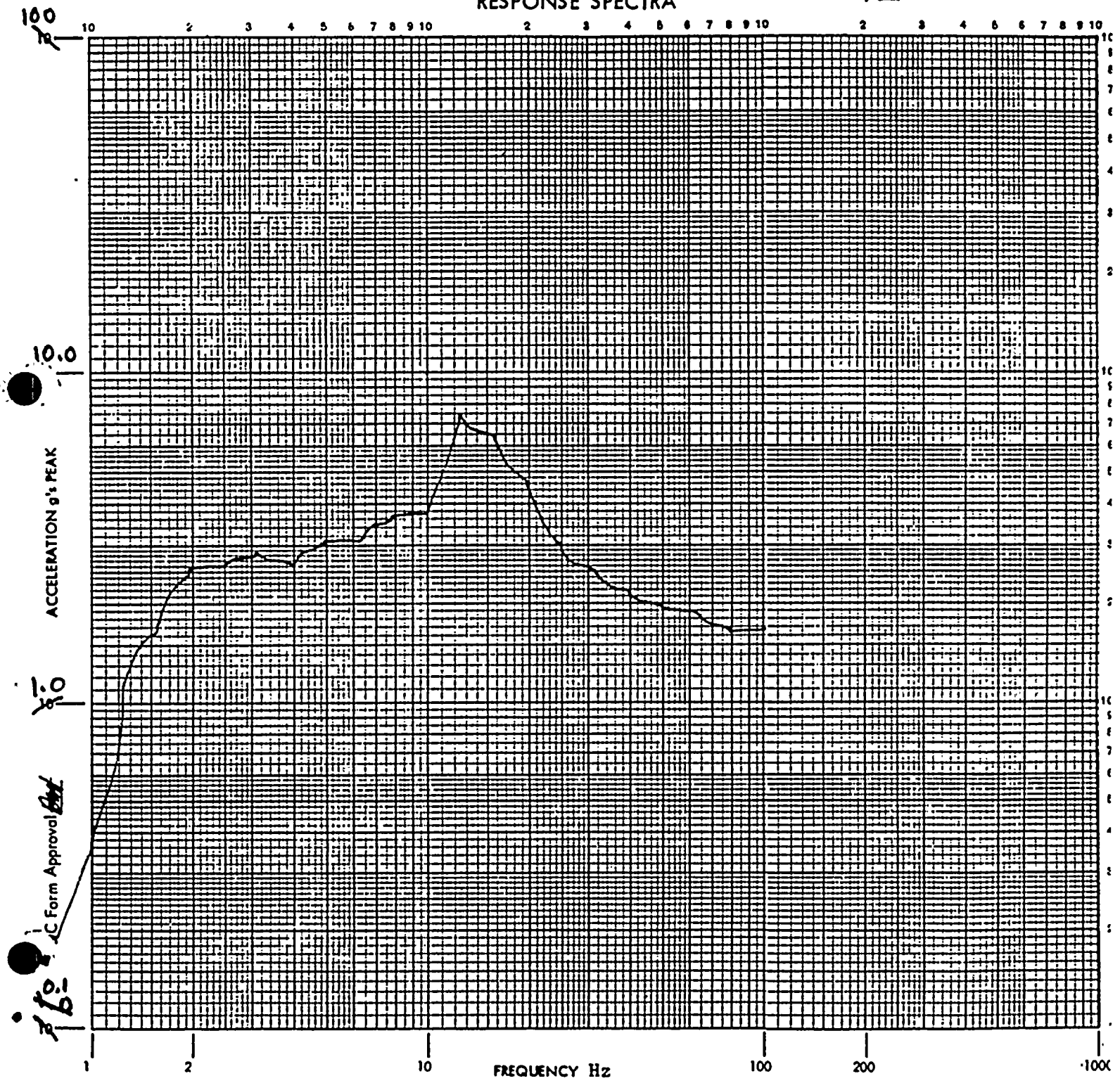
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 11

Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z HORIZ. 2ND 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 12

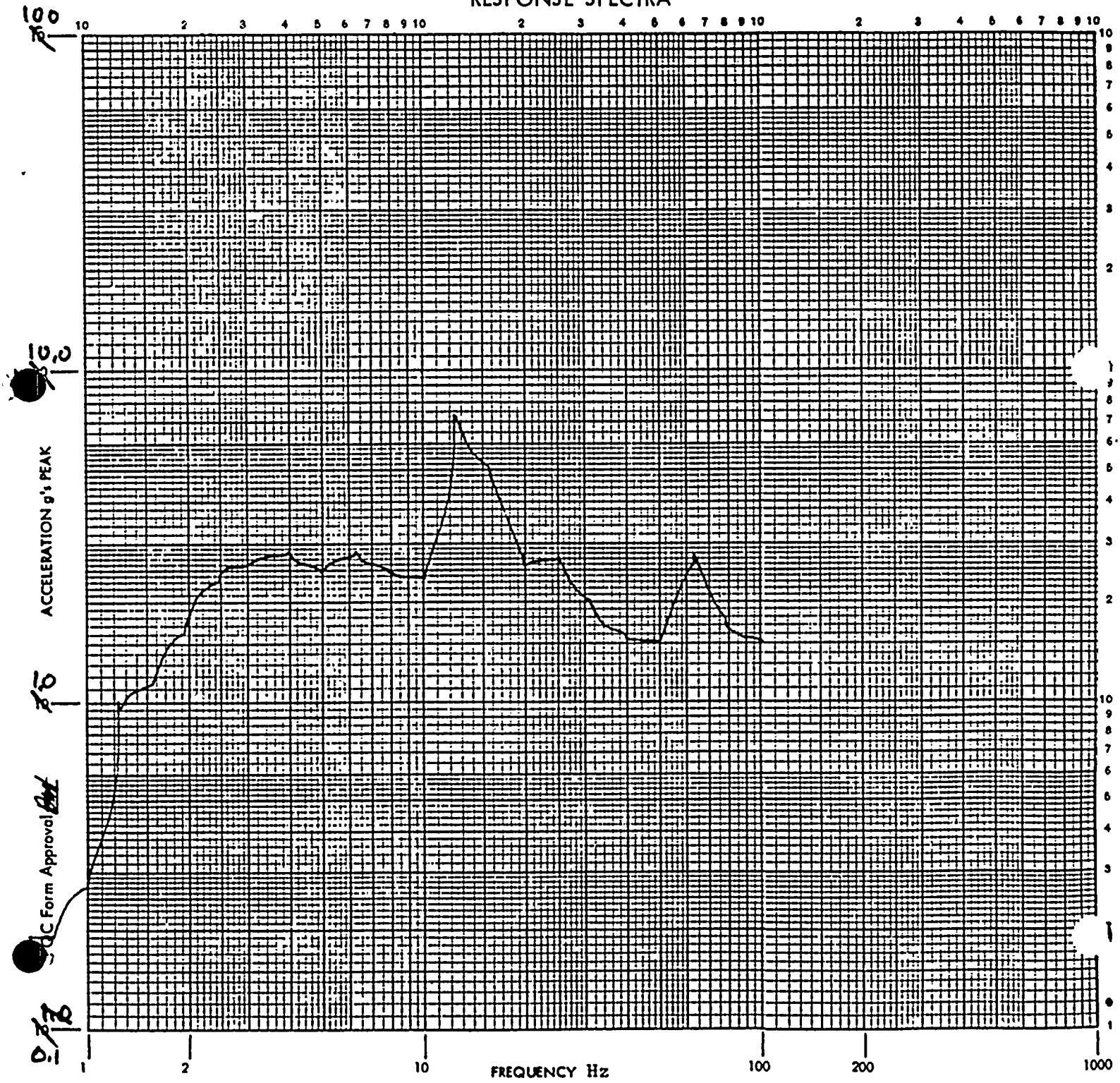
Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z VERT

2ND 1/2 SSE

RESPONSE SPECTRA



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Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 13

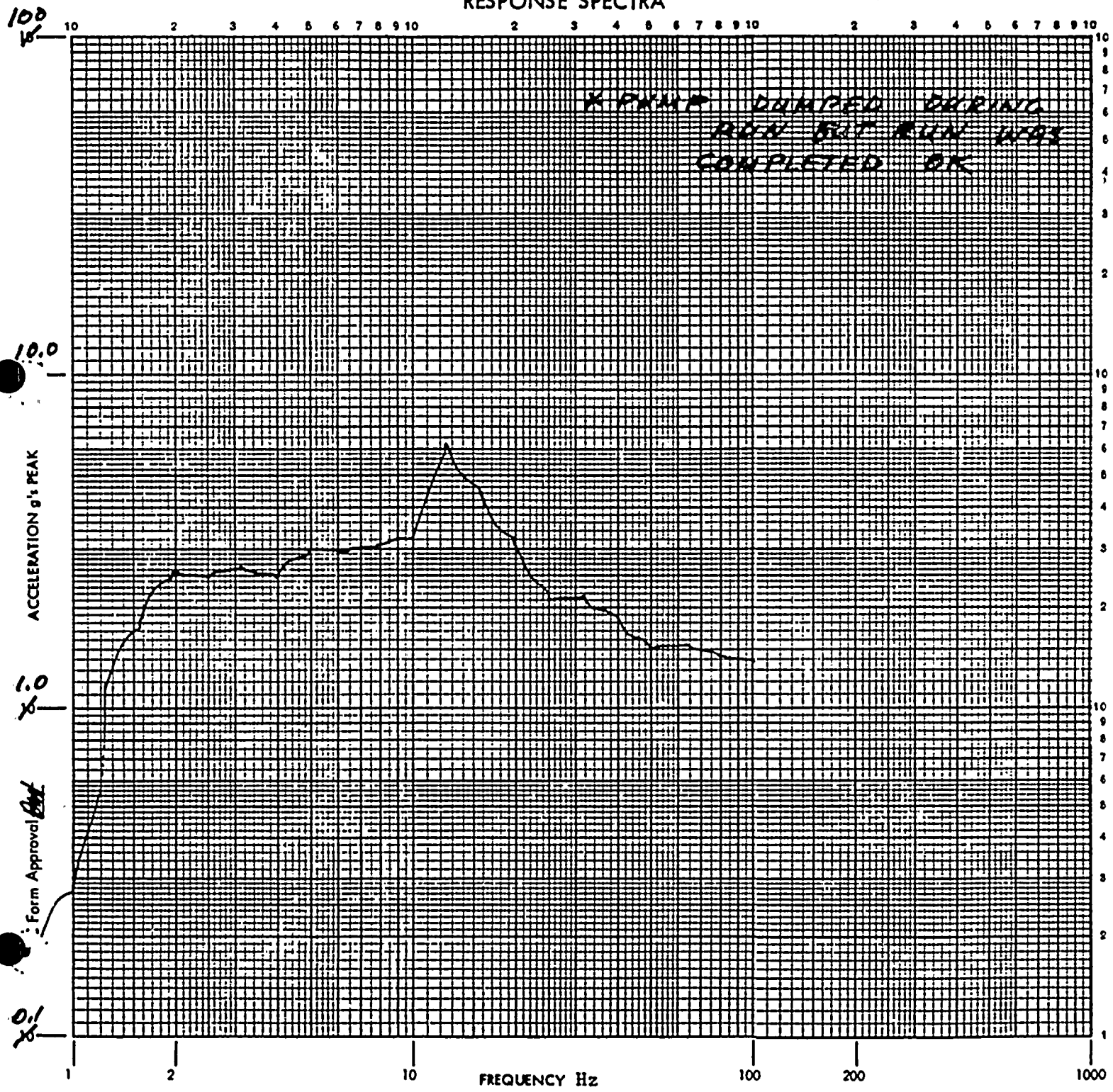
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z HORIZ

3RD 1/2 SSE *

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 14

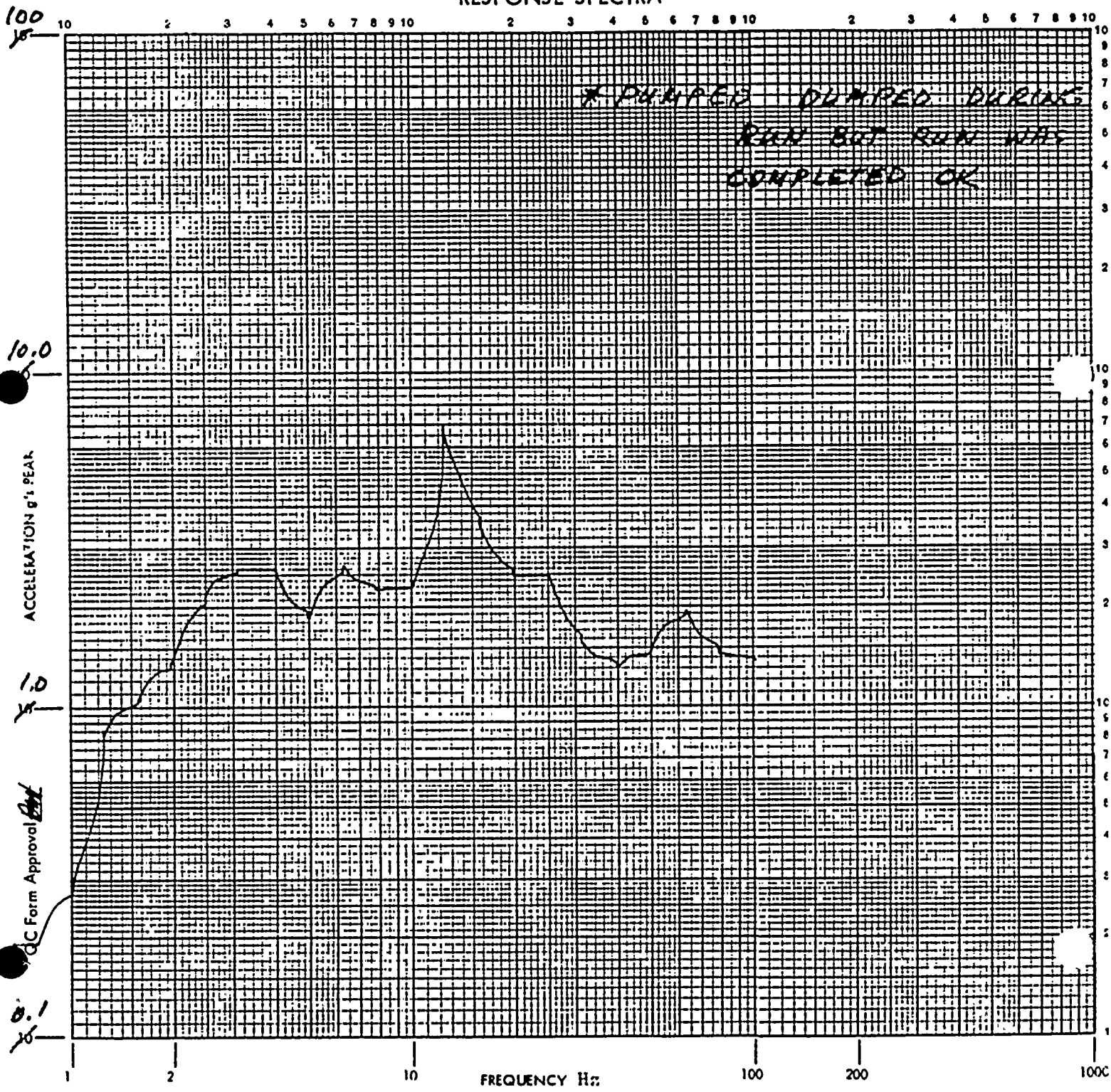
Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z VERT.

3RD 1/2 SSR *

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 15

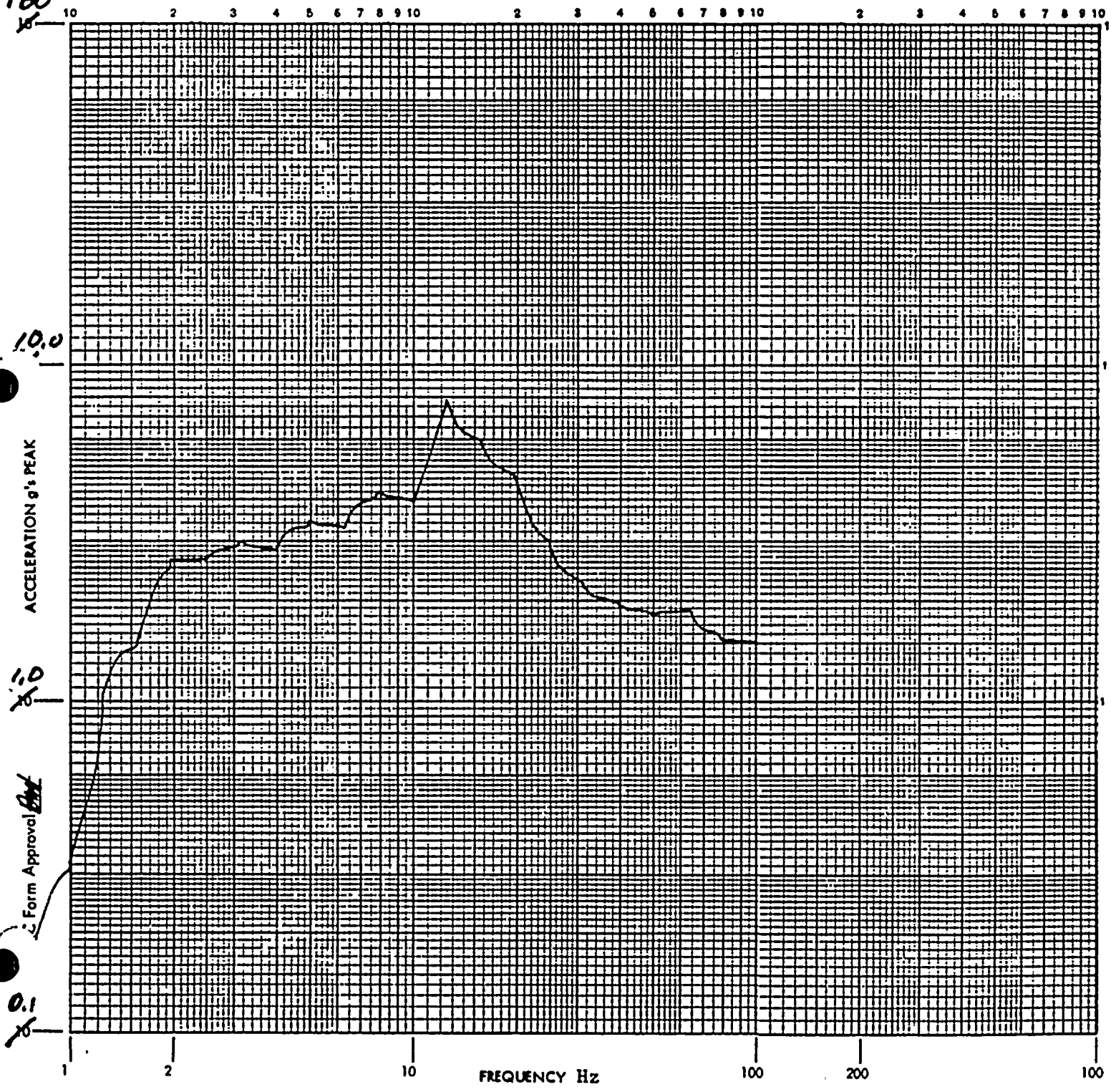
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z HORIZ

4th 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

Page No. 16

CUSTOMER ITT GENERAL CONTROLS

Job No. 58072

Full Scale 100 g

Accel. No. 2

Control (X) Response ( )

Operator KNOLL

Specimen SEE REC. INSP.

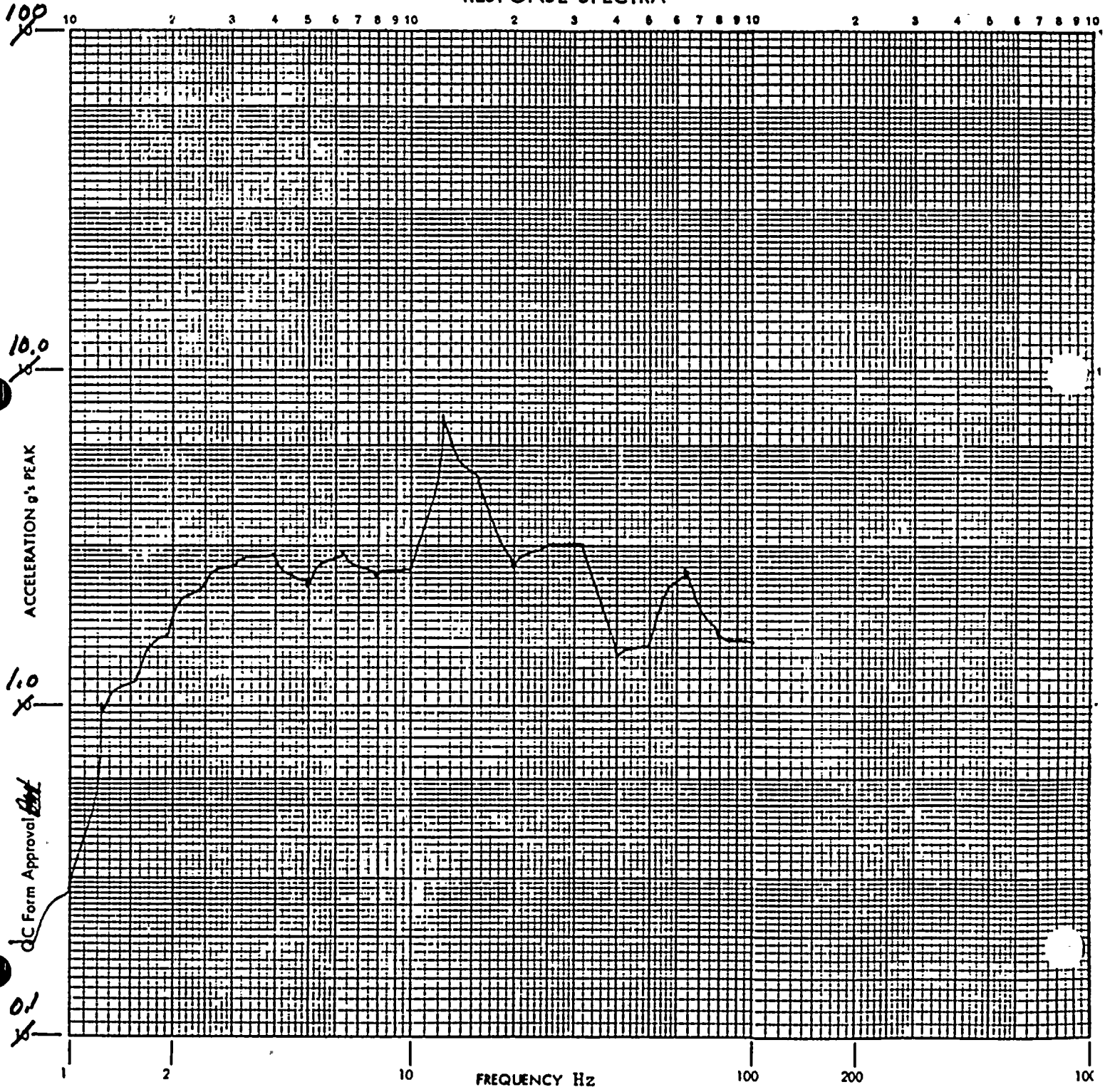
Date 6/4/76

Damping 2.0 %

Axis of Test Y-Z VERT

4th 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 17

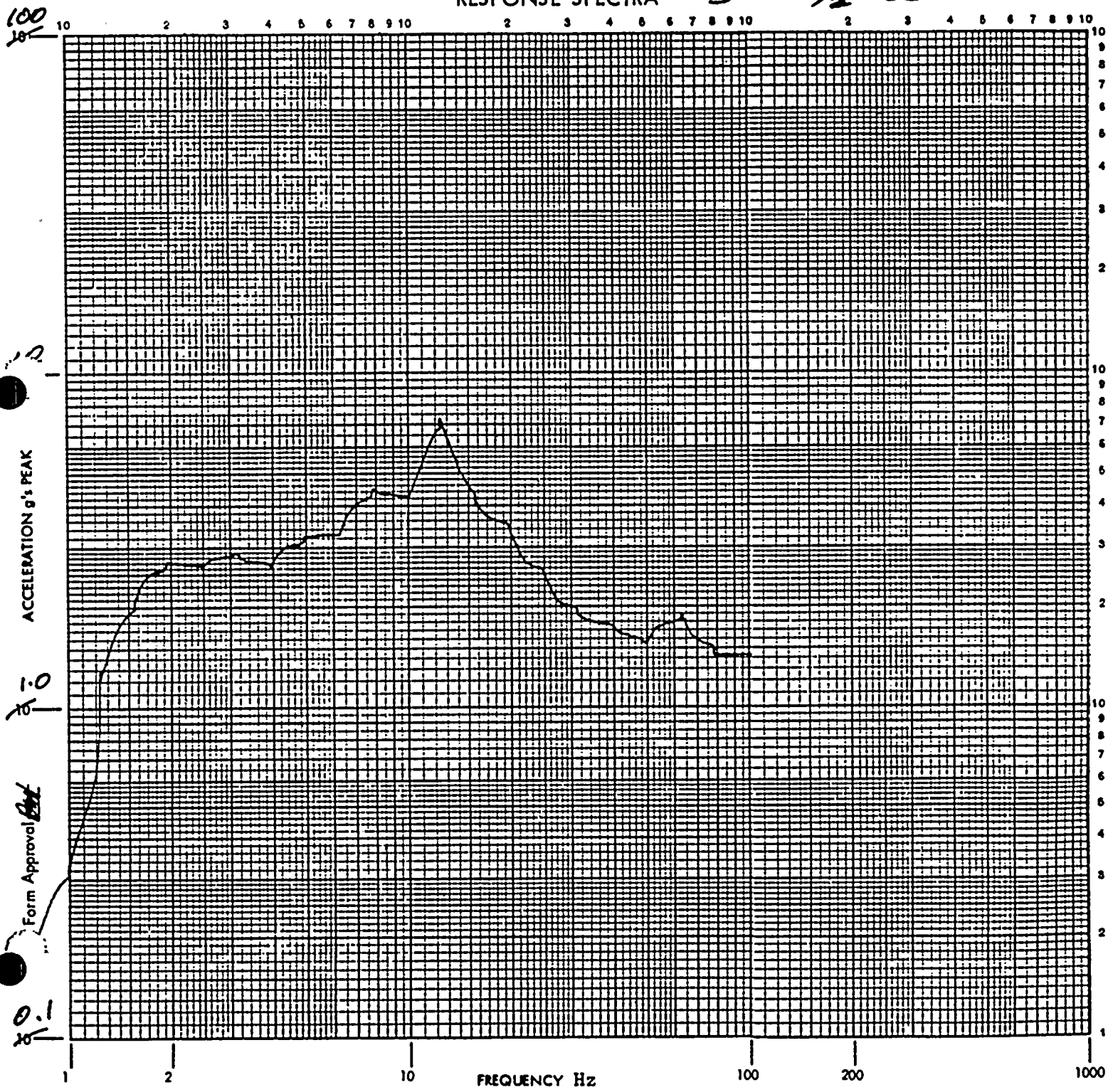
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z

HORIZ.

RESPONSE SPECTRA 5TH 1/2 SSE



WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 18

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

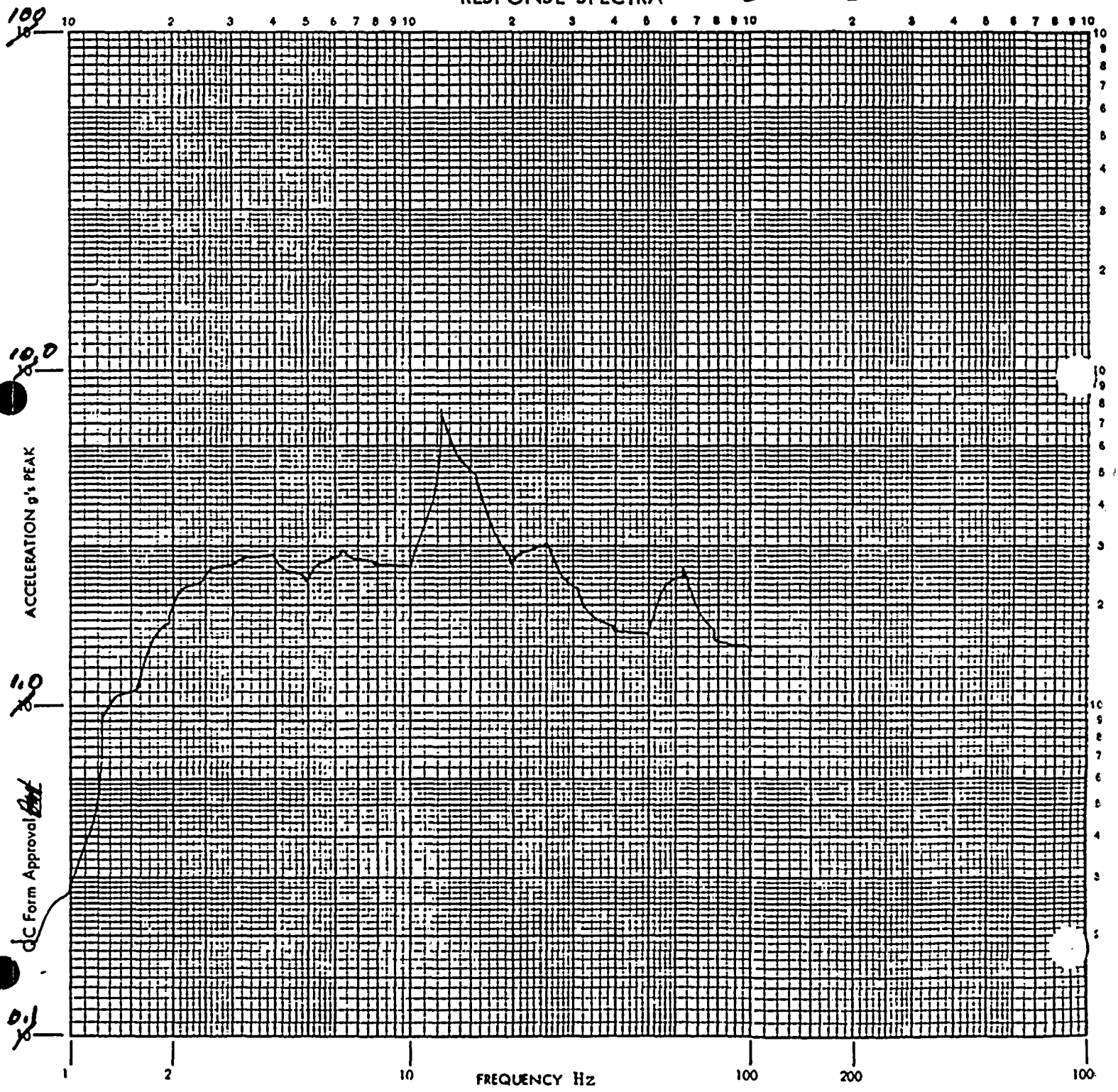
Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z

VERT.

5TH ½ SSE

RESPONSE SPECTRA



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Report No. 58072

CUSTOMER ITT GENERAL Job No. 58072 Page No. 19

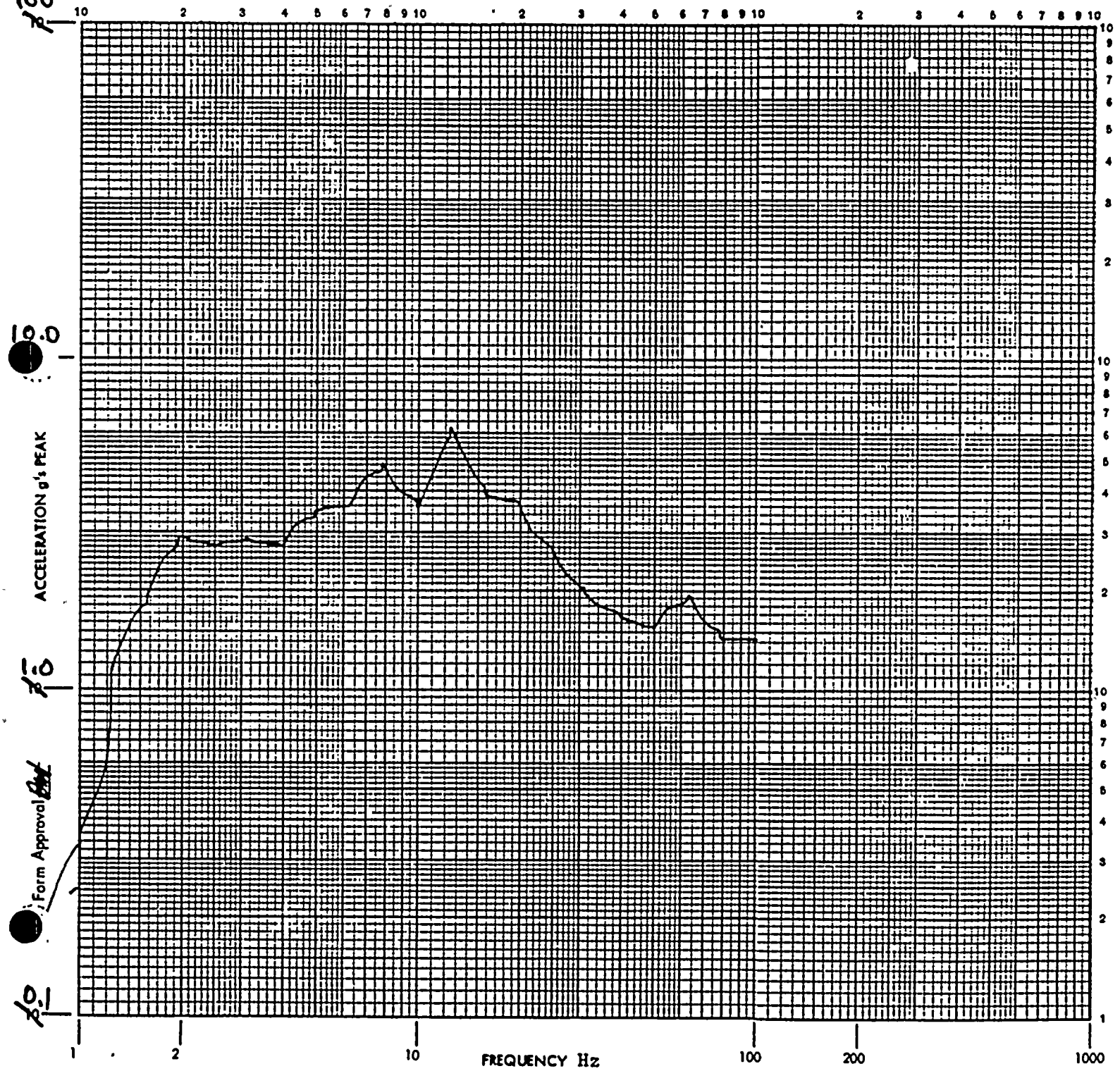
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z

HORIZ
1ST 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 20

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

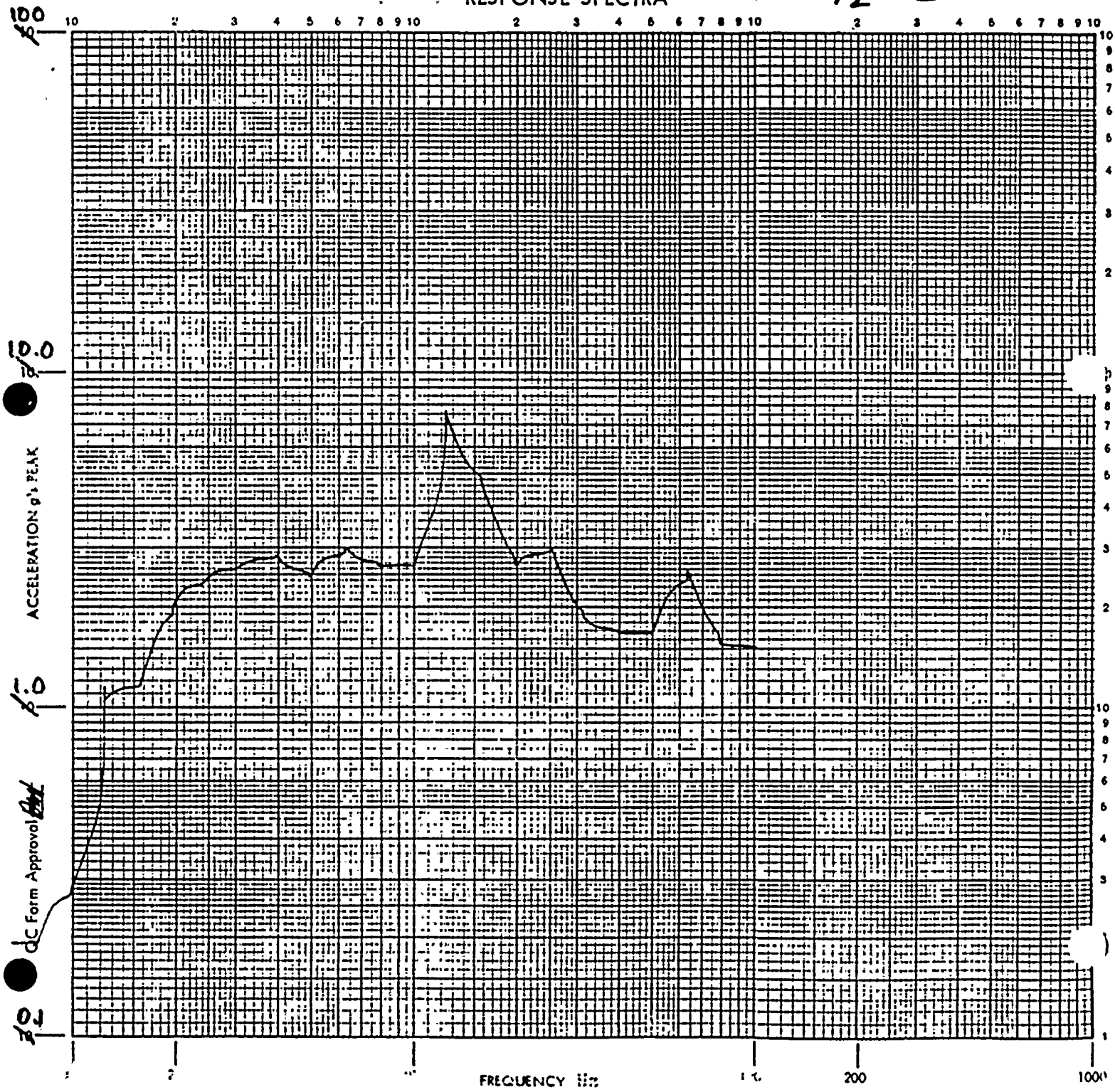
Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z

VERT.

1ST 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS

Job No. 58072

Page No. 21

Full Scale 100 g

Accel. No. 1

Control (X)

Response ( )

Operator KNOLL

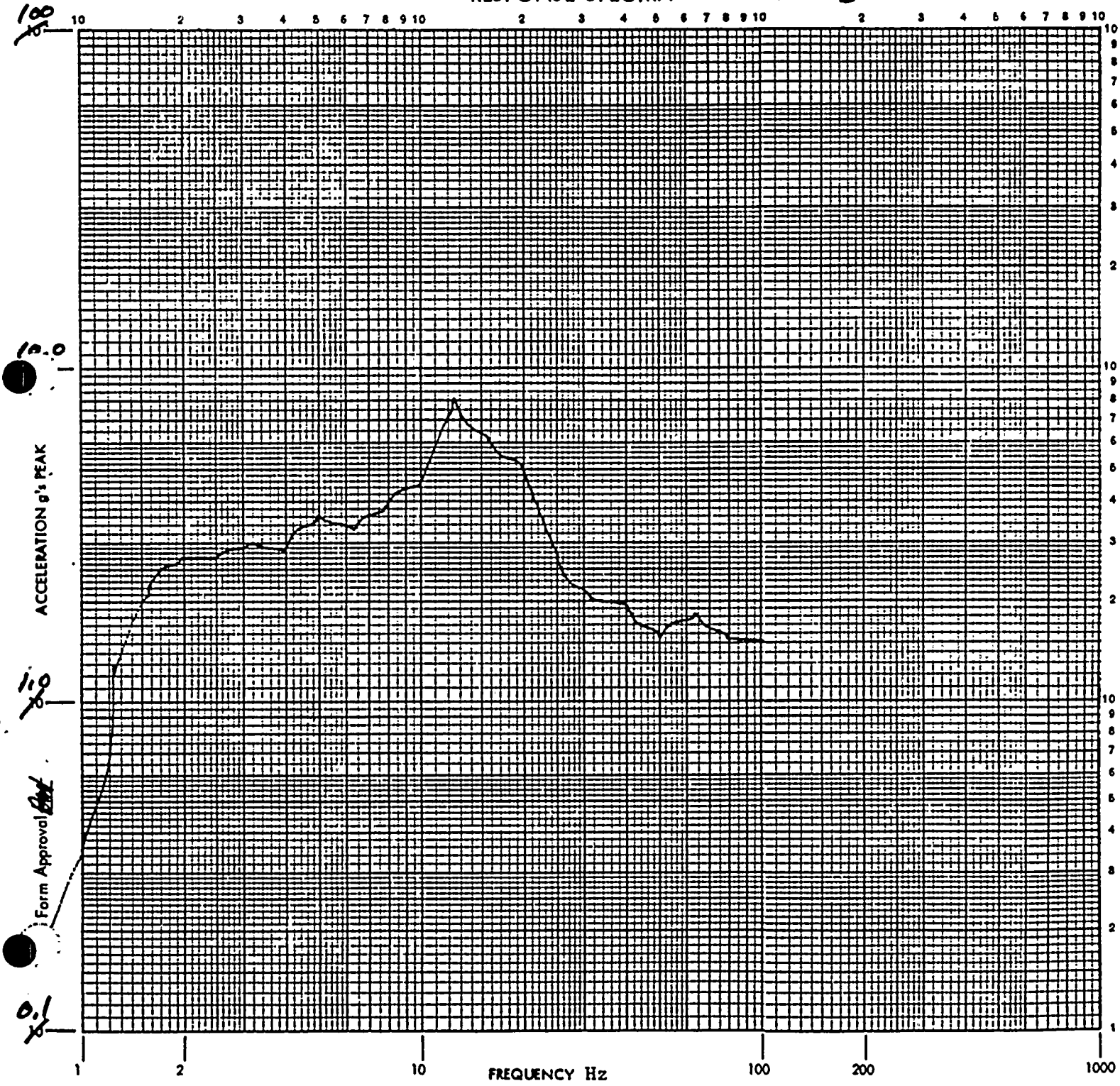
Specimen SEE REC. INSP.

Date 6/4/76

Damping 2.0 %

Axis of Test X-Y HORIZ.

RESPONSE SPECTRA 2ND ½ SSE



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Report No. 58072

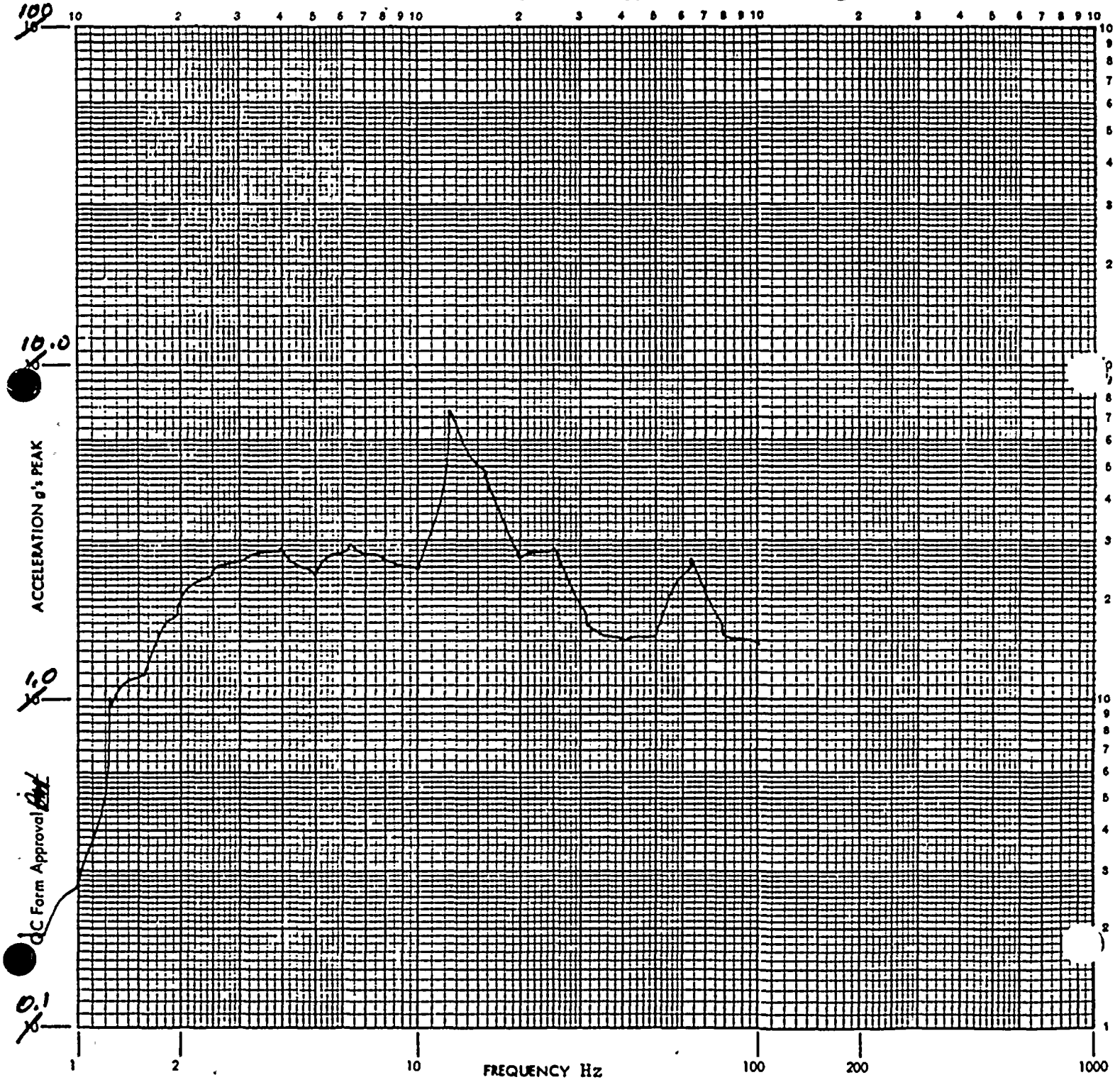
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 22

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Y VERT.

RESPONSE SPECTRA 2ND. ½ SSE



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Report No. 58072

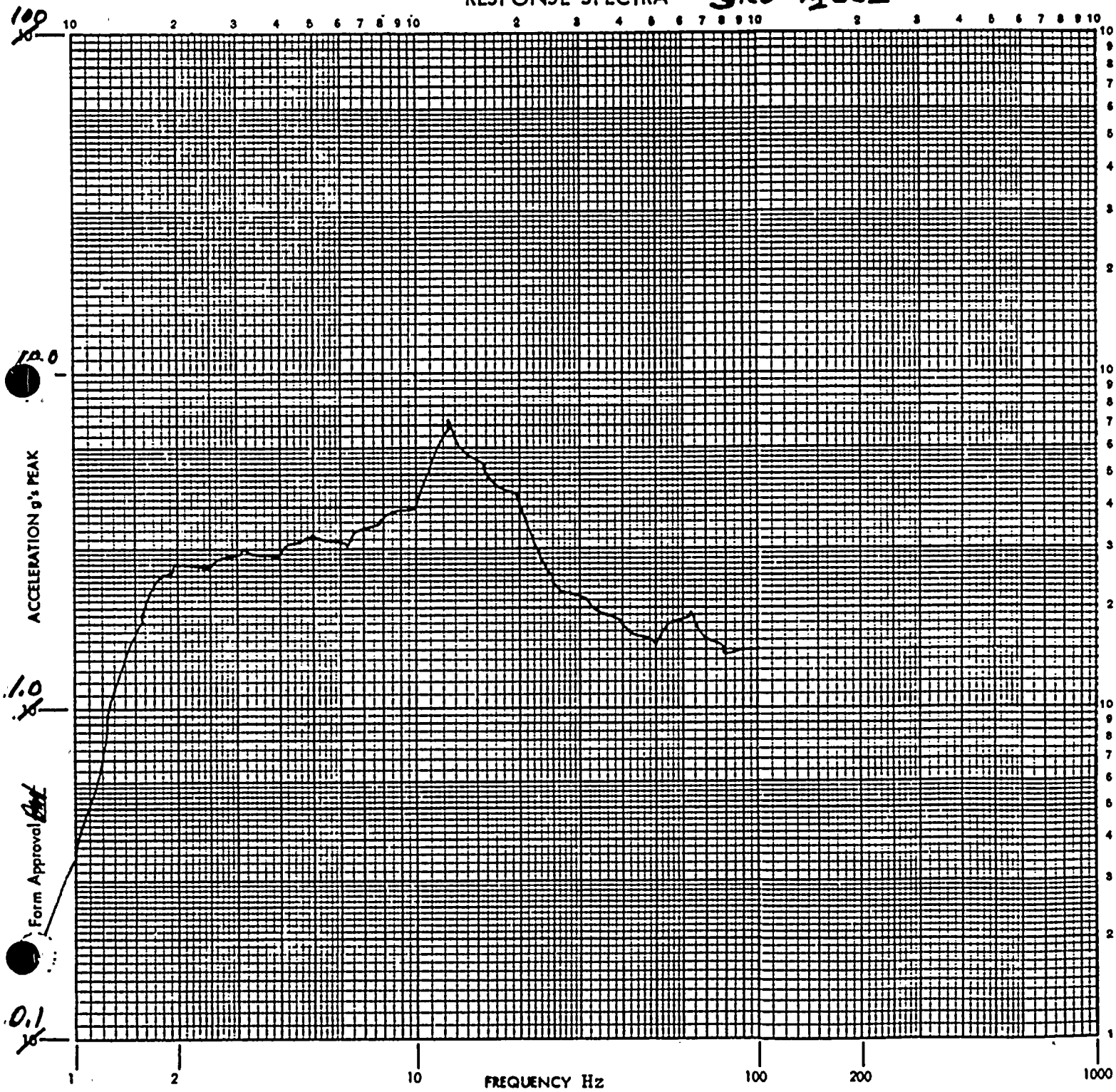
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 23

Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Y HORIZ

RESPONSE SPECTRA 3RD 1/2 SSE



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Report No. 58072

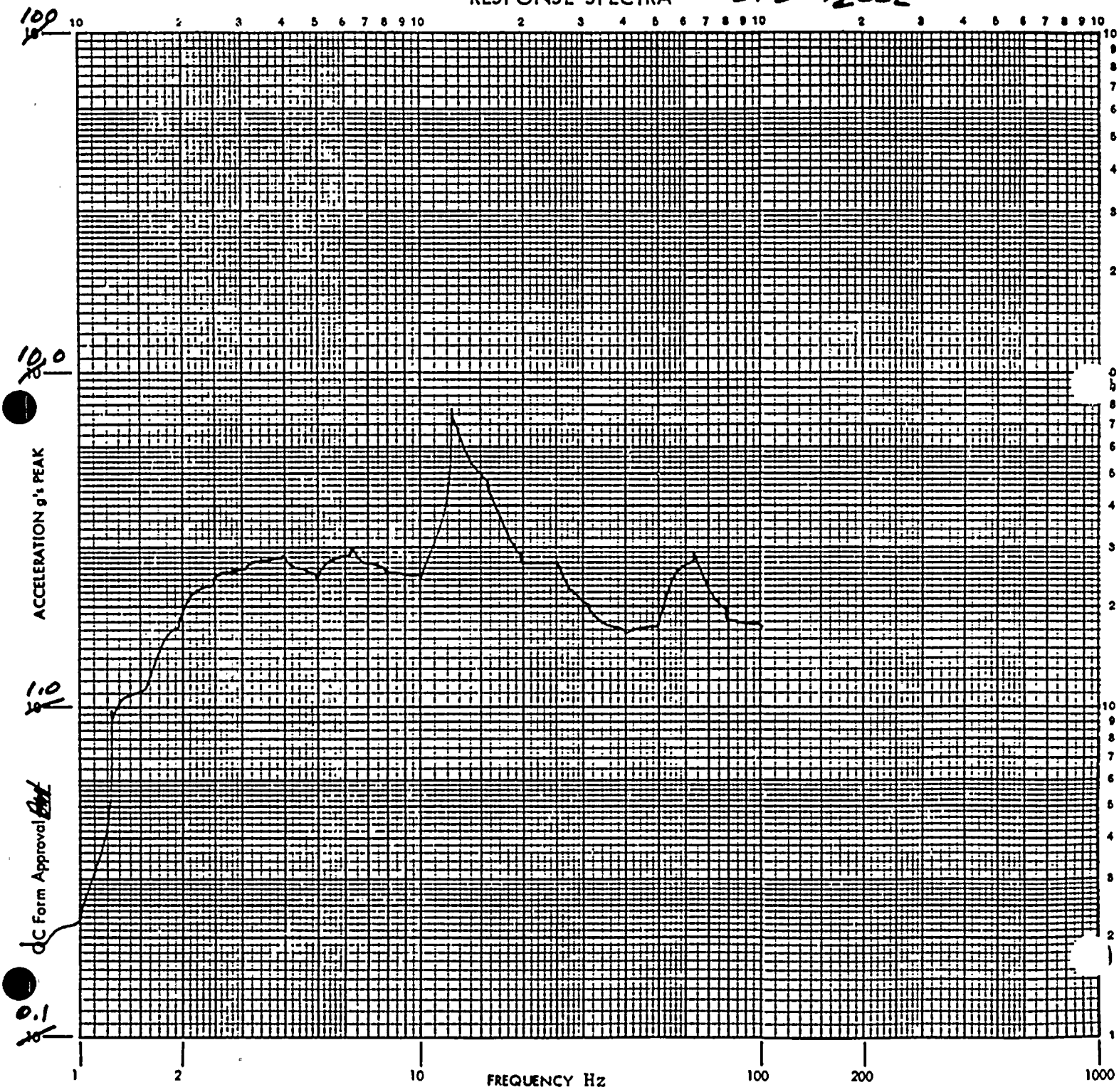
CUSTOMER ITT GENERAL Job No. 58072 Page No. 24

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z VERT.

RESPONSE SPECTRA 3RD 1/2 SSE



WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 25

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

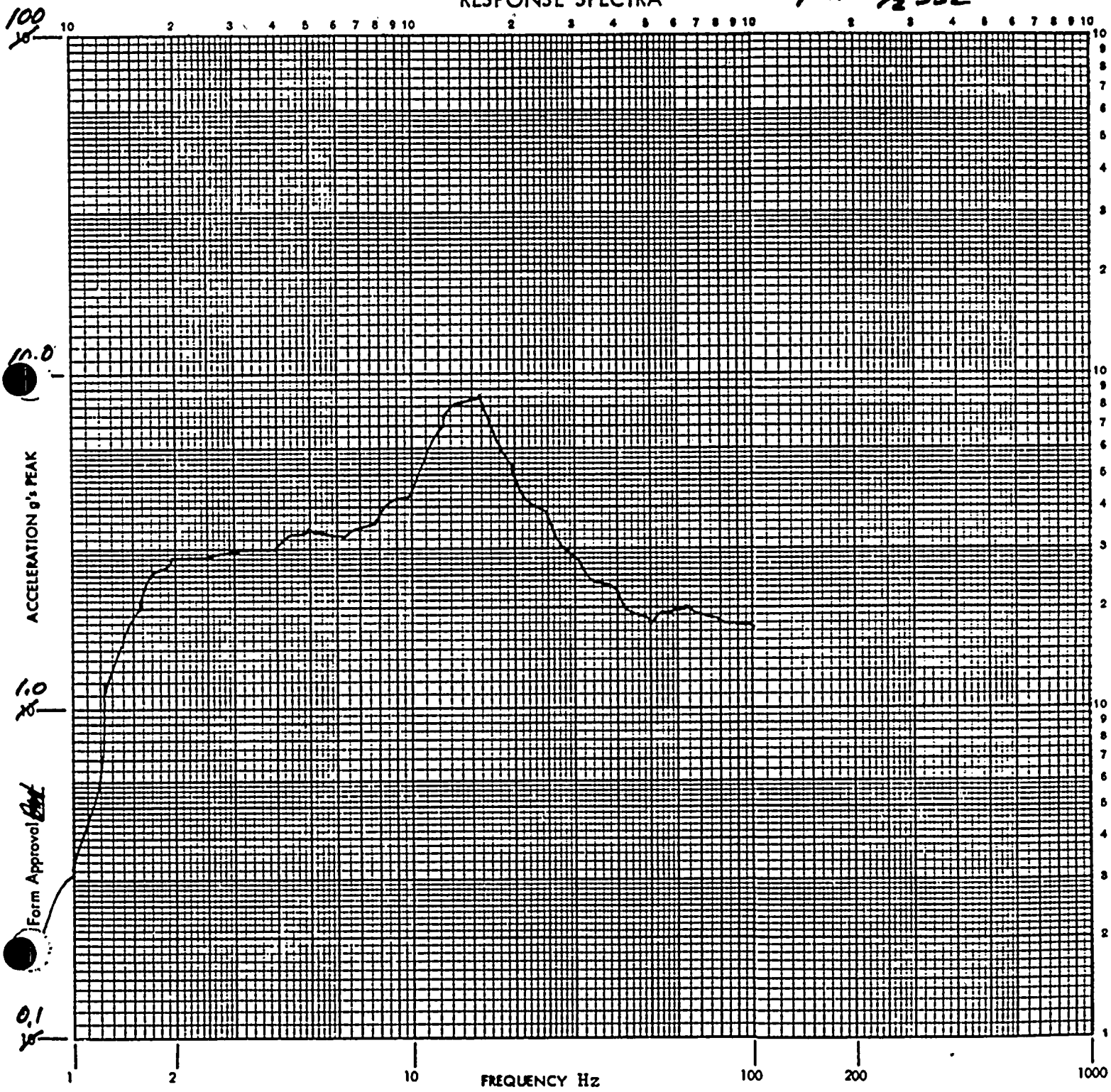
Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Y

~~4TH~~ HORIZ. ~~½ SSE~~

4TH ½ SSE

RESPONSE SPECTRA



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Report No. 58072

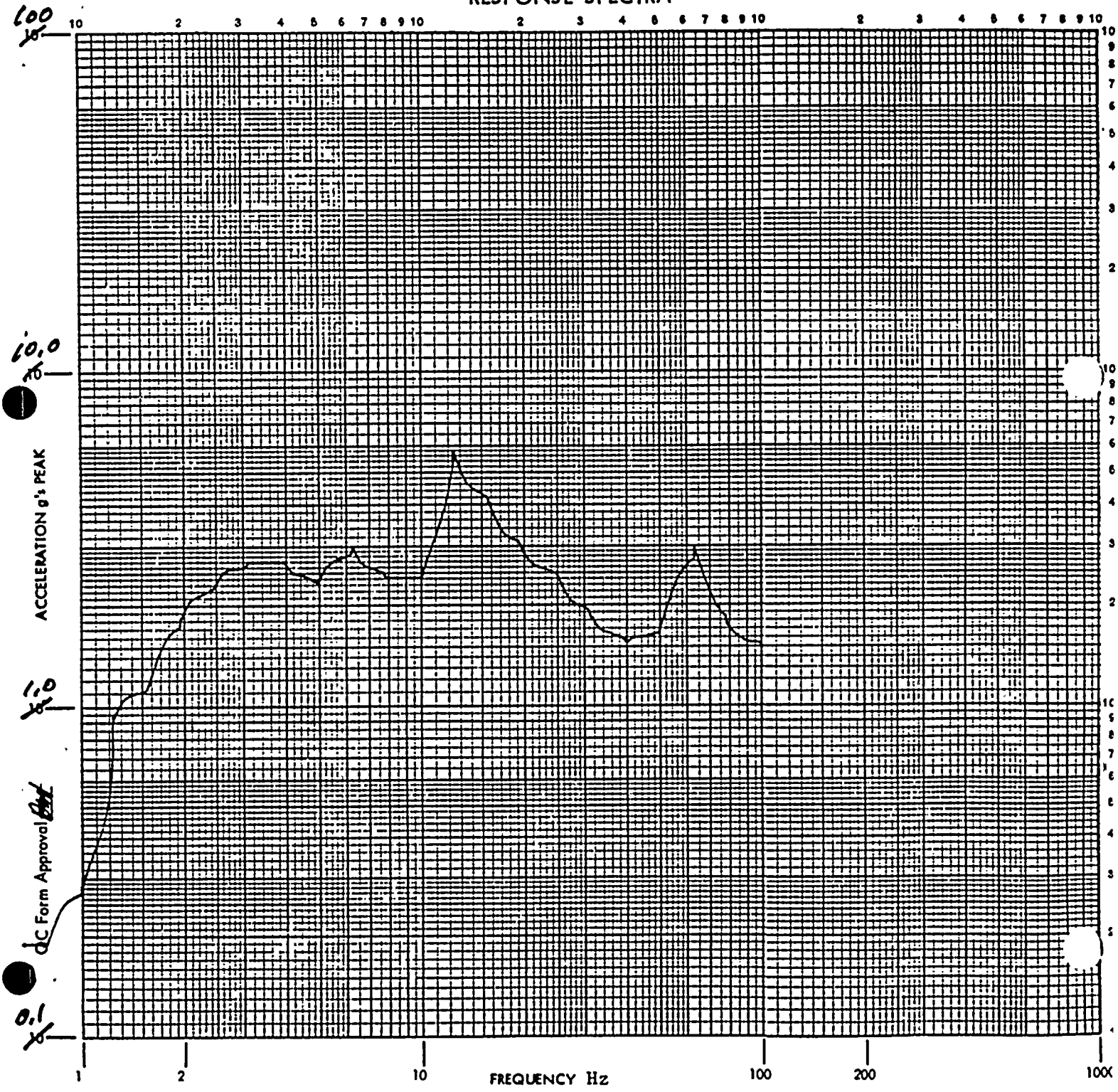
CUSTOMER ITT GENERAL Job No. 58072 Page No. 26

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Y VERT. 4TH 1/2 SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

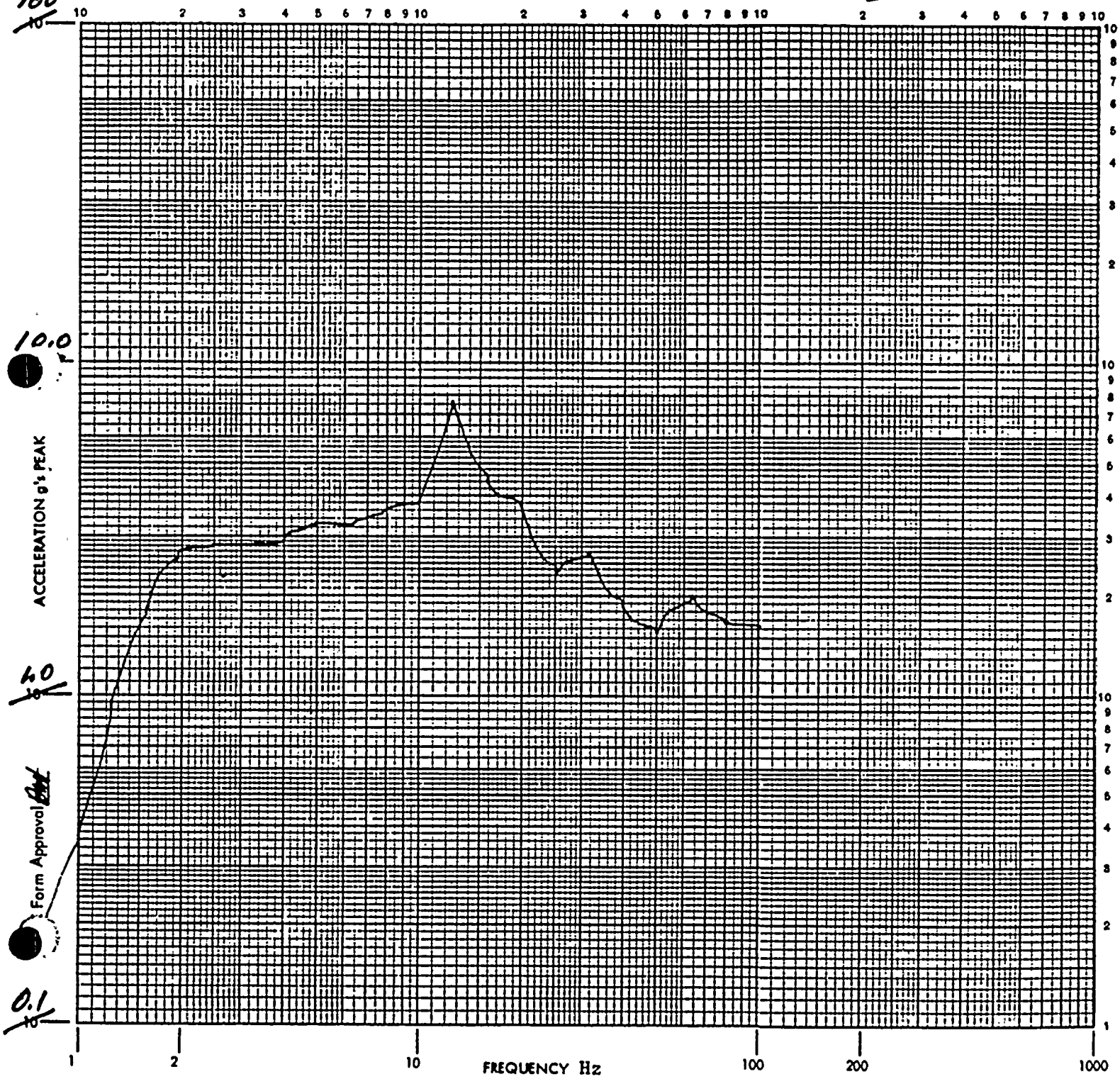
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 27

Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SGE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-~~Y~~ HORIZ

RESPONSE SPECTRA 5TH 1/2 SSE



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Report No. 58072

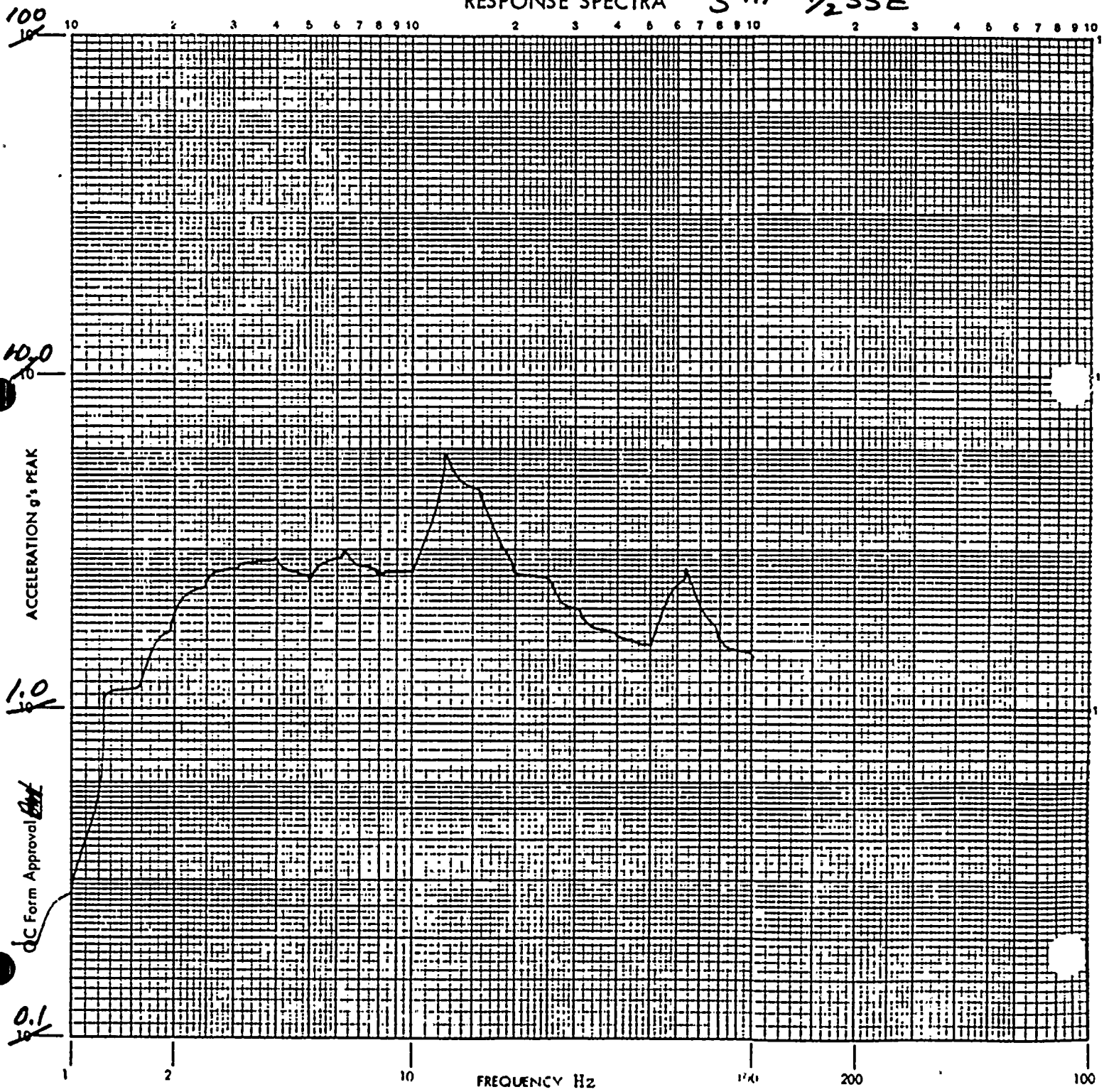
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 28

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z VERT.

RESPONSE SPECTRA 5TH 1/2 SSE



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 29

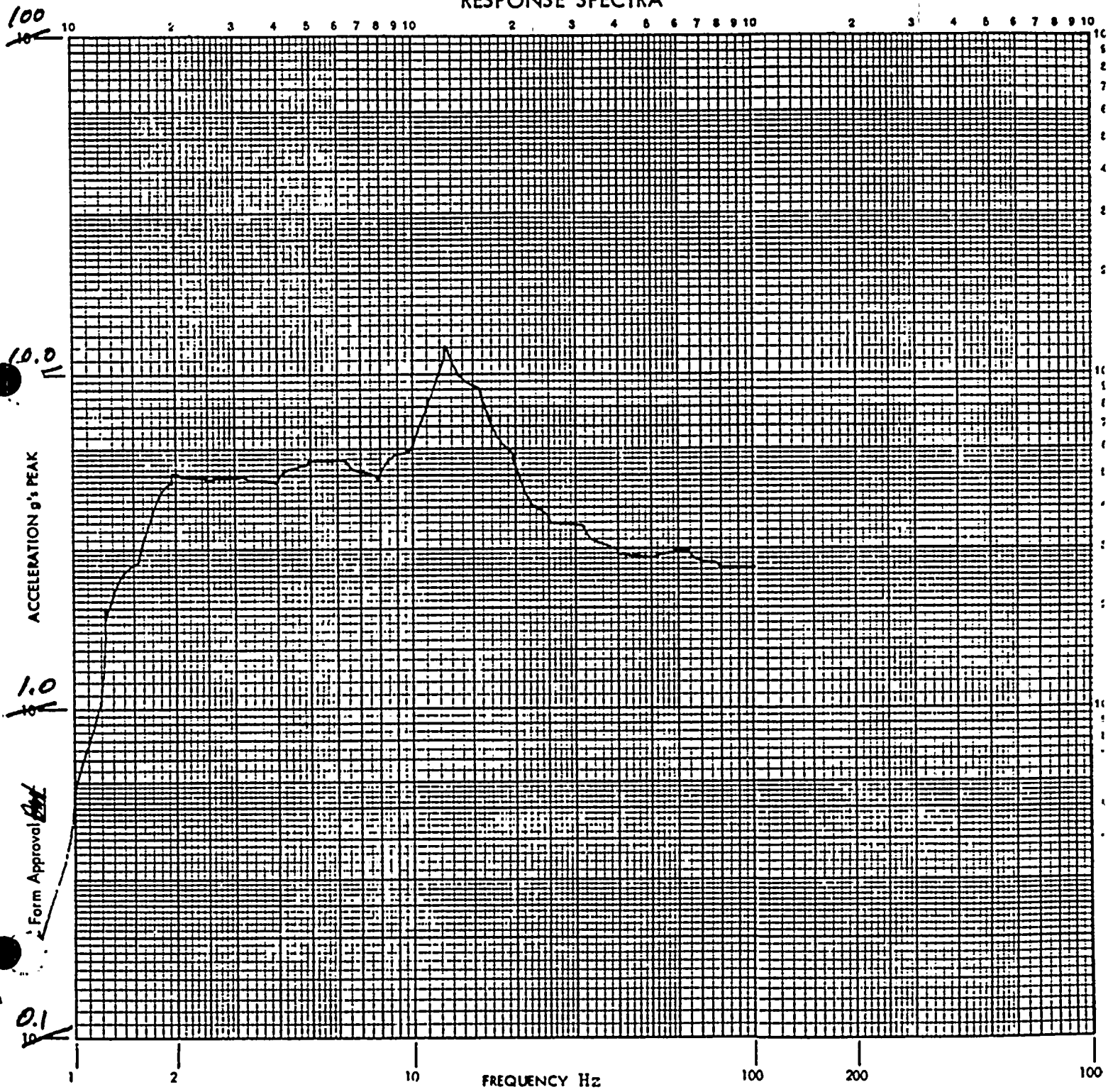
Full Scale 100 g Accel. No. 1 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z

HORIZ. SSE

RESPONSE SPECTRA



WYLE LABORATORIES

Report No. 58072

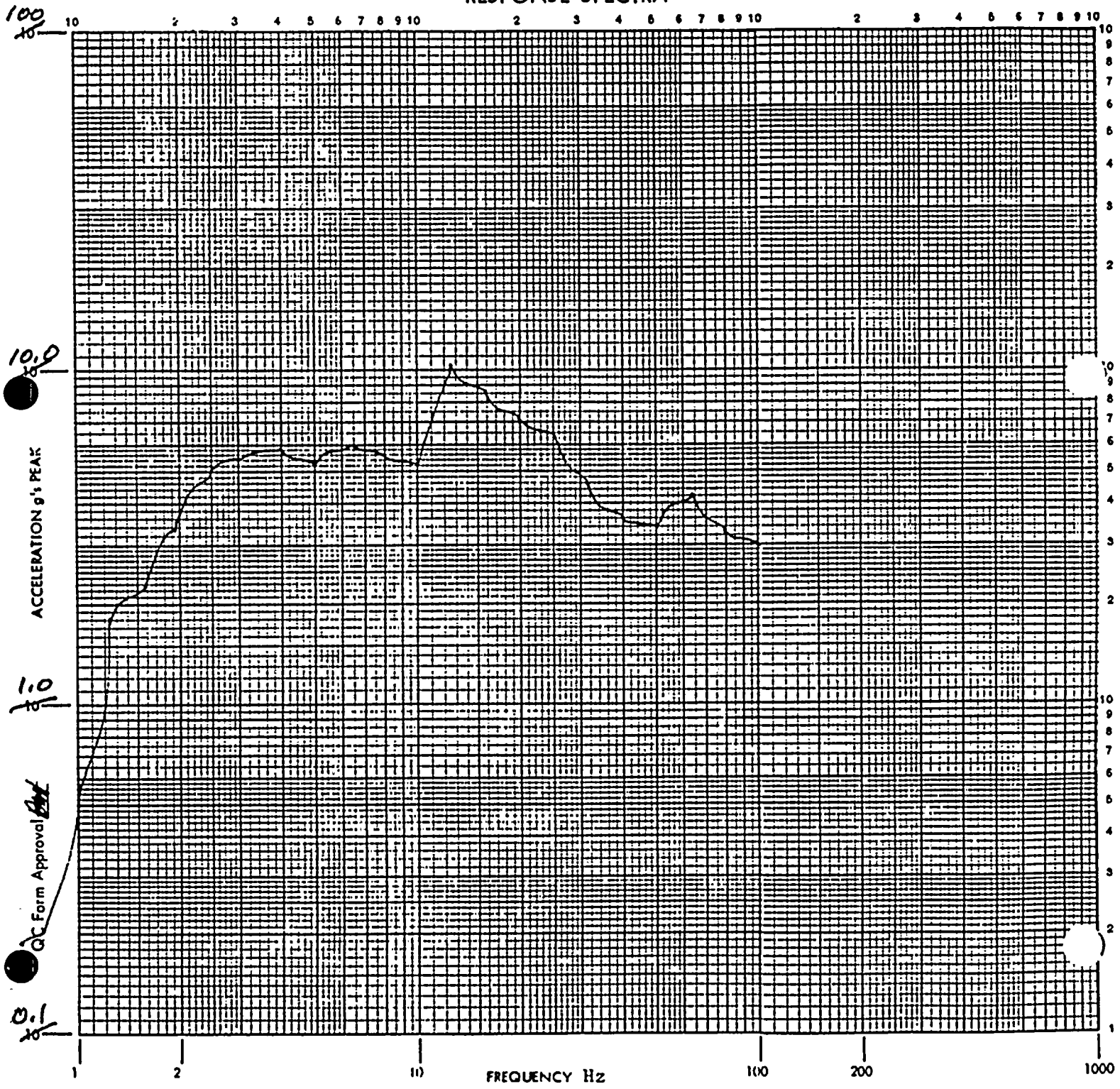
CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 30

Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test X-Z VERT. SSE

RESPONSE SPECTRA



WYLE LABORATORIES

Report No. 58072

Page No. 31

CUSTOMER ITT GENERAL CONTROLS

Job No. 58072

Full Scale 100 g

Accel. No. 1

Control (X) Response ( )

Operator KNOLL

Specimen SEE REC. INSP.

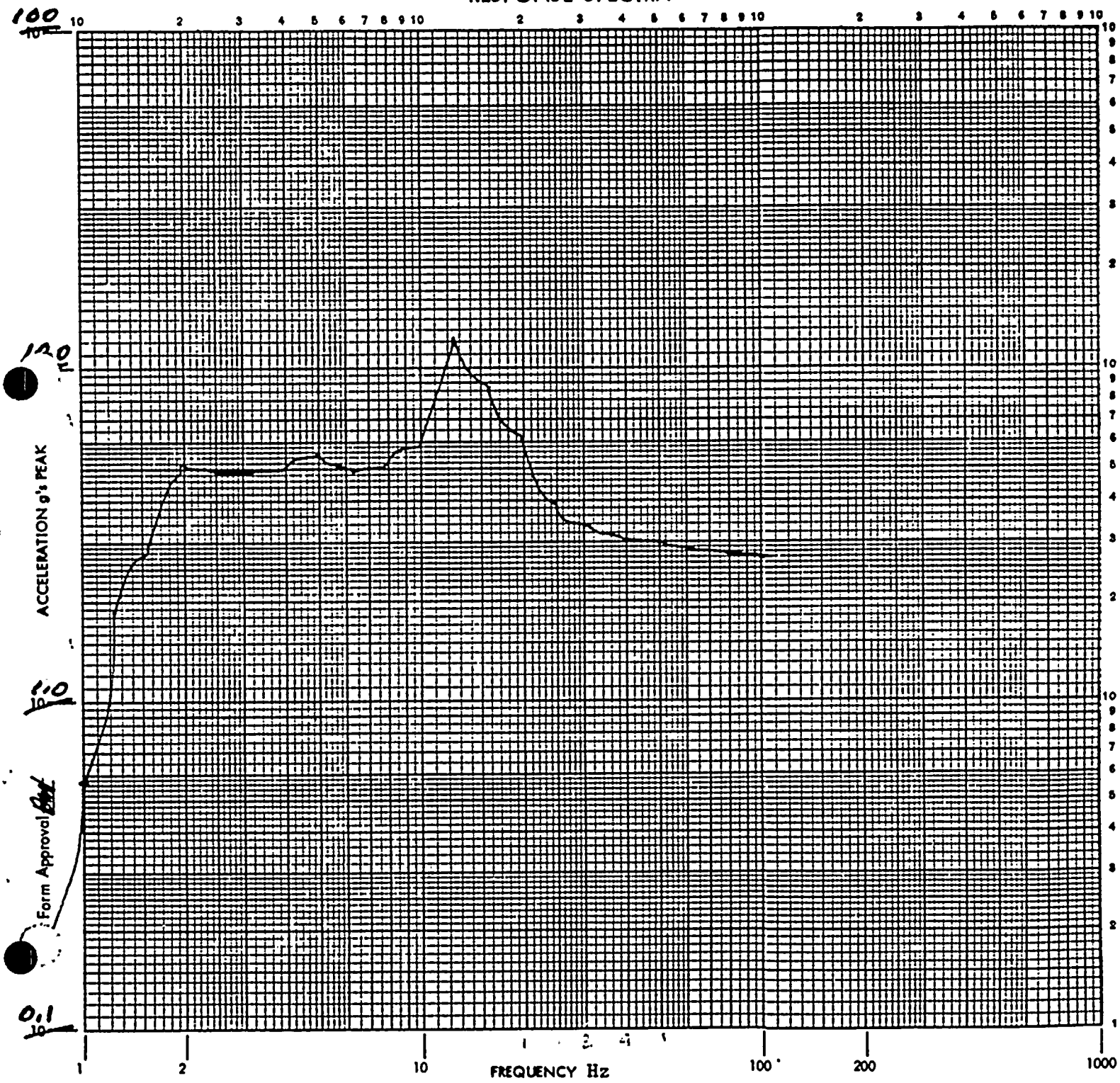
Date 6/4/76

Damping 2.0 %

Axis of Test Y-Z

HORIZ. SSE

RESPONSE SPECTRA



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WYLE LABORATORIES

Report No. 58072

CUSTOMER ITT GENERAL CONTROLS Job No. 58072 Page No. 32

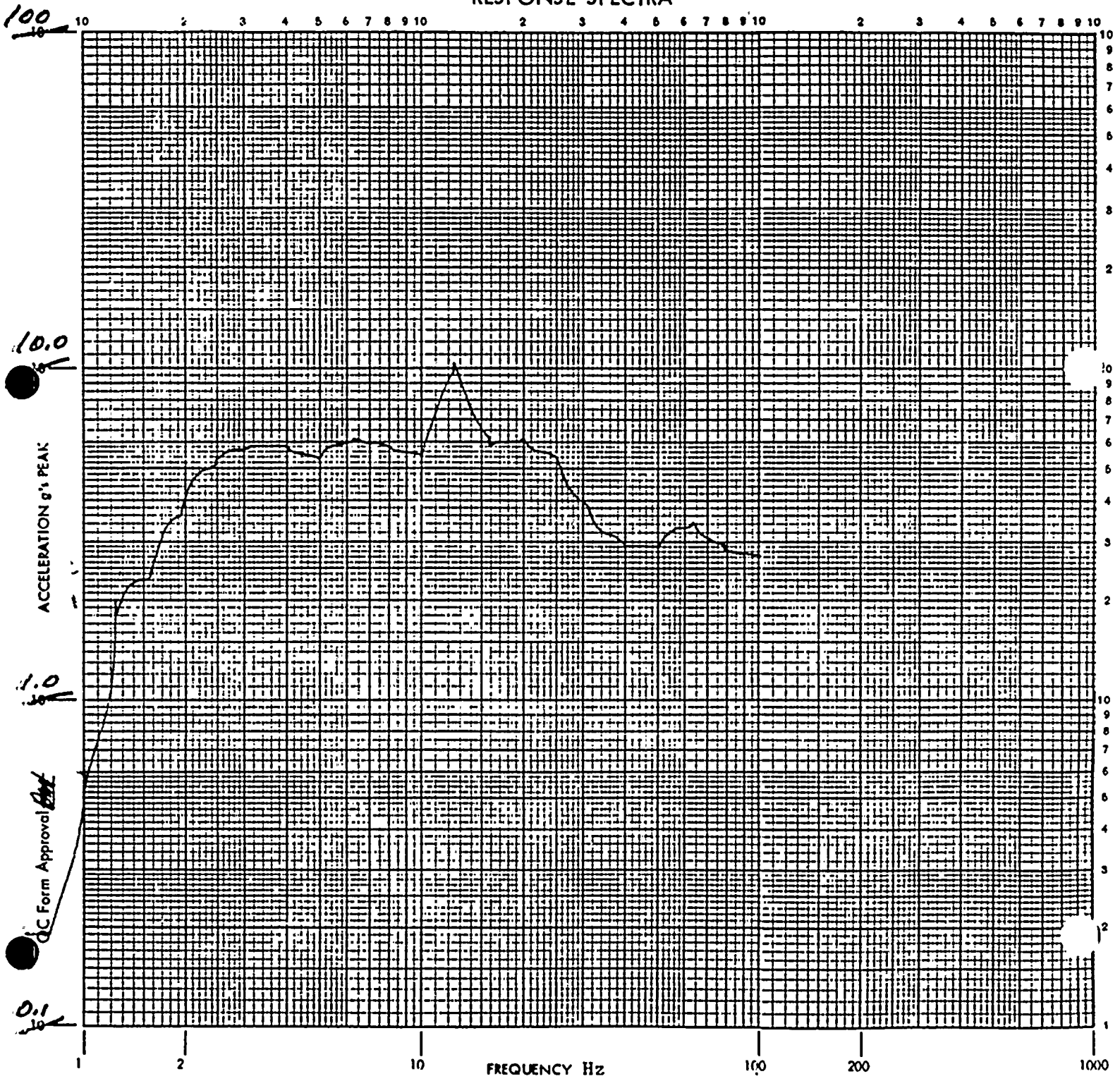
Full Scale 100 g Accel. No. 2 Control (X) Response ( )

Operator KNOLL Specimen SEE REC. INSP.

Date 6/4/76 Damping 2.0 % Axis of Test Y-Z

VERT. SSE

RESPONSE SPECTRA



SPECIMEN MILLIAMP HYDRAMOTOR
CUSTOMER ITT GENERAL CONTROLS
PART NO. NH91 REVERSE
S/N 7545B 135481-01-001

JOB NO. 58072
DATE 6-4-76
TEST BY P. KNOLL
WITNESS

WYLE LABORATORIES

TEST: SEISMIC RANDOM

EQUIPMENT	MANUFACTURER	MODEL NO.	RANGE	WYLE NO.	CALIBRATION LAST	CALIBRATION DUE	ACCY.
EXCITER	TEAM CORP	W 3000	12" DA 30,000 FORCE LBS	–	–	–	N/A
EXCITER	TEAM CORP	W 1800	10" DA 18,000 FORCE LBS	–	–	–	N/A
EXCITER	TEAM CORP	W 1800	10" DA 18,000 FORCE LBS	–	–	–	N/A
SERVO CONTROLLER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
SERVO CONTROLLER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
SERVO CONTROLLER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
AMPLIFIER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
AMPLIFIER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
AMPLIFIER	McFADDEN	152 A	–	–	PRIOR TO	USE	N/A
SHOCK SPECTRUM ANALYZER	SPECTRAL DYNAMICS	13231	120 CHANNEL	7530	SYSTEM CALIBRATION		MFG. SPEC.
SPECTRUM SHAPER	BRUEL KJAER	123	12.5 TO 40 KHZ	31337	PRIOR TO	USE	N/A
SPECTRUM SHAPER	BRUEL KJAER	123	12.5 TO 40 KHZ	31570	PRIOR TO	USE	N/A
EQUALIZER SHAPER	TRACOR	822	1.25 TO 10 HZ	31534	PRIOR TO	USE	N/A
EQUALIZER SHAPER	TRACOR	822	1.25 TO 10 HZ	31574	PRIOR TO	USE	N/A
X-Y RECORDER	HEWLETT PACKARD		X = 80"/SEC Y = 20"/SEC		PRIOR TO	USE	MFG. SPEC.
OSCILLOSCOPE	HEWLETT PACKARD	122 AR	DUAL TRACE	7333	2-4-76	8-1-76	±5%
ELECTRONIC VOLTMETER	BRUEL KJAER	2416	0.01 TO 1000 VOLTS	6356	3-29-76	8-1-76	±4% AVE

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Page No. 33

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WT SHEET OF

SPECIMEN MILLIAMP HYDRAMOTOR
CUSTOMER ITT GENERAL CONTROLS
PART NO. NH91 REVERSE
S/N 7545B 135481-01-001
TEST: SEISMIC RANDOM

JOB NO. 58072
DATE 6-4-76
TEST BY P. KNOLL
WITNESS

WYLE LABORATORIES

EQUIPMENT	MANUFACTURER	MODEL NO.	RANGE	WYLE NO.	CALIBRATION LAST	CALIBRATION DUE	ACCY.
ACCELEROMETER	UNHOLTZ DICKIE	75D21	0-2000 HZ	7399	3-22-76	6-22-76	±2%
ACCELEROMETER	UNHOLTZ DICKIE	75D21	0-2000 HZ	7302	3-22-76	6-22-76	±2%
CHARGE AMP	UNHOLTZ DICKIE	D22	0-1000 g.	7341	1-13-76	7-11-76	±2%
CHARGE AMP.	UNHOLTZ DICKIE	D22	0-1000 g.	7342	1-13-76	7-11-76	±2%
TAPE RECORDER	SANBORN	3924B	14 CHANNEL	31266	SYSTEM	CALIBRATION	N/A
TAPE RECORDER	SANBORN	3924B	14 CHANNEL	31265	SYSTEM	CALIBRATION	N/A

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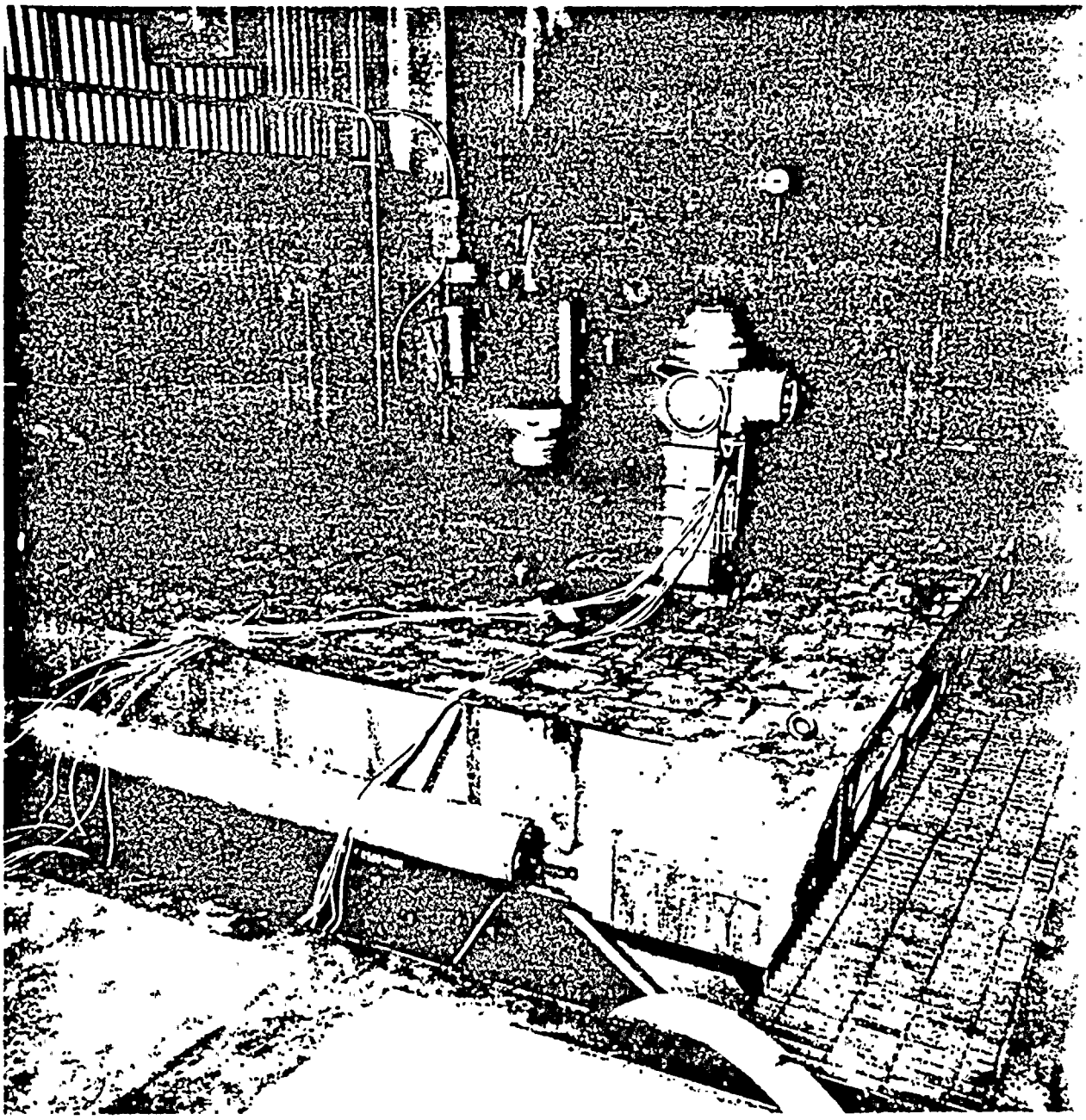
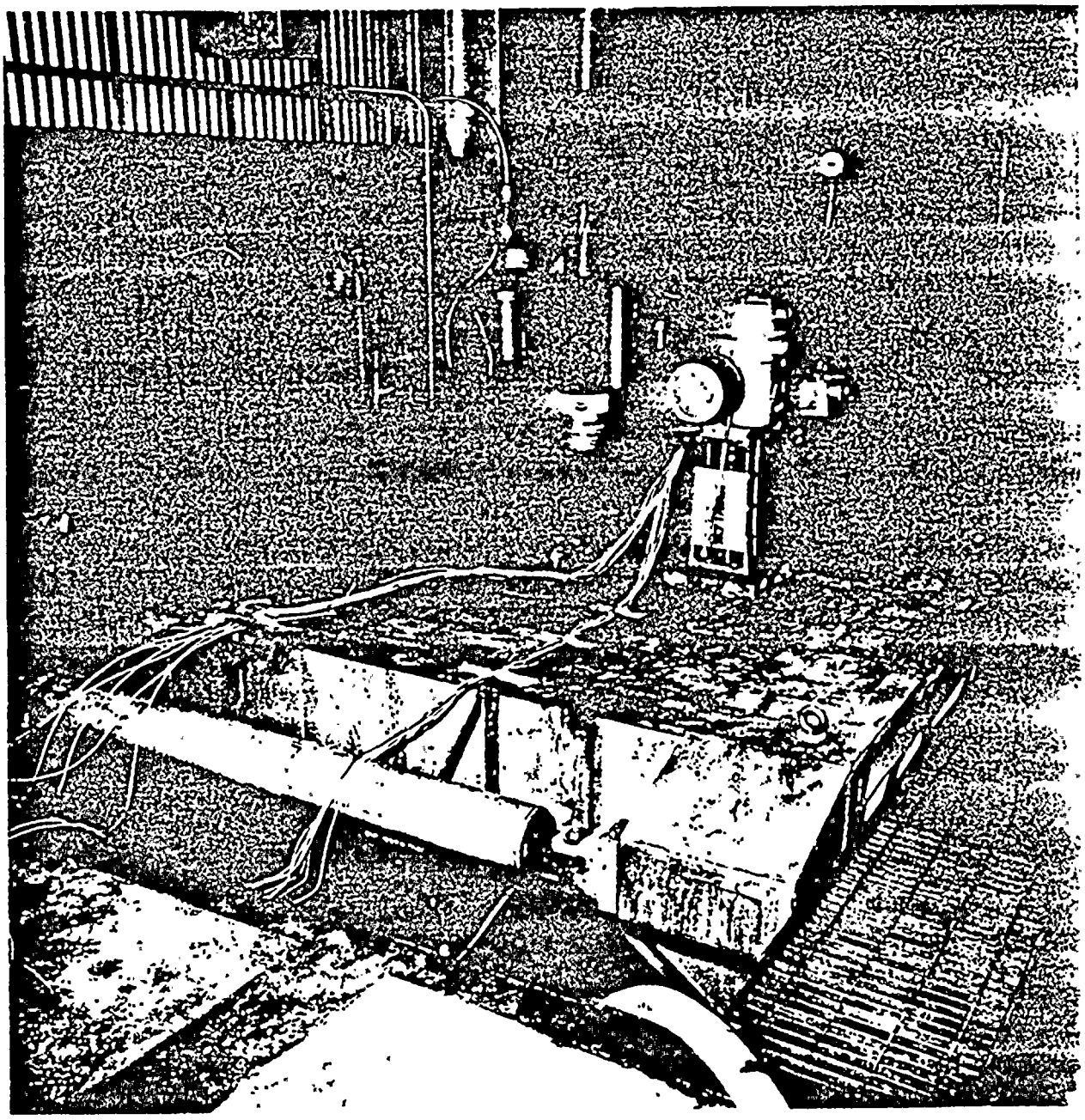
SHEET OF



PHOTOGRAPH 1

SEISMIC TEST - X-Z BIAXIAL PLANE SETUP



PHOTOGRAPH 2

SEISMIC TEST - Y-Z BIAXIAL PLANE SETUP

APPENDIX A.3.b

Industrial RTD assemblies used on the APCI Hydrogen Recombiner System are Thermo Electric Models 80500 in accordance with Thermo Electric Drawing 27645.

Industrial four-point RTD assemblies (rakes) used on the APCI Hydrogen Recombiner System are specially constructed in accordance with Thermo Electric Drawing 16399-C-32109-75.

APPENDIX B.2.b

Moore Industries Switches are located on the following drawings:

Tag No.	Drawing No.
PS-68 A & B	8696-753-01
TS-2 A & B	8696-753-02
TS-3 A & B	8696-753-02
TS-5 A & B	8696-753-02
TS-6 A & B	8696-753-02
TS-7 A & B	8696-753-02
FS-6 A & B	8696-753-03
LS-1 A & B	8696-753-03

Gould Inc., Electrical Products Group
2002 Bethel Rd., Finksburg, MD 21048
Telephone (301) 876-2214

GOULD

JUNE 8, 1979

AIR PRODUCTS, INC.
1919 VULTEE STREET
ALLENTOWN, PA. 18103

ATTENTION: MR. FRED MANSFIELD

DEAR MR. MANSFIELD:

THIS LETTER IS TO CERTIFY THAT GOULD CLASS A10 NEMA RATED CONTACTORS ARE MANUFACTURED IN COMPLIANCE WITH U.L. SPECIFICATION 508. GOULD CLASS A10 CONTACTORS ARE LISTED WITH UNDERWRITERS LABORATORIES, INC. UNDER THE FOLLOWING FILE NUMBER:

FILE NO. E37024-A
GUIDE NLDX
DATED NOVEMBER 9, 1977
GOULD INC., CONTROL & SYSTEMS DIV.,
WESTMINSTER, MD. 21157

THESE ITEMS WERE ENTERED ON THE FOLLOWING PURCHASE ORDERS:

AIR PRODUCTS P.O. AN61081
WEST CHESTER ELECTRIC P.O. C45471

RESPECTFULLY,

THOMAS J. FOWLER
PRODUCT SPECIALIST
CONTROL COMPONENTS

TJF/SAS

APPENDIX C.1.a

PERFORMANCE TEST PROCEDURE OF HYDROGEN RECOMBINER SYSTEM

Manufacturer	APCI
Drawing Number	00-4-1371-25.10-02A

THERMAL CYCLE TEST PROCEDURE

Manufacturer	APCI
Drawing Number	500122A

DYNAMIC TESTING PROCEDURE

Manufacturer	APCI
Drawing Number	500134A

NUCLEAR STAMP (IF REQ'D.)

R 1 7 7

PERFORMANCE TEST SPECIFICATION
NON-INERTED CONTAINMENT

POST LOCA HYDROGEN RECOMBINER SYSTEM

WPPSS NUCLEAR PROJECT NO. 2

CONTRACT 2808-71

AIR PRODUCTS NO. 00-4-1371

FOR

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

REV	ECN NO.	SHEET NO'S REVISED	DATE	QUALITY ASSURANCE (IF REQ'D.) SIGN	DATE	BY	ENGRG. MGR.	P.E. SIGN. (IF REQ'D.)
A	E-6517	8, 11	—	—	1-24-77			—

DESIGN APPROVAL

P.E. STAMP IF REQ'D.	BY G. F. Becker	ENGRG. MGR.	Air Products and Chemicals ALLENTOWN PA.
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	TITLE		NO. 00-4-1371-25.10-02A
			SH. 1 OF 11

FORM 29 (JAN. '73)

PERFORMANCE TEST SPECIFICATION
POST LOCA HYDROGEN RECOMBINER SYSTEM
NON-INERTED CONTAINMENT
WPPSS NUCLEAR PROJECT NO. 2
CONTRACT 2808-71
APCI PROJECT NO. 00-4-1371
FOR WASHINGTON PUBLIC POWER SUPPLY SYSTEM

I. Introduction

This specification is designed to set forth the operating performance test of the Post LOCA Hydrogen Recombiner System fabricated by Air Products and Chemicals, Inc. for Washington Public Power Supply System.

II. Performance Test Objective

A. The primary objective of the performance test will be to demonstrate that the hydrogen recombiner is capable of 99% hydrogen recombination of the influent gas over the range of containment conditions listed below:

	Test Number					
	I	II	III	IV	V	VI
Simulated time from LOCA (days)	0.3 to 0.6	0.6 to 2	2-10	10+	Long Term	High Hydrogen
Pressure (psig)	18.0	12.5	5.0	3.0	1.0	1.0
Temperature (°F)	215	190	150	140	100	100
Water Content	SAT	SAT	SAT	SAT	SAT	SAT
Hydrogen Content (dry/wet) in v/o %	3.5/ 2.0	4.0/ 2.9	3.0/ 2.7	1.5/ 1.4	0.5/ 0.5	4%/ 4%
Oxygen Content (dry/wet) in v/o %	21.0/ 12.2	21.0/ 15.1	21.0/ 18.9	21.0/ 19.6	21.0/ 21.0	21.0/ 21.0
Containment Withdrawal Rate (SCFM/ACFM)	295/ 175	245/ 165	175/ 155	160/ 155	155/ 155	155/ 155
Test Duration (hours)	4	4	4	8	4	4
Ratio setpoint	0.5	0.35	0.20	0.10	0.00	0.00

NOTE: The ratio setpoint is the ratio of the recycle flow rate (FE-7) to the system flow rate (FE-6).

B. The test will demonstrate the recombination efficiency of greater than or equal to 99.0%. The recombination efficiency shall be defined as $\frac{(H_2)\text{in} - (H_2)\text{ out}}{(H_2)\text{ in}}$ with all concentrations being on a dry basis.

C. The performance test shall demonstrate that the recombiner preheater will preheat the feed gas to 500°-550°F, the aftercooler will cool the gas to 150°F or lower, and the aftercooler pressure drop through the water side (tubes) is less than 10 psi.

D. The performance test shall also demonstrate that the recombiners may be operated by following the instructions as presented in the Technical Operating Instruction Manual.

E. The above objectives will result in and be verified by a collection of sufficient operating data to reflect conclusive results.

III. Performance Test Acceptance Criteria

The results of the performance test will be considered acceptable when the above objectives have been satisfactorily achieved as determined by responsible Air Products' personnel and the chief representative of the customer witnessing the test.

IV. Performance Test Operating Procedure

A. Location

The hydrogen recombiner system shall be performance tested in Air Products Nuclear Laboratory in the Trexlertown shop. Equipment arrangement shall be in general accordance with Figure 1 (Test Equipment Arrangement) and Figure II (Performance Test Flowsheet).

B. Commissioning

The initial portion of the testing shall be a "commissioning checkout". This function will require that, as a minimum, the following items are checked:

1. Check the 480 VAC/60 Hz/3 ph and 120 VAC/60 Hz/1 ph electrical circuits. All circuits shall be wired, checked for continuity, and checked for proper installation.

2. All control valves shall be stroked and associated equipment shall be calibrated. All controlling instrumentation and transmitters shall be calibrated for proper inputs and outputs.

3. All alarm and shutdown switches shall be set as listed in Table 1 and the shutdown functions shall all be checked for proper operation.

4. All test analyzers shall be installed and calibrated.

5. All utilities shall be checked for proper installation and readiness.

C. Operational Test (Ref. Engineering Flowsheet 00-4-1371-55.10 and Performance Test Flowsheet - Figure II)

With the "commissioning" satisfactorily completed, the actual performance testing shall begin. The sequence of testing shall be as follows:

1. Make sure all utilities are ready for service as follows:

   a. Establish steam pressure in the steam generator and pressurize up to V-4.

   b. Make sure air is available up to V-6.

   c. Make sure hydrogen is available up to V-3.

   d. Make sure potable water is available up to CAC-FCV-5.

   e. Calibrate and put in service the inlet and outlet hydrogen analyzer (H_2A).

   f. Open gas recycle valve V-7.

   g. Adjust the plant electrical controls (see drawing 4-1371-7001D) so that the skid can be started from the local panel.

2. Push the unit start button.

3. The blower should start and the preheater should come on. Observe preheater warm-up (TR1-7).

4. Check that CAC-V-2, CAC-FCV-5, CAC-V-3, and CAC-V-1 remain closed and CAC-FCV-6 and CAC-TCV-4 remain open.

5. As the catalyst bed is being preheated, start the cooling water pump in the closed circuit cooling water system.

6. While the preheating is taking place, put the following controllers on control at the following set points. RMC-2 set at 80% open, RMC-5 set to maintain acceptable blower outlet temperature TE-1A-1, TIC-4 set between 120°F and 150°F, and FIC-67 set at 0.5 ratio.

   NOTE: FIC-67 will be reset to 0.35, 0.20, 0.10, 0.00, and 0.00 for tests II, III, IV, V, and VI respectively.

7. When the preheat is completed, with the feed selector switch in the ON position, all valves should go to their normal operating positions.

Test I

8. Open V-6 and V-8 and adjust PCV-1 and V-7 to hold 18 psig at PI-10 while supplying 100 scfm air feed to the system through R-1.

9. Slowly start saturating the feed gas stream by opening V-4 and adding steam to bring the feed gas temperature to 215°F, as measured at TI-1.

   NOTE: While this is being done, readjust PCV-1 and V-7 to hold PI-10 at 18 psig.

10. Slowly admit hydrogen to the feed gas until it contains 3.5 v/o % hydrogen (measured on a dry basis).

11. When all conditions stabilize, record every hour all data listed in Table II for a four (4) hour test period.

Test II

12. Upon completion of Test I, reset FIC-67 to 0.35, reduce and maintain the pressure at PI-10 at 12.5 psig and the temperature at TI-1 at 190°F, adjust the hydrogen content of the feed gas to 4.0 v/o % (measured on a dry basis), and maintain 100 scfm air flow.

13. When all conditions stabilize, record every hour all data listed in Table II for a four (4) hour test period.

Test III

14. Upon completion of Test II, reset FIC-67 to 0.20, reduce and maintain the pressure at PI-10 at 5 psig and the temperature at TI-1 at 150°F, adjust the hydrogen content of the feed gas to 3 v/o % (measured on a dry basis), and maintain 100 scfm air flow.

15. When all conditions stabilize, record every hour all data listed in Table II for a four (4) hour test period.

Test IV

16. Upon completion of Test III, reset FIC-67 to 0.10, reduce and maintain the pressure at PI-10 at 3 psig and the temperature at TI-1 at 140°F, adjust the hydrogen content of the feed gas to 1.5 v/o% (measured on a dry basis), and maintain 100 scfm air flow.

17. When all conditions stabilize, record every hour all data listed in Table II for an eight (8) hour test period.

Test V

18. Upon completion of Test IV, reset FIC-67 to 0.00, reduce and maintain the pressure at PI-10 at 1.0 psig and the temperature at TI-1 at 100°F, adjust the hydrogen content of the feed gas to 0.5 v/o% (measured on a dry basis), and maintain 100 scfm air flow.

19. When all conditions stabilize, record every hour all data listed in Table II for a four (4) hour test period.

Test VI

20. Upon completion of test V, adjust the hydrogen content of the feed gas to 4.0 v/o% (measured on a dry basis), and maintain other parameters as designated in Test V.

21. When all conditions stabilize, record every hour all data listed in Table II for a four (4) hour test period.

22. Upon completion of the above tests, the system shall be shutdown and secured in accordance with the Technical Operation Instruction Manual.

Table 1

Setpoints

Switch	Description	Alarm	Shutdown	Other
TS-2	Heater Element Temp.	1075°F Incr.	1100°F Incr.	--
TS-3	Heater Outlet(Band)	--	600°F Incr.	560°F Incr./540°F Decreasing
TS-5	Recombiner Outlet	1150°F Incr.	1150°F Incr.	Ready lite @ 400°F
TS-6	Phase Separator Outlet	175°F Incr.	200°F Incr.	--
TS-7	Blower Outlet	260°F Incr.	300°F Incr.	--
FS-6	Total Flow	75 scfm Decr.	50 scfm Decr.	--
PS-68A	Tube Rupture Sensor	5 psig Incr.	45 psig Incr.	--

NUCLEAR STAMP (IF REQ'D.)

Table II

Data Sheet

Temperatures

CAC-FN-1 Blower Discharge	TR-1-1 (°F)
CAC-CR-1 Recombiner Bed	TR-1-2 (°F)
CAC-CR-1 Recombiner Bed	TR-1-3 (°F)
CAC-CR-1 Recombiner Bed	TR-1-4 (°F)
CAC-CR-1 Recombiner Bed	TR-1-5 (°F)
CAC-CR-1 Recombiner Outlet	TR-1-6 (°F)
CAC-CR-1 Recombiner Inlet	TR-1-7 (°F)
CAC-MS-1 Separator Outlet	TIC-4 (°F)
Feed Gas to CAC-AW-1 Scrubber	TI-1 (°F)
CW to CAC-EV-1 Aftercooler	TI-2 (°F)
CW from CAC-EV-1 Aftercooler	TI-3 (°F)
Water to CAC-AW-1 Scrubber	TI-4 (°F)
Water from CAC-AW-1 Scrubber	TI-5 (°F)

Pressures

CAC-FN-1 Blower Suction	PI-1 (psig)
CAC-FN-1 Blower Discharge	PI-2 (psig)
Feed to Skid	PI-10 (psig)
Cooler Pressure Drop	PI-4 and 5 (psig)

Flows

Gas from CAC-MS-1 Separator	FR-67 (scfh)
Recycle Gas Flow	FR-67 (scfh)
Ratio Set Point	
Service Water to CAC-AW-1 Scrubber	FI-5 (gpm)
Feed Gas to CAC-AW-1 Scrubber	FI-1 (scfh)
Air Supply Flow	R-1 (scfh)
Hydrogen Supply Flow	R-2 (SCFH)
CW to CAC-EV-1 Aftercooler	R-3 (gpm)

Table II (Con't.)

Data Sheet

Electrical

CAC-FN-1 Motor	Amps
	Volts
CAC-EHC-1 Preheater	Amps
	Volts

Purities

Hydrogen to CAC-AW-1 Scrubber	H_2A-1 (%)
Hydrogen to CAC-FN-1 Blower	H_2A-1 (%)
Hydrogen from CAC-MS-1 Separator	H_2A-2 (ppm)

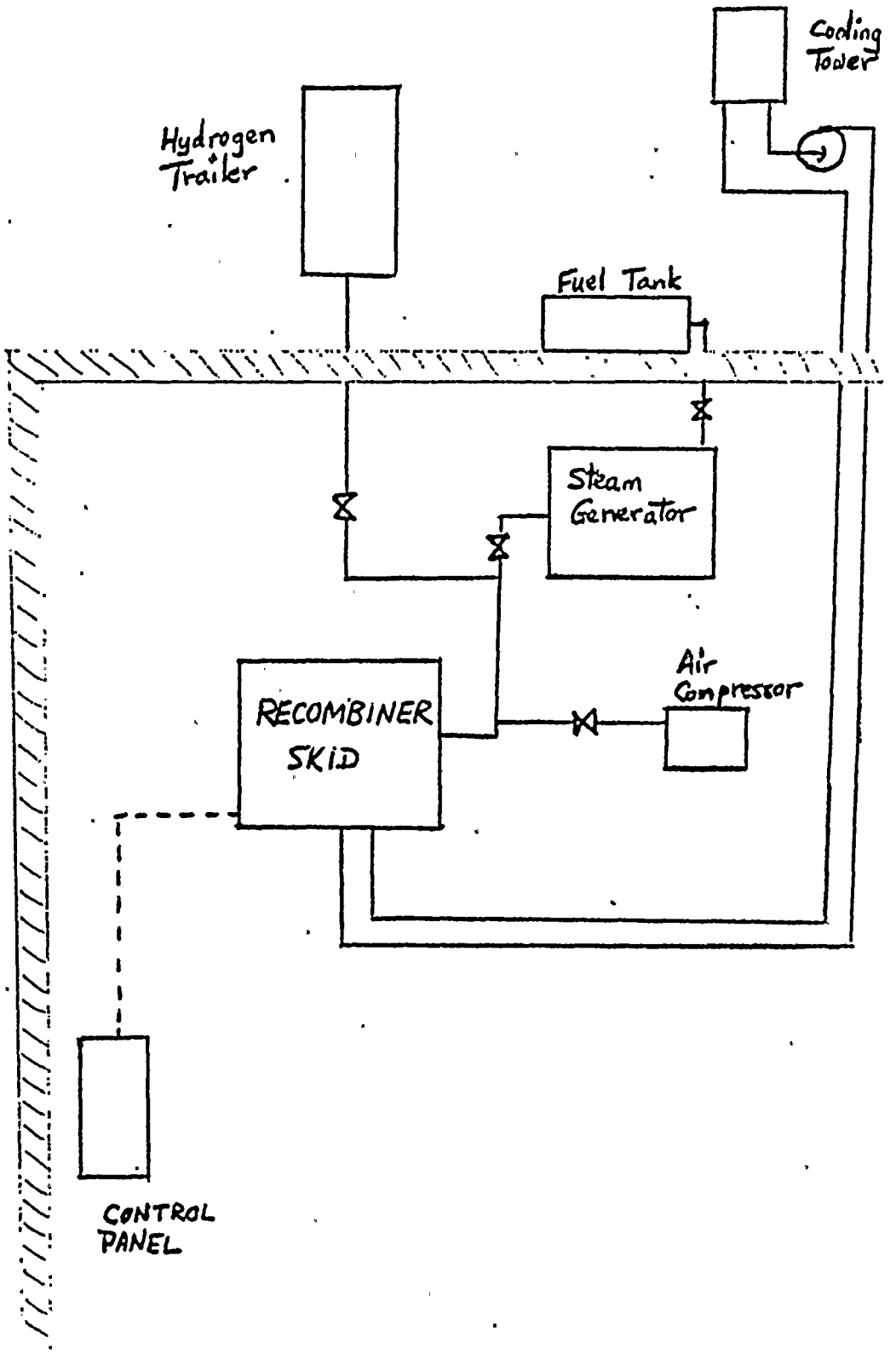


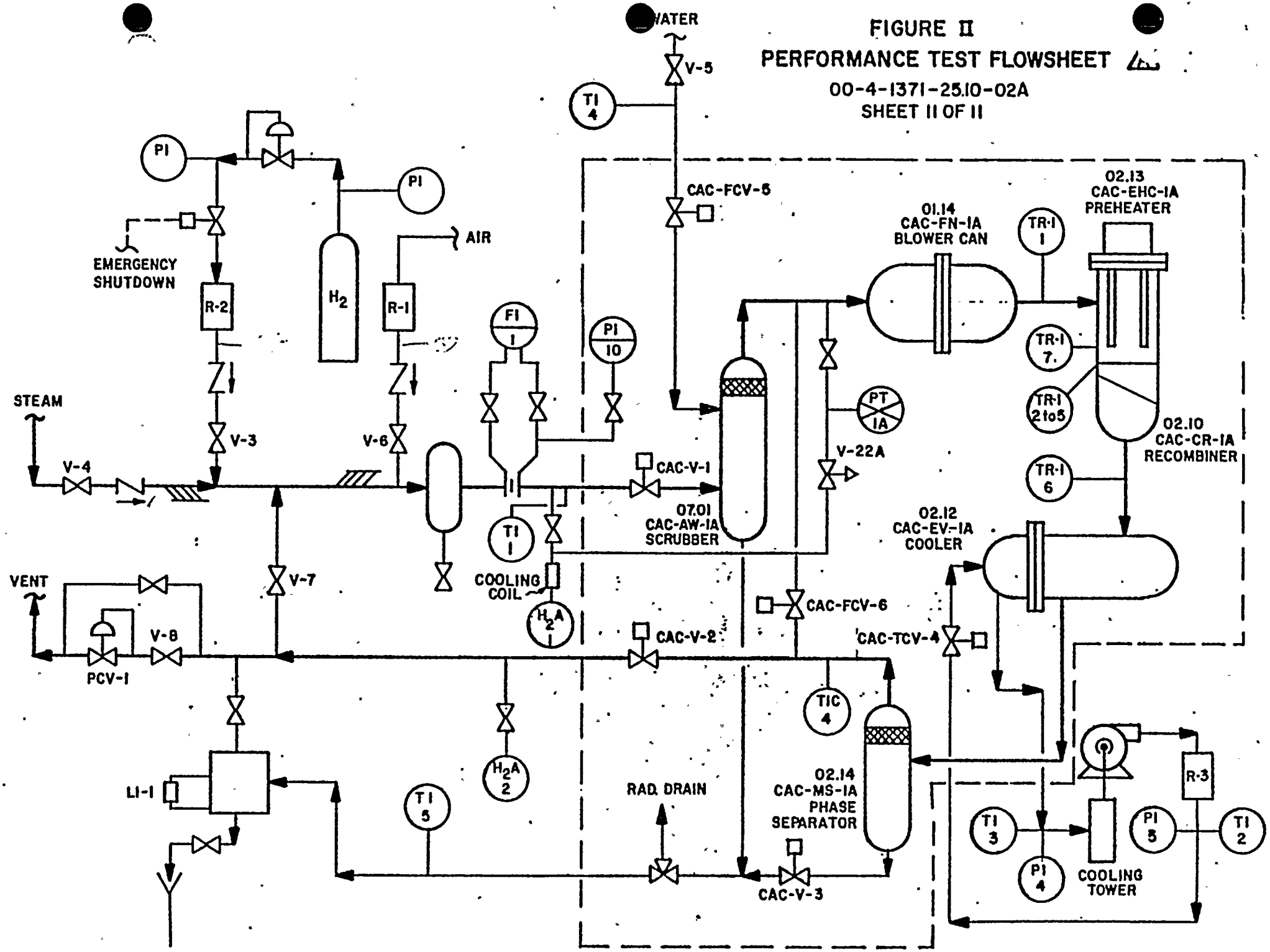
FIGURE I

TEST EQUIPMENT ARRANGEMENT

00-4-1371-25.10-02A

FIGURE II
PERFORMANCE TEST FLOWSHEET

00-4-1371-25.10-02A
SHEET II OF II



THERMAL CYCLE TEST PROCEDURE

for the

HYDROGEN RECOMBINER SYSTEM

on

WPPSS CONTRACT 2808-71

APCI PROJECT 00-4-1371

REV	ECN NO.	SHEET NO'S REVISED	DATE QUALITY ASSURANCE (IF REQ'D.)	SIGN QUALITY ASSURANCE (IF REQ'D.)	DATE	BY	ENGRG. MGR.	P.E. SIGN. (IF REQ'D.)
C	E-8655	5			14DEC.78	R.F. Ponden	R.M. Bell	
B	E-8652	4,5,6,7			13Nov78	R. Ponden	R.M. Bell	
A	E-8651	4,5,6,10,7			2NOV1978	M. Lipson	R.M. Bell	

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P. E. STAMP IF REQ'D.

BY R. Ponden

DATE 19 October 1978

ENGRG. MGR. R.M. Bell

Q. A. APP'D. (IF REQ'D.) 25 October 78

Air Products and Chemicals Inc.

ALLENTOWN PA.

TITLE

Thermal Cycle Test Procedure

NO. 500122 A

SH. 1 OF 10

NUCLEAR STAMP (IF REQ'D.)

THERMAL CYCLE TEST PROCEDURE
for the
HYDROGEN RECOMBINER SYSTEM
on
WPPSS CONTRACT 2808-71
APCI PROJECT 00-4-1371

I. INTRODUCTION

Air Products and Chemicals, Inc. is supplying the Washington Public Power Supply System with the Post-Loca Hydrogen Recombiner System for use as safeguard equipment. During the lifetime of the plant, the system will be tested semi-annually to a preheat operating condition which involves the energization of the blower motor and heater. This procedure presents a test method for cycling the system to qualify the blower, motor, and heater for the operating effects of the 40 year surveillance testing.

II. OBJECTIVE

The purpose of this test is to operate the system through 80 preheat cycles and demonstrate the integrity of the blower, motor, and heater to withstand the operational effects due to periodic system testing. These effects are a result of the stresses created by equipment operation and include thermal and mechanical cyclic aging.

III. METHOD

The test entails the on-off cycling of the power supply to the blower motor and heater to simulate the operational aging effects on the blower, motor, and heater. For each cycle, the equipment is energized; air is circulated through the system by the blower and is heated in the preheat chamber of the recombiner vessel to 550°F. Upon reaching this temperature, the heater is de-energized and the preheat chamber is cooled below 200°F to complete the cycle. This thermal cycle is continuously charted on the system's temperature recorder for each of the 80 cycles. (1)

During the test, the following parameters will be monitored and recorded at regular intervals:

Motor	Power Input Current Draw Voltage Frequency
Blower	Discharge Temperature Discharge Pressure Inlet Temperature Inlet Pressure Flow Rate
Heater	Current Draw Voltage

These results will be compared to baseline data to verify the integrity.

(1) Documented thermal cycles accomplished on previous testing of this system are acceptable towards fulfilling cycle requirements.

IV. TEST PROCEDURE (Reference: Flowsheet 00-4-1371-55.10)

A. Location

The test will be conducted in the APCI Nuclear Test Lab at the Trexlertown facilities using skid P/N-2041 (CAC-HR-1B) and control panel P/N 2040 (CAC-HR-1A) presently set up for performance testing. A

B. Preparation

1. Connect drains from the 07.01 Scrubber (CAC-AW-1B) and 01.14 Blower Container (CAC-FN-1B) to the skid drain line number PC-120 through use of flexible tubing. Put plug in drain line PC-111, and assure drain line PC-116 is run to shop drain sump. B A B

2. Install an electric timer to control the thermal cycles.* B

3. Attach the motor analyzer for monitoring the motor performance.

4. Install air filter (G.J. Oliver type AF-210) on the 2" inlet line (2-CFG-100-SS.5N-Sp). This air filter is rated for 175 scfm flow and 10 micron filtration at 99.3% efficiency. The purpose of the filter is to prevent the introduction of any airborne contaminants into the system. B A

5. Obtain amp and volt meters to monitor the heater performance.

C. Commissioning

1. Operate the timer through a cycle to verify installation connections.

2. Inspect the wiring of the 480 VAC/60 Hz/3 ph and 120 VAC/60 Hz/1 ph circuits for proper installation.

3. Calibrate all instrumentation on control panel and recombiner skid to equipment specifications.

4. Set all system alarm and shutdown switches according to Table 1

*Thermal cycling can be automatically or manually controlled.

and check the shutdown operations for proper function.

5. Check all test instrumentation for validated inspection stickers.

6. Close the following hand valves on skid: CAC-V-51, CAC-V-59, CAC-V-58, CAC-V-21, CAC-V-22, and CAC-V-61. All other hand valves should be open. Drain valve CAC-V-57 should be closed to shop drain sump. A

D. Pre-Test Cycle

1. Start system in the following sequence (Reference: Figure 1).

a. turn on Breakers #1, #3 (AC) and #5 (AC) at Terminal Box #1.

b. turn on 480 VAC Valves Breaker.

c. turn on 480 VAC Blower Breaker.

d. turn on Cooling Tower Fan Breaker.

e. turn on Cooling Water Pump Breaker.

NOTE: For a, b, c, d, and e above, press "RESET" and "START" buttons on breakers.

f. press "START" buttons for valves and pump located at Terminal Box #2.

g. turn on Heater Breaker.

h. close pump recirculating valve to achieve max. flow on R-3. B C

i. turn on CAC-RMS-9 (Panel Power). B

j. turn on CAC-SS-2 (Mode Selector). B

NOTE: All other switches are to be "OFF".

k. turn feed selector to "ON" position.

l. set RMC-5 to "0". B

m. set TIC-4 at 100% open on "Manual". B

n. set RMC-2 at 100% open. B

o. set FIC 67 for maximum recycle flow. B

p. turn on recycle recorder (FR-67) and temperature recorder (TR-1).

q. check motor analyzer for the following:

1) the cover is off.

2) voltage switch is set at 600V.

3) the wire terminals are securely fastened.

4) the voltage terminal transfer switch is set at "COM".

r. close the pressure survey valves.

s. start the timer.

2. With system in operation:

a. confirm valves CAC-V-1 and CAC-V-2 are open by checking indicator lights on control panel.

b. confirm valve CAC-FCV-6 is 100% open by checking FR-67 for flow through FE-7. B

c. confirm heater operation by observing temperature rise on recorder (TR-1-7). A

d. confirm PI-1 and PI-2 are operating.

e. record the motor, blower and heater performance for baseline data by completing data sheet (Figure 2).

f. check timer settings and thermal cycle against the temperature recorder (TR-1-7). Make the necessary adjustments for timer, then proceed to test, Section E. A

E. Test

1. Start system per Step I in Section D, Pre-Test Cycle.

2. During the first and last cycle on each test day:(a) record the performance by completing data sheet (Figure 2), and A

(b) open valve CAC-V-57 to plant drain sump and remove any build-up of condensate from the scrubber or blower container. Close valve CAC-V-57 after removal of condensate.

3. Check recorder charts on TR-1 and FR-67 at the start and completion of each test day to assure proper thermal cycling and system performance.

4. At the end of each test day, shutdown the system by:

   a. turning off CAC-SS-2, △D

   b. turning off recorders TR-1 and FR-67. △D

   c. turning off all switches at switchboard.

   d. opening pump valve.

   e. turning off Heater Breaker.

   f. turning off Cooling Water Pump Breaker.

   g. turning off Cooling Water Fan Breaker.

   h. turning off 480 VAC Blower Breaker.

   i. turning off 480 VAC Valves Breaker.

   j. turning off Breakers #1 (DC), #3 (AC), and #5 (AC) at Terminal Box #1.

   k. turn off timer.

   l. drain water out of cooling tower to prevent freezing (if req'd.) △A △D

Table 1

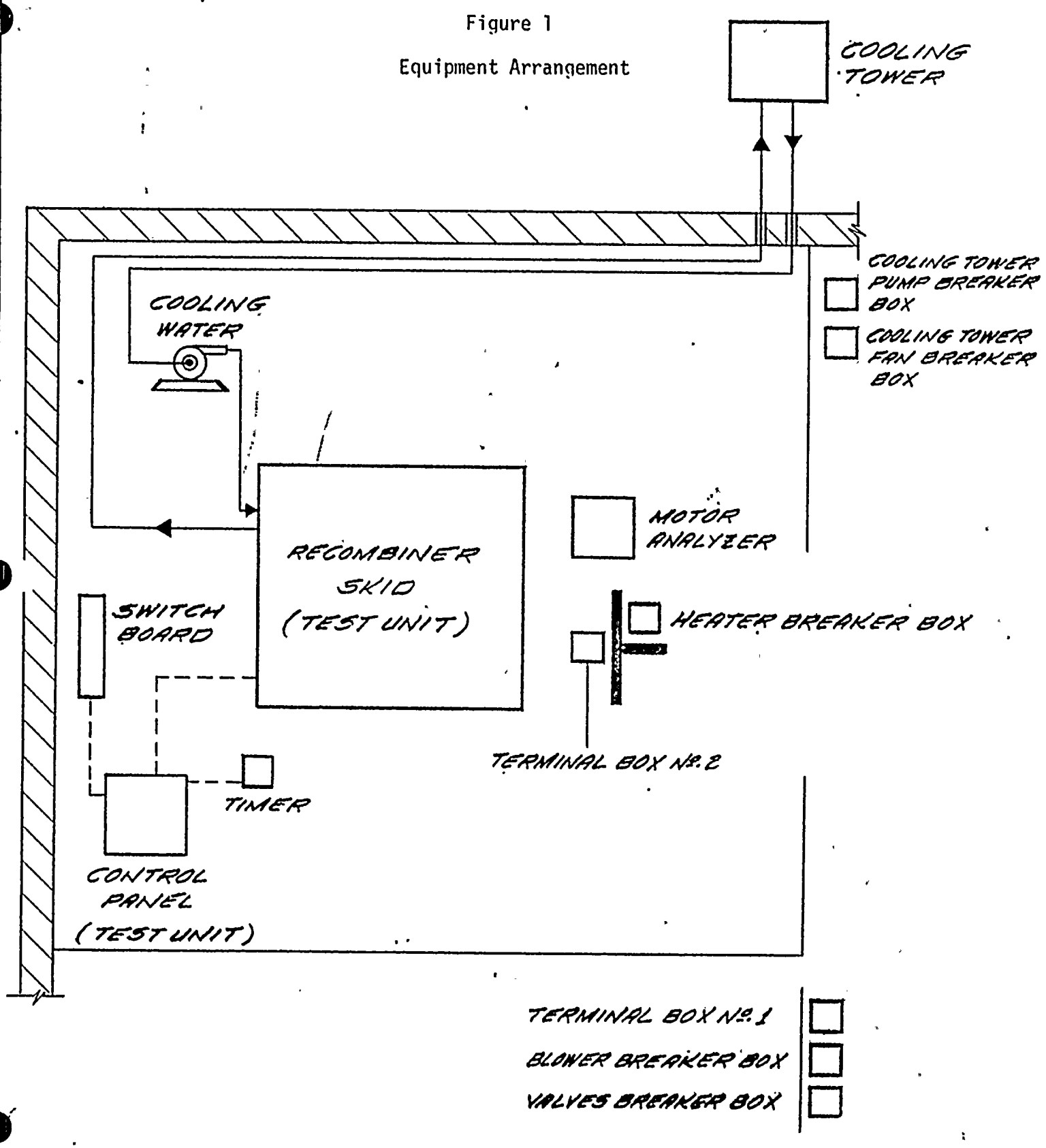
Setpoints

Switch	Description	Alarm	Shutdown	Other
TS-2	Heater Element Temp.	1075°F Incr.	1100°F Incr.	--
TS-3	Heater Outlet (Band)	600°F Incr.		520°F Incr./500°F Decreasing
TS-5	Recombiner Outlet	1150°F Incr.	1150°F Incr.	Ready lite @ 400°F
TS-6	Phase Separtor Outlet	175°F Incr.	220°F Incr.	--
TS-7	Blower Outlet	260°F Incr.	300°F Incr.	--
FS-6	Total Flow	75 scfm Decr.	50 scfm Decr.	--
PS-68	Tube Rupture Sensor	5 psig Incr.	45 psig Incr.	--

NUCLEAR STAMP (IF REQ'D.)

Figure 1

Equipment Arrangement



FORM 8230-1 (12/76)

TITLE		NO.
Thermal Cycle Test Procedure	Air Products ALLENTOWN, PA.	500122 A
		SH. 9 OF 10

NUCLEAR STAMP (IF REQ'D.)

Figure 2

Test Data Sheet.

Date:	_____	_____
Time:	_____	_____
Cycle:	_____	_____
Motor Performance		
Kilowatts	_____	_____
Volts	_____	_____
Amps	_____	_____
Frequency	_____	_____
Blower Performance		
Inlet Press, PSIG, PI-1	_____	_____
Discharge Press, PSIG, PI-2	_____	_____
Inlet Temp, ^{o}F, TI-1	_____	_____
Discharge Temp, ^{o}F, TR-1-1	_____	_____
Ambient Press., in. Hg	_____	_____
Relative Humidity	_____	_____
Flow, cfm, FR-6	_____	_____
Heater Performance		
Volts	_____	_____
Amps	_____	_____
Recorder charts (TR-1 and FR-67) checked	_____	_____
Drain Valve CAC-V-57 opened for condensate removal & closed.	_____	_____

Recorded by:

DYNAMIC TESTING PROCEDURE

for the

HYDROGEN RECOMBINER SYSTEM

on

WPPSS CONTRACT 2808-71

APCI PROJECT 00-4-1371

REV	ECN NO.	SHEET NO'S REVISED	DATE	SIGN QUALITY ASSURANCE (IF REQ'D.)	DATE	BY	ENGRG. MGR.	P.E. SIGN. (IF REQ'D.)

DESIGN APPROVAL

BY R.F. Ponden

DATE Oct 16, 1979

ENGRG. MGR.

Q. A. APP'D. (IF REQ'D.)

Air Products

ALLENTOWN PA.

TITLE

DYNAMIC TESTING PROCEDURE

NO. 500134A

SH. 1 OF 8

FORM 8229 (REV. 9/76)

I. INTRODUCTION

Air Products and Chemicals, Inc. is supplying the Washington Public Power Supply System with the Post-LOCA Hydrogen Recombiner System for use as safeguard equipment. During the lifetime of the plant, including a possible LOCA, the system may be subjected to seismic events, but must still be capable of performing its safety related function. This procedure, including Wyle Laboratories Test Procedure 541/0758-1/DK dated June 4, 1979, presents the total test plan to be employed in the dynamic (seismic shaker table) testing of the hydrogen recombiner system. Hydrogen recombination and thermal cycling tests have been done previously and will not be repeated. The same system used for previous performance and thermal cycle tests will be used for this dynamic test.

II. OBJECTIVE

The purpose of this test is to verify that the Post LOCA recombiner system, consisting of a control panel and a recombiner skid, will be able to successfully complete functional testing after being subjected to the contract combined response curves. The vibration testing will be conducted in accordance with the recommended practices of IEEE-344-1975 and sufficient data will be recorded to demonstrate that the system mechanically operates before and after this testing. Completion of this test plan will demonstrate the integrity of the recombiner system to withstand the postulated dynamic events.

III. METHODS

1. Functional Test

A functional test will be conducted to establish and verify baseline operations after each phase of vibration testing. This test will involve energizing the skid and control panel instrumentation(1) and operating the system up to steady-state preheat temperatures by circulating ambient air through the system and heating the air in the preheat chamber of the recombiner vessel to the control temperature of approximately 500°F. At steady-state, the following parameters will be monitored, recorded, and compared to baseline data to verify functional capability.

Motor	Power Input Current Voltage
Blower	Discharge Temp. (TE-1-1) Discharge Press. (PI-2) Inlet Temp. (Ambient) Inlet Press. (PI-1) Flow Rate (FE-6)
Heater	Current Voltage Temp. at Preheater Outlet (TE-1-7)
Control Valves	Energized to normal operating position.

(1) The following items are not connected for the functional test (a) Control valve limit switches and lights, (b) Temperature, pressure and flow signals to the client's panel (main control board), (c) Control signals to or from the client's panel (main control board).

2. Vibration Testing

The system will be proof tested as described in Wyle Test Plan 541/0758-1/DK of June 4, 1979 with the following changes or clarifications.

a. Test Sequence

Phase #1 — 5 OBE tests
Functional Test
Phase #2 — 1 SSE test w/o system operating
Functional Test
Phase #3 — 1 SSE test with system operating
Functional Test

Rotate the system 90° on the seismic shaker table and repeat Phases #1, 2, and 3 with associated functional tests.

b. The duration of each test run will be 30 seconds minimum.

c. The control panel and recombiner skid will be simultaneously vibration tested.

d. The test will cover a required frequency range of 1-90 Hz minimum.

e. The RRS for OBE testing will be the following seismic response curves received from the client.

Figure 1-15A dtd. 3/5/79 — Combined Response Curve OBE + SRV - Horiz. (Damping = 0.01)

Figure 2-15A dtd. 3/5/79 — Combined Response Curve OBE + SRV - Vert. (Damping = 0.01)

f. The RRS for SSE testing will be the following seismic response curves received from the client.

Figure 5-15A dtd. 3/5/79 — Combined Response Curve SSE + SRV + LOCA - Horiz. (Damping = 0.02)

Figure 6-15A dtd. 3/5/79 — Combined Response Curve SSE + SRV + LOCA - Vert. (Damping = 0.02)

3. Acceptance Criteria

a. The system shall be capable of functioning after each phase of testing without any need for equipment replacement or modification. The functional capability of the system will be demonstrated by comparing the results of each functional

test to the baseline data. The results of the functional testing shall be within ± 5% of the baseline data. Sources of variation outside of the recombiner system boundary, such as supply power changes and accuracy of monitoring equipment shall be added to the above tolerance for the baseline data.

b. For vibration test Phase #3, the equipment must function before and after the test. The equipment may trip-out during the test phase, but must be capable of restart after the test phase and demonstrate functional results.

c. A safety related component failure during the vibration test does not necessarily constitute a system dynamic test failure. If the component which failed can be immediately replaced or modified, then either: (1) the testing sequence may resume from the time in the sequence when the failure occurred, providing that sufficient documentation or justification is available, or can be generated, to verify that the replaced or modified component is qualified to the system criteria; or (2) the vibration testing may be restarted from the beginning so that the replaced or modified component is qualified through the entire vibration test sequence. Compoent changes which require extensive effort and time may be done after the vibration test completion; with the component subsequently qualified independent of the system, but to the same criteria. In this case the system testing would resume and the system will be qualified without the failed component.

d. The following components in the control panel being tested are considered non-essential to the safety related function of the system and are therefore excluded from the above acceptance criteria: panel-mounted annunciator, flow recorder, and temperature recorder and skid-mounted pressure gages and rotameters.

IV. PROCEDURE (Ref. Flowsheet 004-1371-55.10)

1. Location and Items

The test will be conducted at Wyle Laboratories, in Huntsville, Alabama, using Skid P/N 2041 (CAC-HR-1B) and Control Panel P/N 2040 (CAC-HR-1A) which were used for a performance test and the thermal cycle test.

2. Preparation

a. Install air filter (G. J. Oliver Type AF-210) in the 2" inlet line (2-CFG-100-SS.5N-Sp).

b. Connect electrical cable assemblies between skid and control panel. Install the motor starter and heater contactor.

c. Connect the 480 VAC/60 Hz/3 ph and 120 VAC/60 Hz/1 ph power lines to the control panel, motor starter and heater contactor.

d. Connect the seven (7) electrical monitoring lines and the six (6) accelerometers provided by Wyle.

e. Connect water supply to 2" inlet pipe (2-CS-113-CS2N-Sp2) on aftercooler.

f. Connect drain line to 2" outlet pipe (2-CS-112-CS3N-Sp2) on aftercooler.

3. Commissioning

a. Inspect all wiring for proper installation.

b. Calibrate instrumentation being used on control panel and skid to equipment specifications.

c. Set all system alarm and shutdown switches according to Table 1, and check shutdown operations for proper function.

d. Close the following hand valves: CAC-V-51, CAC-V-59, CAC-V-21, CAC-V-58, CAC-V-57, CAC-V-22, and CAC-V-61. All other hand valves are to be open. All inlet and outlet lines are to remain capped unless otherwise noted.

4. Functional Test

a. Start cooling water flow for aftercooler.

b. Operate system through preheat cycle to confirm:

(1) Valve CAC-V-1 and CAC-V-2 are open by checking stem travel visually.

(2) Valve CAC-FCV-6 is 100% open by checking FR-67 for flow through FE-7.

(3) Heater operation by observing temperature rise on recorder (TR-1-7).

(4) PI-1 and PI-2 are operating.

c. Record the motor, blower, and heater performance for baseline data by completing data sheet (Figure 2) when system reaches steady-state.

5. Vibration testing by Wyle Laboratories.

TABLE 1

Setpoints

Switch	Description	Alarm	Shutdown	Other
TS-2	Heater Element Temp.	1075°F Incr.	1100°F Incr.	--
TS-3	Heater Outlet (Band)	600°F Incr.		520°F Incr./500°F Decreasing
TS-5	Recombiner Outlet	1150°F Incr.	1150°F Incr.	Ready light @ 400°F
TS-6	Phase Separator Outlet	175°F Incr.	220°F Incr.	--
TS-7	Blower Outlet	260°F Incr	300°F Incr.	--
FS-6	Total Flow	75 scfm Decr.	50 scfm Decr.	--
PS-68	Tube Rupture Sensor	15 psig Incr.	45 psig Incr.	--

FIGURE 2 - Test Data Sheet

NUCLEAR STAMP (IF REQ'D.)

Date:		
Time:		
Phase:		
Motor Performance:		
Kilowatts		
Volts		
Amps		
Blower Performance:		
Inlet Press., PSIG, PI-1		
Discharge Press., PSIG, PI-2		
Inlet Temp., °F, Ambient		
Discharge Temp., °F, TE-1-1		
Ambient Pressure, in. Hg		
Preheat Outlet Temp., °F, TE-1-7		
Flow, scfm, FE-6		
Heater Performance:		
Volts		
Amps		
Valve Positions Checked:		
CAC-V-1		
CAC-FCV-5		
CAC-TCV-4		
CAC-V-3		
CAC-FCV-6		
CAC-V-2		

APPENDIX C.2.a

The following complete test reports have been submitted to the client and the titles are included here for reference:

1. Performance Test (Non-Inerted Containment)

2. Thermal Cycle Test Performance

3. Dynamic Testing

MECHANICAL DESIGN REPORT
00-4-1371-5430-04A
Addenda No. 1

Post LOCA Hydrogen Recombiner System
Washington Public Power Supply System
WPPSS Nuclear Proj. #2 - Contract #2808-71

Air Products & Chemicals, Inc.

Computer Output
Book 3 of 3

8009230352

3/4"-PC-121-SS.5N-SP

GROUP 7C

```
START NC3600 NO PRODUCTION NO TAPE 31
BLOWER DRAIN LINE
GEOMETRY
BLOWER DRAIN LINE
COORDINATES INCHES
1 0 0 0
2 0 2 0
4 0 4.5 0
6 15.5 4.5 0
7 39.5 4.5 0
8 64 4.5 0
10 79 4.5 0
12 79 10 0
14 79 13 0
16 82 13 0
17 84.5 13 0
19 99 13 0
21 99 13 8
23 0 -14 0
25 5.5 -14 0
27 11 -14 0
29 11 -22 0
31 11 -31 0
33 8 -31 0
35 4 -31 0
37 4 -31 -8
38 4 -31 -16
BOUNDARY
2 ZXSTOP
21 ANCHOR
38 ANCHOR
6 YZSTOP
8 YZSTOP
12 ZXSTOP
MATERIAL 304SS
70 28300000 .3 .0000091 18800
175 27775000 .3 .00000930
SIF
101 2.1 2.1 1
102 2.1 2.1 1
BRANCH 1 304SS 25 1
RUN 1 2 1.05 .113 .09 1
RUN 2 0 1.05 .113 .09 2
ELBOW 4 .75 1.55 .25 .26 0 101
RUN 0 6 1.05 .113 .01 1
RUN 6 7 1.05 .113 .09 0
RUN 7 8
RUN 8 0 1.05 .113 .09 0
ELBOW 10 .75 1.55 .25 .26 0 101
RUN 0 12 1.05 .113 .09 0
RUN 12 0 1.05 .113 .09 2
ELBOW 14 .75 1.55 .25 .26 0 101
RUN 0 16 1.05 .113 .09 3
RUN 16 17
RUN 17 0
ELBOW 19 .75 1.55 .25 .26 0 101
RUN 0 21 1.05 .113 .09 1
RUN 1 0 1.05 .113 .09 3
ELBOW 23 .75 1.55 .25 .26 0 101
```

```
RUN 0 25 1.05 .113 .09 1
RUN 25 0 1.05 .113 .09 2
ELBOW 27 .75 1.55 .25 .26 0 101
RUN 0 29 1.05 .113 .09 1
RUN 29 0 1.05 .113 .09 2
ELBOW 31 .75 1.55 .25 .26 0 101
RUN 0 33 1.05 .113 .09 1
RUN 33 0 1.05 .113 .09 2
ELBOW 35 .75 1.55 .25 .26 0 101
RUN 0 37 1.05 .113 .09 1
RUN 37 38 1.05 .113 .09 0
LOAD 1
DESIGN
DEADWEIGHT -Z 1.0
FORCE 16 0 0 3
FORCE 17 0 0 3
LOAD 2
VERTICAL +Z
DEADWEIGHT +Z 1.0
FORCE 16 0 0 3
FORCE 17 0 0 3
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
FORCE 16 3
FORCE 17 3
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
FORCE 16 3
FORCE 17 3
LOAD 5
HORIZONTAL +Y
DEADWEIGHT +Y 1.0
FORCE 16 0 3
FORCE 17 0 3
LOAD 6
HORIZONTAL -Y
DEADWEIGHT -Y 1.0
FORCE 16 0 3
FORCE 17 0 3
LOAD 7
THERMAL
THERMAL 1 175 0 0 0 70
MOVEMENT 21 0 0 .004
SUPERPOSITION
BLOWER DRAIN
16 2 1 -4
OBE + SRV XZ
3
1 1.0 2 .96 3 .68
OBE + SRV X-Z
2
1 1.96 3 .68
OBE + SRV YZ
3
1 1.0 2 .96 5 .68
OBE + SRV Y-Z
2
1 1.96 5 .68
```

```
OBE + SRV -XZ
3
1 1.0 2 .96 4 .68
OBE + SRV -X-Z
2
1 1.96 4 .68
OBE + SRV -YZ
3
1 1.0 2 .96 6 .68
OBE + SRV -Y-Z
2
1 1.96 6 .68
SSE + SRV + LOCA XZ
3
1 1.0 2 1.9 3 1.16
SSE + SRV + LOCA X-Z
2
1 2.9 3 1.16
SSE + SRV + LOCA YZ
3
1 1.0 2 1.9 5 1.16
SSE + SRV + LOCA Y-Z
2
1 2.9 5 1.16
SSE + SRV + LOCA -XZ
3
1 1.0 2 1.9 4 1.16
SSE + SRV + LOCA -X-Z
2
1 2.9 4 1.16
SSE + SRV + LOCA -YZ
3
1 1.0 2 1.9 6 1.16
SSE + SRV + LOCA -Y-Z
2
1 2.9 6 1.16
END OF JOB
```

165	5.066666	5.066666	1.000000				[illegible]
161	5.066666	5.066666	1.000000				[illegible]
2 2	1.0200	0.1120	5.0000	0.0	0.0	0.0	6110
5 0	1.2906	0.5290	5.0000	0.0	0.0	0.0	6110
1 2	1.0200	0.1120	5.0000	0.0	0.0	0.0	6110
11	4.122000	-21.00000	-0.122000	0			6 1
10	10.52000	-20.52000	0.0	0			6 1
12	10.52000	-14.12000	0.0	0			6 1
14	0.12000	-13.52000	0.0	0			6 1
17	98.52000	12.00000	0.122000	0			6 1
15	10.12000	15.52000	0.0	0			6 1
16	19.52000	[illegible]	0.0	0			6 1
10	0.12000	[illegible]	0.0	0			6 1
19	4.00000	[illegible]	-0.122000	0			[illegible]
17	4.120000	[illegible]	0.0	0			[illegible]
[illegible]	[illegible]	[illegible]	0.0	0			[illegible]
21	[illegible]	[illegible]	0.0	0			[illegible]

```
     1    31     0     0                                                  PD1
BLOWER DRAIN LINE
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                            P 1
BLOWER DRAIN LINE                                                         P 2
    37    38     7     0     6     3     8     1     0     1     1     0  P 3
     6     1     1     0     1     0     0                                P 4
     1    38     8     0     0     1     2                                P 5
     1     0.0         0.0         0.0         0                         P 7
     2     0.0         2.00000     0.0         0                         P 7
     4     0.21967     4.28033     0.0         0                         P 7
     6    15.50000     4.50000     0.0         0                         P 7
     7    39.50000     4.50000     0.0         0                         P 7
     8    64.00000     4.50000     0.0         0                         P 7
    10    78.78032     4.71967     0.0         0                         P 7
    12    79.00000    10.00000     0.0         0                         P 7
    14    79.21967    12.78033     0.0         0                         P 7
    16    82.00000    13.00000     0.0         0                         P 7
    17    84.50000    13.00000     0.0         0                         P 7
    19    98.78032    13.00000     0.21967     0                         P 7
    21    99.00000    13.00000     8.00000     0                         P 7
    23     0.21967   -13.78033     0.0         0                         P 7
    25     5.50000   -14.00000     0.0         0                         P 7
    27    10.78033   -14.21967     0.0         0                         P 7
    29    11.00000   -22.00000     0.0         0                         P 7
    31    10.78033   -30.78032     0.0         0                         P 7
    33     8.00000   -31.00000     0.0         0                         P 7
    35     4.21967   -31.00000    -0.21967     0                         P 7
    37     4.00000   -31.00000    -8.00000     0                         P 7
    38     4.00000   -31.00000   -16.00000     0                         P 7
    39     0.0         3.75000     0.0         0                         P 7
    40     0.75000     4.50000     0.0         0                         P 7
    41    78.25000     4.50000     0.0         0                         P 7
    42    79.00000     5.25000     0.0         0                         P 7
    43    79.00000    12.25000     0.0         0                         P 7
    44    79.75000    13.00000     0.0         0                         P 7
    45    98.25000    13.00000     0.0         0                         P 7
    46    99.00000    13.00000     0.75000     0                         P 7
    47     0.0       -13.25000     0.0         0                         P 7
    48     0.75000   -14.00000     0.0         0                         P 7
    49    10.25000   -14.00000     0.0         0                         P 7
    50    11.00000   -14.75000     0.0         0                         P 7
    51    11.00000   -30.25000     0.0         0                         P 7
    52    10.25000   -31.00000     0.0         0                         P 7
    53     4.75000   -31.00000     0.0         0                         P 7
    54     4.00000   -31.00000    -0.75000     0                         P 7
    70     0.75000     3.75000     0.0         0                         P 7
    71    78.25000     5.25000     0.0         0                         P 7
    72    79.75000    12.25000     0.0         0                         P 7
    73    98.25000    13.00000     0.75000     0                         P 7
    74     0.75000   -13.25000     0.0         0                         P 7
    75    10.25000   -14.75000     0.0         0                         P 7
    76    10.25000   -30.25000     0.0         0                         P 7
    77     4.75000   -31.00000    -0.75000     0                         P 7
  1  3     1.0500      0.1130     2.0000      0.0         0.0         0.0  P11D
  2  4     1.5500      0.2500     2.0000      0.0         0.0         0.0  P11D
  3  3     1.0500      0.1130     2.0000      0.0         0.0         0.0  P11D
   101    2.099999    2.099999    1.000000                                P 12.1
   102    2.099999    2.099999    1.000000                                P 12.1
```

```
  0.090    0.260    0.010
1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
    0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
  25.00000     0.0          0.0          0.0          0.0          0.0  P15
   0.0                                                                 P16A
   1                                                                   P16B
   1   175.00000     0.0          0.0          0.0         70.00000   P16C
   1     0.0         0.0         -1.00000                             P17
   2     0.0         0.0          1.00000                             P17
   3     1.00000     0.0          0.0                                 P17
   4    -1.00000     0.0          0.0                                 P17
   5     0.0         1.00000      0.0                                 P17
   6     0.0        -1.00000      0.0                                 P17
2  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0         P18
21 0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01       P18
38 0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01       P18
6  0 0.0       0.100E 01 0.100E 01 0.0        0.0        0.0         P18
8  0 0.0       0.100E 01 0.100E 01 0.0        0.0        0.0         P18
12 0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0         P18
   1                                                                   P20
   1 0.0       0.0        0.400E-02 0.0        0.0        0.0         P20A
  1   1   21001   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   1   1   0   0   1                                               P21B
  2   2  391001   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   2   1   0   0   1                                               P21B
  3  39   4  70   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
  4   4  40  70   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
  5  40   61002   1   1   1   3   3   1   1   0   0   0   0   0.0      P21
   1   1   1   0   0   1                                               P21B
  6   6   71002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
  7   7   81002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
  8   8  411002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
  9  41  10  71   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 10  10  42  71   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 11  42  121001   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
 12  12  431001   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   2   1   0   0   1                                               P21B
 13  43  14  72   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 14  14  44  72   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 15  44  161002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   3   1   0   0   1                                               P21B
 16  16  171002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
 17  17  451002   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
   1   0   1   0   0   1                                               P21B
 18  45  19  73   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 19  19  46  73   1   2   1   2   2   1   1   0   0   0   0   0.0      P21
   1  101   1   0   0   1                                               P21B
 20  46  211001   1   1   1   1   1   1   1   0   0   0   0   0.0      P21
```

```
  1    1    1    0    0    1                                                    P21B
 21    1  471001  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    3    1    0    0    1                                                    P21B
 22   47   23   74  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 23   23   48   74  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 24   48  251002  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    1    1    0    0    1                                                    P21B
 25   25  491002  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    2    1    0    0    1                                                    P21B
 26   49   27   75  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 27   27   50   75  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 28   50  291001  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    1    1    0    0    1                                                    P21B
 29   29  511001  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    2    1    0    0    1                                                    P21B
 30   51   31   76  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 31   31   52   76  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 32   52  331002  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    1    1    0    0    1                                                    P21B
 33   33  531002  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    2    1    0    0    1                                                    P21B
 34   53   35   77  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 35   35   54   77  1    2    1    2    2    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                    P21B
 36   54  371001  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    1    1    0    0    1                                                    P21B
 37   37  381001  1    1    1    1    1    1    1    0    0    0    0  0.0      P21
  1    0    1    0    0    1                                                    P21B
  0                                                                             P22
 1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0          P32
 7                                                                              P33
 1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0            P34
  7
21  1                                                                           P37
  7  1     0  0     0  0     0  0     0  0     0  0     0  0     0  0           P38
 16     6                                                                       P39
  1     00.0        0.0        0.3000E 010.0        0.0        0.0             P40
  2     00.0        0.0        0.3000E 010.0        0.0        0.0             P40
  3     00.3000E 010.0        0.0        0.0        0.0        0.0             P40
  4     00.3000E 010.0        0.0        0.0        0.0        0.0             P40
  5     00.0        0.3000E 010.0        0.0        0.0        0.0             P40
  6     00.0        0.3000E 010.0        0.0        0.0        0.0             P40
 17     6                                                                       P39
  1     00.0        0.0        0.3000E 010.0        0.0        0.0             P40
  2     00.0        0.0        0.3000E 010.0        0.0        0.0             P40
  3     00.3000E 010.0        0.0        0.0        0.0        0.0             P40
  4     00.3000E 010.0        0.0        0.0        0.0        0.0             P40
  5     00.0        0.3000E 010.0        0.0        0.0        0.0             P40
  6     00.0        0.3000E 010.0        0.0        0.0        0.0             P40
-999999                                                                         P41
DESIGN                                                                          P41
VERTICAL +Z                                                                     P41
HORIZONTAL +X                                                                   P41
```

```
HORIZONTAL -X                                                          P41
HORIZONTAL +Y                                                          P41
HORIZONTAL -Y                                                          P41
THERMAL                                                                P41
    11     1     0     0     1                                        P 1
BLOWER DRAIN                                                           P 2
    37    38    16     0     2     1    -4                            P60
     3                                                                 P61
OBE + SRV XZ                                                           P62
  1   1.0000  2   0.9600  3   0.6800
     2                                                                 P61
OBE + SRV X-Z                                                          P62
  1   1.9600  3   0.6800
     3                                                                 P61
OBE + SRV YZ                                                           P62
  1   1.0000  2   0.9600  5   0.6800
     2                                                                 P61
OBE + SRV Y-Z                                                          P62
  1   1.9600  5   0.6800
     3                                                                 P61
OBE + SRV -XZ                                                          P62
  1   1.0000  2   0.9600  4   0.6800
     2                                                                 P61
OBE + SRV -X-Z                                                         P62
  1   1.9600  4   0.6800
     3                                                                 P61
OBE + SRV -YZ                                                          P62
  1   1.0000  2   0.9600  6   0.6800
     2                                                                 P61
OBE + SRV -Y-Z                                                         P62
  1   1.9600  6   0.6800
     3                                                                 P61
SSE + SRV + LOCA XZ                                                    P62
  1   1.0000  2   1.9000  3   1.1600
     2                                                                 P61
SSE + SRV + LOCA X-Z                                                   P62
  1   2.9000  3   1.1600
     3                                                                 P61
SSE + SRV + LOCA YZ                                                    P62
  1   1.0000  2   1.9000  5   1.1600
     2                                                                 P61
SSE + SRV + LOCA Y-Z                                                   P62
  1   2.9000  5   1.1600
     3                                                                 P61
SSE + SRV + LOCA -XZ                                                   P62
  1   1.0000  2   1.9000  4   1.1600
     2                                                                 P61
SSE + SRV + LOCA -X-Z                                                  P62
  1   2.9000  4   1.1600
     3                                                                 P61
SSE + SRV + LOCA -YZ                                                   P62
  1   1.0000  2   1.9000  6   1.1600
     2                                                                 P61
SSE + SRV + LOCA -Y-Z                                                  P62
  1   2.9000  6   1.1600
     0                                                                 P68
     0                                                                 PD1
     0                                                                 PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.21 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.21 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	37
TOTAL NUMBER OF STRUCTURAL JOINTS	38
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	8
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	6
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	1
TOTAL NUMBER OF CROSS-SECTION TYPES	3
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	38
TOTAL FICTIOUS JOINTS READ IN	8
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
2	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
3	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	175.00	27774992.00	0.300000	0.000009300	18800.00

PRESSURE DATA

TYPE	PRESSURE
1	25.00

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	2.000000	0.0
4	0.219670	4.280330	0.0
6	15.500000	4.500000	0.0
7	39.500000	4.500000	0.0
8	64.000000	4.500000	0.0
10	78.780319	4.719669	0.0
12	79.000000	10.000000	0.0
14	79.219666	12.780330	0.0
16	82.000000	13.000000	0.0
17	84.500000	13.000000	0.0
19	98.780319	13.000000	0.219670
21	99.000000	13.000000	8.000000
23	0.219670	-13.780330	0.0
25	5.500000	-14.000000	0.0
27	10.780330	-14.219669	0.0
29	11.000000	-22.000000	0.0
31	10.780330	-30.780319	0.0
33	8.000000	-31.000000	0.0
35	4.219669	-31.000000	-0.219670
37	4.000000	-31.000000	-8.000000
38	4.000000	-31.000000	-16.000000
39	0.0	3.750000	0.0
40	0.750000	4.500000	0.0
41	78.250000	4.500000	0.0
42	79.000000	5.250000	0.0
43	79.000000	12.250000	0.0
44	79.750000	13.000000	0.0
45	98.250000	13.000000	0.0
46	99.000000	13.000000	0.750000
47	0.0	-13.250000	0.0
48	0.750000	-14.000000	0.0
49	10.250000	-14.000000	0.0
50	11.000000	-14.750000	0.0
51	11.000000	-30.250000	0.0
52	10.250000	-31.000000	0.0
53	4.750000	-31.000000	0.0
54	4.000000	-31.000000	-0.750000
70	0.750000	3.750000	0.0
71	78.250000	5.250000	0.0
72	79.750000	12.250000	0.0
73	98.250000	13.000000	0.750000
74	0.750000	-13.250000	0.0
75	10.250000	-14.750000	0.0
76	10.250000	-30.250000	0.0
77	4.750000	-31.000000	-0.750000

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1						
	1	175.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	0.0	-1.000000
2	0.0	0.0	1.000000
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	1.000000	0.0
6	0.0	-1.000000	0.0

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	2	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
2	21	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	38	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	6	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	8	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
6	12	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0

JOINT DISPLACEMENT DATA

TYPE	X1	X2	X3	THETA 1	THETA 2	THETA 3
1	0.0	0.0	0.400000E-02	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.32 ** LAST STEP "BEGP" TIME IS    0.21 ** DELTA TIME IS    0.11 *
* ELAPSED SECONDS                              1.6                                 0.9                       0.7 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   38


 BAND-WIDTH =    18  BY D.O.F.          BAND-WIDTH =     3  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.49 ** LAST STEP "DA3D" TIME IS    0.32 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                              4.6                                 1.6                       3.0 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

THE FOLLOWING JOINTS HAVE NON-ZERO DISPLACEMENT SPECIFIED

JOINT	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE
38										
	7	1								

APPLIED CONCENTRATED JOINT LOADS

JOINT	LOAD NO	F1 (LB)	F2 (LB)	F3 (LB)	M1 (IN-LB)	M2 (IN-LB)	M3 (IN-LB)
16	1	0.0	0.0	0.30000E 01	0.0	0.0	0.0
	2	0.0	0.0	0.30000E 01	0.0	0.0	0.0
	3	0.30000E 01	0.0	0.0	0.0	0.0	0.0
	4	0.30000E 01	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.30000E 01	0.0	0.0	0.0	0.0
	6	0.0	0.30000E 01	0.0	0.0	0.0	0.0
17	1	0.0	0.0	0.30000E 01	0.0	0.0	0.0
	2	0.0	0.0	0.30000E 01	0.0	0.0	0.0
	3	0.30000E 01	0.0	0.0	0.0	0.0	0.0
	4	0.30000E 01	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.30000E 01	0.0	0.0	0.0	0.0
	6	0.0	0.30000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.51 ** LAST STEP "JCSO" TIME IS    0.49 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                             4.9                                 4.6                        0.3 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.49172E 08) OCCURS AT THE 103TH DOF
MINIMUM VALUE (0.17121E 04) OCCURS AT THE 69TH DOF
RATIO OF MAX/MIN= 0.28720E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    2.76 ** LAST STEP "INPT" TIME IS    0.51 ** DELTA TIME IS    2.25 *
* ELAPSED SECONDS                            12.3                                 4.9                        7.4 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    4.00 ** LAST STEP "EQ3D" TIME IS    2.76 ** DELTA TIME IS    1.24 *
* ELAPSED SECONDS                            21.3                                12.3                        9.0 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
1	1	2	1001	1	1	1	1	1	1	1	1	2.00000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
2	2	39	1001	1	1	1	1	2	1	1	1	1.75000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
3	39	4	70	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
4	4	40	70	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707107 -0.707107 0.0 0.0 0.0 1.000000 -0.707107 -0.707107 0.0
5	40	6	1002	1	1	1	1	1	1	1	3	14.75000	0.01000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
6	6	7	1002	1	1	1	1	0	1	1	1	24.00000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
7	7	8	1002	1	1	1	1	0	1	1	1	24.50000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
8	8	41	1002	1	1	1	1	0	1	1	1	14.25000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
9	41	10	71	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 1.000000 0.0 0.0 0.0 -1.000000 -1.000000 0.0 0.0
10	10	42	71	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	-0.707099 0.707114 0.0 0.0 0.0 -1.000000 -0.707114 -0.707099 0.0
11	42	12	1001	1	1	1	1	0	1	1	1	4.75000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
12	12	43	1001	1	1	1	1	2	1	1	1	2.25000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
13	43	14	72	1	2	1	1	101	1	1	2	0.78539	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
14	14	44	72	1	2	1	1	101	1	1	2	0.78541	0.26000	RAD=	0.7500	0.707110	-0.707104	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707104	-0.707110	0.0
15	44	16	1002	1	1	1	1	3	1	1	1	2.25000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
16	16	17	1002	1	1	1	1	0	1	1	1	2.50000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
17	17	45	1002	1	1	1	1	0	1	1	1	13.75000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
18	45	19	73	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-1.000000	0.0	0.0
19	19	46	73	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707100	0.0	0.707114
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707114	0.0	-0.707100
20	46	21	1001	1	1	1	1	1	1	1	1	7.25000	0.09000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
21	1	47	1001	1	1	1	1	3	1	1	1	13.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
22	47	23	74	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	1.000000	0.0	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	0.0	1.000000	0.0
23	23	48	74	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.707107	0.707107	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-0.707107	0.707107	0.0
24	48	25	1002	1	1	1	1	1	1	1	1	4.75000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
25	25	49	1002	1	1	1	1	2	1	1	1	4.75000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
26	49	27	75	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
27	27	50	75	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707106	-0.707107	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707107	0.707106	0.0
28	50	29	1001	1	1	1	1	1	1	1	1	7.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
29	29	51	1001	1	1	1	1	2	1	1	1	8.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
30	51	31	76	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-1.000000	0.0	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.0	1.000000	0.0
31	31	52	76	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707114	0.707100	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.707100	0.707114	0.0
32	52	33	1002	1	1	1	1	1	1	1	1	2.25000	0.09000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
33	33	53	1002	1	1	1	1	2	1	1	1	3.25000	0.09000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
34	53	35	77	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	0.0	-1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	1.000000	0.0	0.0
35	35	54	77	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.707107	0.0	-0.707106
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.707106	0.0	0.707107
36	54	37	1001	1	1	1	1	1	1	1	1	7.25000	0.09000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
37	37	38	1001	1	1	1	1	0	1	1	1	8.00000	0.09000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0

```
   MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT   7 AND EQUALS 0.24500E 02 INCHES
   MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  31 AND EQUALS 0.58904E 00 INCHES
   MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  13 AND EQUALS 0.35320E 08
   MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT   7 AND EQUALS 0.82978E 03

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    4.21 ** LAST STEP "SELT" TIME IS    4.00 ** DELTA TIME IS    0.21 *
* ELAPSED SECONDS                            25.1                                21.3                        3.8 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS.	M2 IN-LBS	M3 IN-LBS
1	0.0	0.0	-0.68624824E 00	0.12867050E 01	0.0	0.0
2	0.0	0.0	0.0	0.70314817E-02	0.0	0.0
4	0.0	0.0	-0.15315253E 00	0.95153286E-04	0.95146446E-04	0.0
6	0.0	0.0	0.0	0.0	0.41386318E 01	0.0
7	0.0	0.0	-0.21824999E 01	0.0	0.18178105E 00	0.0
8	0.0	0.0	0.0	0.0	-0.29789276E 01	0.0
10	0.0	0.0	-0.15315181E 00	-0.95027615E-04	-0.95163457E-04	0.0
12	0.0	0.0	0.0	0.13125026E 00	0.0	0.0
14	0.0	0.0	-0.15315294E 00	0.94900010E-04	0.95453244E-04	0.0
16	0.0	0.0	0.27862492E 01	0.0	0.89057945E-02	0.0
17	0.0	0.0	0.22687521E 01	0.0	0.13710756E 01	0.0
19	-0.28824389E-01	0.0	-0.15315163E 00	0.0	-0.23630147E-02	0.0
23	0.0	0.0	-0.15315253E 00	-0.95153286E-04	0.95146446E-04	0.0
25	0.0	0.0	-0.42749983E 00	0.0	-0.77247597E-06	0.0
27	0.0	0.0	-0.15315259E 00	0.95182011E-04	-0.95120646E-04	0.0
29	0.0	0.0	-0.69749993E 00	0.11624390E 00	0.0	0.0
31	0.0	0.0	-0.15315175E 00	-0.95238793E-04	-0.94944699E-04	0.0
33	0.0	0.0	-0.24749982E 00	0.0	-0.41249234E-01	0.0
35	-0.28824702E-01	0.0	-0.15315259E 00	0.0	0.23630201E-02	0.0
37	0.0	0.0	-0.68624997E 00	0.0	0.0	0.0
39	0.0	0.0	-0.15532643E 00	0.15210126E-01	0.67281304E-04	0.0
40	0.0	0.0	-0.15032583E 00	0.67280984E-04	0.17354083E 00	0.0
41	0.0	0.0	-0.71782732E 00	-0.67281901E-04	-0.15152178E 01	0.0
42	0.0	0.0	-0.29032540E 00	-0.16145962E 00	-0.67362998E-04	0.0
43	0.0	0.0	-0.17782563E 00	0.30210547E-01	0.67275905E-04	0.0
44	0.0	0.0	-0.17782712E 00	0.67248009E-04	0.30209780E-01	0.0
45	0.26915345E-01	0.0	-0.68091673E 00	0.0	-0.14122715E 01	0.0
46	0.19090341E-02	0.0	-0.41723740E 00	0.0	-0.16709357E-02	0.0
47	0.0	0.0	-0.67282754E 00	-0.13089638E 01	0.67281304E-04	0.0
48	0.0	0.0	-0.29032600E 00	-0.67280984E-04	0.16145951E 00	0.0
49	0.0	0.0	-0.29032630E 00	0.67281901E-04	-0.16146028E 00	0.0
50	0.0	0.0	-0.40282530E 00	0.38645482E 00	-0.67268789E-04	0.0
51	0.0	0.0	-0.44782710E 00	-0.50271326E 00	-0.67282148E-04	0.0
52	0.0	0.0	-0.17782521E 00	-0.67365603E-04	-0.30210186E-01	0.0
53	0.26915345E-01	0.0	-0.20841414E 00	0.0	0.73498249E-01	0.0
54	0.19093507E-02	0.0	-0.41723812E 00	0.0	0.16708882E-02	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.0	0.0	0.68624824E 00	-0.12867050E 01	0.0	0.0
2	0.0	0.0	0.0	-0.70314817E-02	0.0	0.0
4	0.0	0.0	0.15315253E 00	-0.95153286E-04	-0.95146446E-04	0.0
6	0.0	0.0	0.0	0.0	-0.41386318E 01	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
7	0.0	0.0	0.21824999E 01	0.0	-0.18178105E 00	0.0
8	0.0	0.0	0.0	0.0	0.29789276E 01	0.0
10	0.0	0.0	0.15315181E 00	0.95027615E-04	0.95163457E-04	0.0
12	0.0	0.0	0.0	-0.13125026E 00	0.0	0.0
14	0.0	0.0	0.15315294E 00	-0.94900010E-04	-0.95453244E-04	0.0
16	0.0	0.0	0.32137499E 01	0.0	-0.89057945E-02	0.0
17	0.0	0.0	0.37312469E 01	0.0	-0.13710756E 01	0.0
19	0.28824389E-01	0.0	0.15315163E 00	0.0	0.23630147E-02	0.0
23	0.0	0.0	0.15315253E 00	0.95153286E-04	-0.95146446E-04	0.0
25	0.0	0.0	0.42749983E 00	0.0	0.77247597E-06	0.0
27	0.0	0.0	0.15315259E 00	-0.95182011E-04	0.95120646E-04	0.0
29	0.0	0.0	0.69749993E 00	-0.11624390E 00	0.0	0.0
31	0.0	0.0	0.15315175E 00	0.95238793E-04	0.94944699E-04	0.0
33	0.0	0.0	0.24749982E 00	0.0	0.41249234E-01	0.0
35	0.28824702E-01	0.0	0.15315259E 00	0.0	-0.23630201E-02	0.0
37	0.0	0.0	0.68624997E 00	0.0	0.0	0.0
39	0.0	0.0	0.15532643E 00	-0.15210126E-01	-0.67281304E-04	0.0
40	0.0	0.0	0.15032583E 00	-0.67280984E-04	-0.17354083E 00	0.0
41	0.0	0.0	0.71782732E 00	0.67281901E-04	0.15152178E 01	0.0
42	0.0	0.0	0.29032540E 00	0.16145962E 00	0.67362998E-04	0.0
43	0.0	0.0	0.17782563E 00	-0.30210547E-01	-0.67275905E-04	0.0
44	0.0	0.0	0.17782712E 00	-0.67248009E-04	-0.30209780E-01	0.0
45	-0.26915345E-01	0.0	0.68091673E 00	0.0	0.14122715E 01	0.0
46	-0.19090341E-02	0.0	0.41723740E 00	0.0	0.16709357E-02	0.0
47	0.0	0.0	0.67282754E 00	0.13089638E 01	-0.67281304E-04	0.0
48	0.0	0.0	0.29032600E 00	0.67280984E-04	-0.16145951E 00	0.0
49	0.0	0.0	0.29032630E 00	-0.67281901E-04	0.16146028E 00	0.0
50	0.0	0.0	0.40282530E 00	-0.38645482E 00	0.67268789E-04	0.0
51	0.0	0.0	0.44782710E 00	0.50271326E 00	0.67282148E-04	0.0
52	0.0	0.0	0.17782521E 00	0.67365603E-04	0.30210186E-01	0.0
53	-0.26915345E-01	0.0	0.20841414E 00	0.0	-0.73498249E-01	0.0
54	-0.19093507E-02	0.0	0.41723812E 00	0.0	-0.16708882E-02	0.0

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.68624824E 00	0.0	0.0	0.0	0.0	0.12867126E 01
2	0.0	0.0	0.0	0.0	0.0	0.70315264E-02
4	0.15315253E 00	0.28824683E-01	0.0	0.0	0.0	0.23630012E-02
6	0.11537485E 01	0.0	0.0	0.0	0.0	0.0
7	0.21824989E 01	0.0	0.0	0.0	0.0	0.0
8	0.17437496E 01	0.0	0.0	0.0	0.0	0.0
10	0.15315193E 00	0.28824091E-01	0.0	0.0	0.0	-0.23629300E-02
12	0.0	0.0	0.0	0.0	0.0	0.13125074E 00
14	0.15315223E 00	0.28824382E-01	0.0	0.0	0.0	0.23628741E-02
16	0.32137499E 01	0.0	0.0	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
17	0.37312489E 01	0.0	0.0	0.0	0.0	0.0
19	0.15315175E 00	0.0	0.28824031E-01	0.0	0.23629165E-02	0.0
23	0.15315253E 00	-0.28824683E-01	0.0	0.0	0.0	-0.23630012E-02
25	0.42749983E 00	0.0	0.0	0.0	0.0	0.0
27	0.15315253E 00	-0.28824653E-01	0.0	0.0	0.0	0.23630441E-02
29	0.69749993E 00	0.0	0.0	0.0	0.0	0.11624372E 00
31	0.15315175E 00	0.28824382E-01	0.0	0.0	0.0	-0.23630476E-02
33	0.24749988E 00	0.0	0.0	0.0	0.0	0.0
35	0.15315241E 00	0.0	0.28824627E-01	0.0	-0.23630499E-02	0.0
37	0.68625021E 00	0.0	0.0	0.0	-0.85775256E-01	0.0
39	0.14091402E 00	-0.26915345E-01	0.0	0.0	0.0	0.17248016E-01
40	0.16473848E 00	-0.19093377E-02	0.0	0.0	0.0	0.16709233E-02
41	0.73223853E 00	-0.19092925E-02	0.0	0.0	0.0	-0.16709019E-02
42	0.27591282E 00	-0.26914775E-01	0.0	0.0	0.0	-0.16349792E 00
43	0.16341364E 00	-0.26914973E-01	0.0	0.0	0.0	0.32248307E-01
44	0.19223982E 00	-0.19094173E-02	0.0	0.0	0.0	0.16709426E-02
45	0.70973891E 00	0.0	-0.19093005E-02	0.0	0.16709077E-02	0.0
46	0.38841182E 00	0.0	-0.26914742E-01	0.0	0.38849425E 00	0.0
47	0.65841514E 00	0.26915345E-01	0.0	0.0	0.0	-0.13110104E 01
48	0.30473816E 00	0.19093377E-02	0.0	0.0	0.0	-0.16709233E-02
49	0.30473876E 00	0.19092925E-02	0.0	0.0	0.0	0.16709019E-02
50	0.38841289E 00	0.26915330E-01	0.0	0.0	0.0	0.38849407E 00
51	0.43341470E 00	-0.26915330E-01	0.0	0.0	0.0	-0.50475228E 00
52	0.19223762E 00	-0.19090518E-02	0.0	0.0	0.0	-0.16709270E-02
53	0.23723882E 00	0.0	-0.19093005E-02	0.0	-0.16709077E-02	0.0
54	0.38841277E 00	0.0	-0.26915319E-01	0.0	-0.38849407E 00	0.0

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	-0.68624824E 00	0.0	0.0	0.0	0.0	-0.12867126E 01
2	0.0	0.0	0.0	0.0	0.0	-0.70315264E-02
4	-0.15315253E 00	-0.28824683E-01	0.0	0.0	0.0	-0.23630012E-02
6	-0.11537485E 01	0.0	0.0	0.0	0.0	0.0
7	-0.21824989E 01	0.0	0.0	0.0	0.0	0.0
8	-0.17437496E 01	0.0	0.0	0.0	0.0	0.0
10	-0.15315193E 00	-0.28824091E-01	0.0	0.0	0.0	0.23629300E-02
12	0.0	0.0	0.0	0.0	0.0	-0.13125074E 00
14	-0.15315223E 00	-0.28824382E-01	0.0	0.0	0.0	-0.23628741E-02
16	0.27862492E 01	0.0	0.0	0.0	0.0	0.0
17	0.22687502E 01	0.0	0.0	0.0	0.0	0.0
19	-0.15315175E 00	0.0	-0.28824031E-01	0.0	-0.23629165E-02	0.0
23	-0.15315253E 00	0.28824683E-01	0.0	0.0	0.0	0.23630012E-02
25	-0.42749983E 00	0.0	0.0	0.0	0.0	0.0
27	-0.15315253E 00	0.28824653E-01	0.0	0.0	0.0	-0.23630441E-02
29	-0.69749993E 00	0.0	0.0	0.0	0.0	-0.11624372E 00

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
31	-0.15315175E 00	-0.28824382E-01	0.0	0.0	0.0	0.23630476E-02
33	-0.24749988E 00	0.0	0.0	0.0	0.0	0.0
35	-0.15315241E 00	0.0	-0.28824627E-01	0.0	0.23630499E-02	0.0
37	-0.68625021E 00	0.0	0.0	0.0	0.85775256E-01	0.0
39	-0.14091402E 00	0.26915345E-01	0.0	0.0	0.0	-0.17248016E-01
40	-0.16473848E 00	0.19093377E-02	0.0	0.0	0.0	-0.16709233E-02
41	-0.73223853E 00	0.19092925E-02	0.0	0.0	0.0	0.16709019E-02
42	-0.27591282E 00	0.26914775E-01	0.0	0.0	0.0	0.16349792E 00
43	-0.16341364E 00	0.26914973E-01	0.0	0.0	0.0	-0.32248307E-01
44	-0.19223982E 00	0.19094173E-02	0.0	0.0	0.0	-0.16709426E-02
45	-0.70973891E 00	0.0	0.19093005E-02	0.0	-0.16709077E-02	0.0
46	-0.38841182E 00	0.0	0.26914742E-01	0.0	-0.38849425E 00	0.0
47	-0.65841514E 00	-0.26915345E-01	0.0	0.0	0.0	0.13110104E 01
48	-0.30473816E 00	-0.19093377E-02	0.0	0.0	0.0	0.16709233E-02
49	-0.30473876E 00	-0.19092925E-02	0.0	0.0	0.0	-0.16709019E-02
50	-0.38841239E 00	-0.26915330E-01	0.0	0.0	0.0	-0.38849407E 00
51	-0.43341470E 00	0.26915330E-01	0.0	0.0	0.0	0.50475228E 00
52	-0.19223762E 00	0.19090518E-02	0.0	0.0	0.0	0.16709270E-02
53	-0.23723882E 00	0.0	0.19093005E-02	0.0	0.16709077E-02	0.0
54	-0.38841277E 00	0.0	0.26915319E-01	0.0	0.38849407E 00	0.0

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.0	0.68624955E 00	0.0	0.0	0.0	0.0
2	0.0	0.16874987E 00	0.0	0.0	0.0	0.0
4	0.28824575E-01	0.15315235E 00	0.0	0.0	0.0	0.23630555E-02
6	0.0	0.0	0.0	0.0	0.0	0.41386433E 01
7	0.0	0.21824999E 01	0.0	0.0	0.0	0.18178380E 00
8	0.0	0.0	0.0	0.0	0.0	-0.29789400E 01
10	0.28824326E-01	0.15315163E 00	0.0	0.0	0.0	-0.23630094E-02
12	0.0	0.31500006E 00	0.0	0.0	0.0	0.0
14	0.28825235E-01	0.15315354E 00	0.0	0.0	0.0	0.23632564E-02
16	0.0	0.32137499E 01	0.0	0.0	0.0	0.89058317E-02
17	0.0	0.37312469E 01	0.0	0.0	0.0	0.13710823E 01
19	0.0	0.15315181E 00	0.0	-0.94986433E-04	0.0	-0.95203286E-04
23	-0.28824575E-01	0.15315235E 00	0.0	0.0	0.0	0.23630555E-02
25	0.0	0.42749983E 00	0.0	0.0	0.0	-0.77247597E-06
27	-0.28824609E-01	0.15315253E 00	0.0	0.0	0.0	-0.23630110E-02
29	0.0	0.69749993E 00	0.0	0.0	0.0	0.0
31	0.28824013E-01	0.15315169E 00	0.0	0.0	0.0	-0.23628892E-02
33	0.0	0.24749982E 00	0.0	0.0	0.0	-0.41249394E-01
35	0.0	0.15315264E 00	0.0	0.95155265E-04	0.0	0.95156705E-04
37	0.0	0.68625021E 00	0.0	0.85775256E-01	0.0	0.0
39	-0.19093005E-02	0.16973877E 00	0.0	0.0	0.0	0.16709077E-02
40	-0.26915267E-01	0.13591349E 00	0.0	0.0	0.0	0.17557925E 00

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
41	-0.26915286E-01	0.70341498E 00	0.0	0.0	0.0	-0.15172577E 01
42	-0.19090443E-02	0.30473775E 00	0.0	0.0	0.0	-0.16709601E-02
43	-0.19093759E-02	0.19223756E 00	0.0	0.0	0.0	0.16708651E-02
44	-0.26915859E-01	0.16341442E 00	0.0	0.0	0.0	0.32247722E-01
45	0.0	0.69532913E 00	0.0	-0.67281304E-04	0.0	-0.14102402E 01
46	0.0	0.40282434E 00	0.0	-0.38645506E 00	0.0	-0.67368208E-04
47	0.19093005E-02	0.68723875E 00	0.0	0.0	0.0	0.16709077E-02
48	0.26915267E-01	0.27591366E 00	0.0	0.0	0.0	0.16349787E 00
49	0.26915286E-01	0.27591395E 00	0.0	0.0	0.0	-0.16349858E 00
50	0.19093407E-02	0.41723830E 00	0.0	0.0	0.0	-0.16709201E-02
51	-0.19093091E-02	0.46223885E 00	0.0	0.0	0.0	-0.16709117E-02
52	-0.26914697E-01	0.16341269E 00	0.0	0.0	0.0	-0.32248005E-01
53	0.0	0.22282654E 00	0.0	0.67281304E-04	0.0	0.71460605E-01
54	0.0	0.40282518E 00	0.0	0.38645488E 00	0.0	0.67265850E-04

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.0	-0.68624955E 00	0.0	0.0	0.0	0.0
2	0.0	-0.16874987E 00	0.0	0.0	0.0	0.0
4	-0.28824575E-01	-0.15315235E 00	0.0	0.0	0.0	-0.23630555E-02
6	0.0	0.0	0.0	0.0	0.0	-0.41386433E 01
7	0.0	-0.21824999E 01	0.0	0.0	0.0	-0.18178380E 00
8	0.0	0.0	0.0	0.0	0.0	0.29789400E 01
10	-0.28824326E-01	-0.15315163E 00	0.0	0.0	0.0	0.23630094E-02
12	0.0	-0.31500006E 00	0.0	0.0	0.0	0.0
14	-0.28825235E-01	-0.15315354E 00	0.0	0.0	0.0	-0.23632564E-02
16	0.0	0.27862492E 01	0.0	0.0	0.0	-0.89058317E-02
17	0.0	0.22687521E 01	0.0	0.0	0.0	-0.13710823E 01
19	0.0	-0.15315181E 00	0.0	0.94986433E-04	0.0	0.95203286E-04
23	0.28824575E-01	-0.15315235E 00	0.0	0.0	0.0	-0.23630555E-02
25	0.0	-0.42749983E 00	0.0	0.0	0.0	0.77247597E-06
27	0.28824609E-01	-0.15315253E 00	0.0	0.0	0.0	0.23630110E-02
29	0.0	-0.69749993E 00	0.0	0.0	0.0	0.0
31	-0.28824013E-01	-0.15315169E 00	0.0	0.0	0.0	0.23628892E-02
33	0.0	-0.24749982E 00	0.0	0.0	0.0	0.41249394E-01
35	0.0	-0.15315264E 00	0.0	-0.95155265E-04	0.0	-0.95156705E-04
37	0.0	-0.68625021E 00	0.0	-0.85775256E-01	0.0	0.0
39	0.19093005E-02	-0.16973877E 00	0.0	0.0	0.0	-0.16709077E-02
40	0.26915267E-01	-0.13591349E 00	0.0	0.0	0.0	-0.17557925E 00
41	0.26915286E-01	-0.70341498E 00	0.0	0.0	0.0	0.15172577E 01
42	0.19090443E-02	-0.30473775E 00	0.0	0.0	0.0	0.16709601E-02
43	0.19093759E-02	-0.19223756E 00	0.0	0.0	0.0	-0.16708651E-02
44	0.26915859E-01	-0.16341442E 00	0.0	0.0	0.0	-0.32247722E-01
45	0.0	-0.69532913E 00	0.0	0.67281304E-04	0.0	0.14102402E 01
46	0.0	-0.40282434E 00	0.0	0.38645506E 00	0.0	0.67368208E-04

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
47	-0.19093005E-02	-0.68723875E 00	0.0	0.0	0.0	-0.16709077E-02
48	-0.26915267E-01	-0.27591366E 00	0.0	0.0	0.0	-0.16349787E 00
49	-0.26915286E-01	-0.27591395E 00	0.0	0.0	0.0	0.16349858E 00
50	-0.19093407E-02	-0.41723830E 00	0.0	0.0	0.0	0.16709201E-02
51	0.19093091E-02	-0.46223885E 00	0.0	0.0	0.0	0.16709117E-02
52	0.26914697E-01	-0.16341269E 00	0.0	0.0	0.0	0.32248005E-01
53	0.0	-0.22282654E 00	0.0	-0.67281304E-04	0.0	-0.71460605E-01
54	0.0	-0.40282518E 00	0.0	-0.38645488E 00	0.0	-0.67265850E-04

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	-0.12063391E 05	0.12063410E 05	0.0	0.0	0.0	-0.61035156E-02
10	0.12063234E 05	-0.12063297E 05	0.0	0.0	0.0	0.95214844E-02
14	-0.12063379E 05	0.12063539E 05	0.0	0.0	0.0	0.28076172E-01
19	0.12063207E 05	0.0	-0.12063309E 05	0.0	-0.14404297E-01	0.0
21	0.0	0.0	0.39999969E-02	0.0	0.0	0.0
23	-0.12063391E 05	-0.12063410E 05	0.0	0.0	0.0	0.61035156E-02
27	0.12063438E 05	0.12063383E 05	0.0	0.0	0.0	-0.14648438E-02
31	0.12063316E 05	-0.12063191E 05	0.0	0.0	0.0	-0.16601563E-01
35	-0.12063430E 05	0.0	0.12063402E 05	0.0	-0.56152344E-02	0.0
39	-0.85301172E 04	-0.11571738E 05	0.0	0.0	0.0	0.84618018E 03
40	0.11571707E 05	0.85301211E 04	0.0	0.0	0.0	-0.84618066E 03
41	-0.11571762E 05	-0.85301094E 04	0.0	0.0	0.0	-0.84617749E 03
42	0.85303164E 04	0.11571609E 05	0.0	0.0	0.0	0.84617676E 03
43	-0.85300586E 04	-0.11571848E 05	0.0	0.0	0.0	0.84616528E 03
44	0.11571637E 05	0.85300938E 04	0.0	0.0	0.0	-0.84619946E 03
45	-0.11571738E 05	0.0	-0.85301172E 04	0.0	0.84618018E 03	0.0
46	0.85303242E 04	0.0	0.16668949E 05	0.0	-0.84617261E 03	0.0
47	-0.85301172E 04	0.11571738E 05	0.0	0.0	0.0	-0.84618018E 03
48	0.11571707E 05	-0.85301211E 04	0.0	0.0	0.0	0.84618066E 03
49	-0.11571762E 05	0.85301094E 04	0.0	0.0	0.0	0.84617749E 03
50	0.85301133E 04	-0.11571691E 05	0.0	0.0	0.0	-0.84618433E 03
51	0.85301172E 04	0.11571730E 05	0.0	0.0	0.0	0.84618091E 03
52	-0.11571633E 05	-0.85303281E 04	0.0	0.0	0.0	-0.84617188E 03
53	0.11571738E 05	0.0	0.85301172E 04	0.0	0.84618018E 03	0.0
54	-0.85301016E 04	0.0	-0.11571719E 05	0.0	-0.84618286E 03	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    5.97 ** LAST STEP "EDIT" TIME IS    4.21 ** DELTA TIME IS    1.76 *
* ELAPSED SECONDS                            63.6                                25.1                     38.5 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    6.01 ** LAST STEP "SLVR" TIME IS    5.97 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            64.1                                63.6                      0.5 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.000018357	0.000285723	-0.000563697	0.000278312	0.000046678	0.000014166
2	0.0	0.000285649	0.0	0.000282281	0.000040114	0.000003902
4	0.000003859	0.000284524	0.000636662	0.000282137	0.000034063	-0.000004813
6	0.000005981	0.0	0.0	0.000266964	0.000088654	-0.000020508
7	0.000007615	-0.000163141	-0.001816323	0.000242457	-0.000019440	0.000003392
8	0.000009283	0.0	0.0	0.000217438	0.000000315	0.000006258
10	0.000010203	0.000050388	-0.001065826	0.000202740	0.000082139	0.000000321
12	0.0	0.000050445	0.0	0.000212284	0.000037119	0.000006960
14	-0.000028106	0.000052853	0.000594357	0.000211473	0.000015316	0.000010818
16	-0.000030777	0.000082348	0.000609010	0.000191060	0.000014657	0.000010265
17	-0.000031062	0.000107207	0.000557328	0.000169305	0.000029324	0.000009595
19	-0.000029003	0.000198822	0.000003372	0.000048837	0.000016425	0.000004446
21	0.0	0.0	0.0	0.0	0.0	0.0
23	0.000617521	0.000300803	-0.003509150	0.000120291	0.000090630	0.000066412
25	0.000632229	0.000675953	-0.004041221	0.000009325	0.000101880	0.000074768
27	0.000648861	0.001076261	-0.004600089	-0.000101661	0.000119236	0.000075234
29	0.001196461	0.001093068	-0.003441899	-0.000195428	0.000170662	0.000063344
31	0.001651045	0.001084696	-0.001574001	-0.000194478	0.000228983	0.000039435
33	0.001659718	0.000984286	-0.000885802	-0.000162678	0.000230535	0.000032344
35	0.001614506	0.000852364	-0.000052016	-0.000117350	0.000205239	0.000025532
37	0.000401817	0.000189344	-0.000003910	-0.000051297	0.000102330	0.000013361
38	0.0	0.0	0.0	0.0	0.0	0.0
39	0.000001347	0.000285583	0.000494459	0.000282214	0.000034370	-0.000004421
40	0.000004976	0.000281821	0.000680710	0.000282027	0.000033825	-0.000005169
41	0.000010254	0.000050222	-0.001066479	0.000202887	0.000082827	0.000000366
42	0.000010098	0.000050439	-0.000976441	0.000202647	0.000081277	0.000000300
43	-0.000022276	0.000050448	0.000485059	0.000212050	0.000016202	0.000010792
44	-0.000030520	0.000058618	0.000633234	0.000210639	0.000014696	0.000010803
45	-0.000032629	0.000207214	0.000012261	0.000049654	0.000017055	0.000004555
46	-0.000020555	0.000174088	-0.000000169	0.000048145	0.000015824	0.000004328
47	0.000582352	0.000286217	-0.003424920	0.000122111	0.000090164	0.000066139
48	0.000632145	0.000336132	-0.003583636	0.000118130	0.000091039	0.000066667
49	0.000632313	0.001036303	-0.004559316	-0.000099480	0.000118559	0.000075311
50	0.000688759	0.001092798	-0.004571803	-0.000103483	0.000120042	0.000075138
51	0.001630029	0.001093376	-0.001727949	-0.000195481	0.000228264	0.000039780
52	0.001659678	0.001063904	-0.001409490	-0.000193192	0.000229512	0.000039098
53	0.001659776	0.000891743	-0.000161523	-0.000118601	0.000206522	0.000025583
54	0.001505971	0.000784860	-0.000006914	-0.000116305	0.000203838	0.000025469

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-0.	2.	-4.	-3.	-5.	1.57	58.	153.	211.
			2	-0.	0.	-2.	0.	3.	5.	1.00	58.	86.	144.
2	TAN	1	2	-1.	-0.	0.	-0.	-3.	-5.	1.00	58.	86.	144.
			39	1.	0.	-0.	-0.	3.	4.	1.57	58.	113.	171.
3	BEND	1	39	-1.	-0.	-0.	0.	4.	-3.	1.57	39.	28.	66.
			4	1.	1.	-0.	1.	-4.	2.	1.57	39.	26.	64.
4	BEND	1	4	-1.	-1.	0.	-1.	4.	-2.	1.57	39.	26.	64.
			40	0.	1.	-1.	2.	-4.	1.	1.57	39.	23.	62.
5	TAN	1	40	0.	1.	-1.	2.	-1.	4.	1.57	58.	95.	153.
			6	-0.	-1.	1.	10.	1.	1.	1.00	58.	145.	204.
6	TAN	1	6	-0.	1.	2.	-10.	-1.	-1.	1.00	58.	145.	204.
			7	0.	-1.	0.	-11.	1.	1.	1.00	58.	153.	211.
7	TAN	1	7	-0.	1.	-0.	11.	-1.	-1.	1.00	58.	153.	211.
			8	0.	-1.	2.	21.	1.	-0.	1.00	58.	304.	362.
8	TAN	1	8	-0.	1.	3.	-21.	-1.	0.	1.00	58.	304.	362.
			41	0.	-1.	-1.	-6.	1.	-1.	1.00	58.	92.	151.
9	BEND	1	41	-0.	-1.	1.	6.	-1.	-1.	1.57	39.	36.	74.
			10	-0.	1.	-0.	-5.	0.	5.	1.57	39.	39.	78.
10	BEND	1	10	0.	-1.	0.	5.	-0.	-5.	1.57	39.	39.	78.
			42	-1.	1.	-0.	-0.	0.	7.	1.57	39.	40.	79.
11	TAN	1	42	-1.	0.	-1.	-0.	-7.	-0.	1.00	58.	104.	162.
			12	1.	-0.	1.	4.	7.	-3.	1.00	58.	125.	183.
12	TAN	1	12	1.	0.	3.	-4.	-7.	3.	1.00	58.	125.	183.
			43	-1.	-0.	-4.	-4.	7.	-1.	1.57	58.	188.	246.
13	BEND	1	43	1.	-4.	0.	4.	-1.	-7.	1.57	39.	46.	85.
			14	-1.	4.	1.	0.	0.	9.	1.57	39.	49.	87.
14	BEND	1	14	1.	-4.	-1.	-0.	-0.	-9.	1.57	39.	49.	87.
			44	-0.	4.	1.	5.	-0.	7.	1.57	39.	45.	84.
15	TAN	1	44	-0.	-1.	-4.	5.	-7.	0.	1.57	58.	184.	242.
			16	0.	1.	4.	5.	7.	-0.	1.57	58.	184.	242.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	-0.	-1.	-1.	-5.	-7.	0.	1.00	58.	117.	175.
			17	0.	1.	1.	8.	7.	-0.	1.00	58.	146.	204.
17	TAN	1	17	-0.	-1.	2.	-8.	-7.	0.	1.00	58.	146.	204.
			45	0.	1.	-0.	-7.	7.	-0.	1.00	58.	136.	194.
18	BEND	1	45	0.	-0.	-1.	0.	7.	-7.	1.57	39.	52.	91.
			19	1.	0.	1.	5.	-7.	5.	1.57	39.	52.	91.
19	BEND	1	19	-1.	-0.	-1.	-5.	7.	-5.	1.57	39.	52.	91.
			46	1.	0.	0.	7.	-6.	0.	1.57	39.	50.	89.
20	TAN	1	46	1.	-0.	-0.	7.	-0.	6.	1.57	58.	205.	263.
			21	-1.	-1.	0.	-7.	0.	2.	1.00	58.	99.	157.
21	TAN	1	1	-0.	-0.	2.	4.	-3.	-5.	1.57	58.	153.	211.
			47	0.	0.	-0.	-18.	3.	3.	1.57	58.	408.	466.
22	BEND	1	47	-0.	-0.	-0.	18.	3.	-3.	1.57	39.	100.	139.
			23	0.	0.	0.	-11.	-3.	15.	1.57	39.	101.	139.
23	BEND	1	23	-0.	-0.	-0.	11.	3.	-15.	1.57	39.	101.	139.
			48	0.	0.	-0.	2.	-3.	18.	1.57	39.	101.	140.
24	TAN	1	48	-0.	0.	0.	-2.	-18.	-3.	1.57	58.	412.	470.
			25	0.	-0.	0.	3.	18.	1.	1.00	58.	260.	318.
25	TAN	1	25	-0.	0.	-0.	-3.	-18.	-1.	1.00	58.	260.	318.
			49	0.	-0.	1.	5.	18.	-1.	1.57	58.	420.	478.
26	BEND	1	49	0.	-1.	0.	5.	1.	-18.	1.57	39.	103.	141.
			27	-0.	1.	0.	9.	-1.	16.	1.57	39.	102.	141.
27	BEND	1	27	0.	-1.	-0.	-9.	1.	-16.	1.57	39.	102.	141.
			50	-0.	1.	0.	17.	-1.	6.	1.57	39.	100.	139.
28	TAN	1	50	-0.	-0.	-1.	17.	-6.	1.	1.57	58.	410.	468.
			29	0.	0.	2.	-8.	6.	-2.	1.00	58.	140.	198.
29	TAN	1	29	-0.	-0.	-2.	8.	-6.	2.	1.00	58.	140.	198.
			51	0.	0.	2.	9.	6.	-4.	1.57	58.	247.	305.
30	BEND	1	51	0.	-2.	-0.	9.	4.	-6.	1.57	39.	60.	99.
			31	0.	3.	0.	-4.	-4.	11.	1.57	39.	65.	104.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	-0.	-3.	-0.	4.	4.	-11.	1.57	39.	65.	104.
			52	0.	3.	0.	4.	-3.	11.	1.57	39.	65.	103.
32	TAN	1	52	-0.	-0.	3.	-4.	-11.	-3.	1.57	58.	264.	322.
			33	0.	0.	-3.	-3.	11.	3.	1.00	58.	162.	220.
33	TAN	1	33	-0.	-0.	3.	3.	-11.	-3.	1.00	58.	162.	220.
			53	0.	0.	-3.	-13.	11.	2.	1.57	58.	372.	430.
34	BEND	1	53	3.	-0.	-0.	-2.	13.	-11.	1.57	39.	91.	130.
			35	-2.	0.	2.	9.	-14.	7.	1.57	39.	98.	137.
35	BEND	1	35	2.	-0.	-2.	-9.	14.	-7.	1.57	39.	98.	137.
			54	0.	0.	4.	10.	-15.	-1.	1.57	39.	100.	139.
36	TAN	1	54	-0.	-4.	0.	-10.	1.	-15.	1.57	58.	409.	467.
			37	0.	4.	-0.	8.	-1.	14.	1.00	58.	227.	285.
37	TAN	1	37	-0.	-4.	0.	-8.	1.	-14.	1.00	58.	227.	285.
			38	0.	5.	-0.	5.	-1.	13.	1.00	58.	193.	251.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	53	0.001659776	0.000891743	-0.000161523
2	51	0.001630029	0.001093376	-0.001727949
3	27	0.000648861	0.001076261	-0.004600089

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	420.	25	478.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
2	-1.	0.	2.	-0.	0.	0.
6	-0.	-0.	3.	0.	-0.	-0.
8	-0.	0.	5.	0.	-0.	0.
12	2.	-0.	-4.	-0.	0.	-0.
21	-1.	0.	1.	-7.	2.	-0.
38	0.	0.	5.	5.	-13.	-1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** VERTICAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	-0.000057968	-0.000065621	0.000495133	-0.000246597	-0.000036943	-0.000032498
2	0.0	-0.000065533	0.0	-0.000245258	-0.000028292	-0.000025309
4	0.000048158	-0.000069327	-0.000548215	-0.000239437	-0.000020287	-0.000017444
6	0.000052975	0.0	0.0	-0.000155227	-0.000102664	0.000012857
7	0.000054619	0.000104377	0.002704173	-0.000019099	-0.000010966	-0.000002038
8	0.000056297	0.0	0.0	0.000119864	0.000133369	-0.000004273
10	0.000056160	-0.000008239	-0.001119982	0.000201166	0.000037547	0.000005221
12	0.0	-0.000007138	0.0	0.000232518	-0.000001778	0.000020150
14	-0.000069134	-0.000001598	0.000672939	0.000237573	-0.000020833	0.000024999
16	-0.000075224	0.000063218	0.000787836	0.000214915	-0.000014222	0.000021111
17	-0.000075814	0.000111128	0.000794216	0.000190737	0.000013044	0.000017366
19	-0.000070926	0.000234743	0.000010459	0.000056852	0.000036628	0.000004204
21	0.0	0.0	0.0	0.0	0.0	0.0
23	-0.000800637	-0.000081893	0.003206659	-0.000114282	-0.000094811	-0.000071429
25	-0.000816405	-0.000476459	0.003766669	-0.000011062	-0.000108534	-0.000076572
27	-0.000832394	-0.000873918	0.004364628	0.000092170	-0.000126125	-0.000072444
29	-0.001333387	-0.000890152	0.003307601	0.000179894	-0.000175246	-0.000054499
31	-0.001696109	-0.000884279	0.001583670	0.000178311	-0.000230958	-0.000028325
33	-0.001702320	-0.000814427	0.000893973	0.000147673	-0.000232345	-0.000021644
35	-0.001656539	-0.000723788	0.000052403	0.000103998	-0.000207730	-0.000015978
37	-0.000418613	-0.000151813	0.000003825	0.000042609	-0.000105697	-0.000008377
38	0.0	0.0	0.0	0.0	0.0	0.0
39	0.000038725	-0.000065456	-0.000425500	-0.000239873	-0.000020722	-0.000017922
40	0.000051965	-0.000078422	-0.000590225	-0.000238888	-0.000019949	-0.000016957
41	0.000057273	-0.000010950	-0.001144020	0.000200689	0.000038127	0.000005103
42	0.000053413	-0.000007102	-0.001021443	0.000201580	0.000036834	0.000005365
43	-0.000055652	-0.000007155	0.000541665	0.000238145	-0.000020069	0.000025075
44	-0.000074693	0.000011672	0.000736825	0.000236675	-0.000021295	0.000024843
45	-0.000079059	0.000245038	0.000030414	0.000057761	0.000037874	0.000004321
46	-0.000051983	0.000205720	0.000002469	0.000056080	0.000035364	0.000004081
47	-0.000762798	-0.000066202	0.003124728	-0.000115979	-0.000094260	-0.000071206
48	-0.000816358	-0.000119872	0.003282081	-0.000112264	-0.000095287	-0.000071633
49	-0.000816452	-0.000835407	0.004318107	0.000090140	-0.000125479	-0.000072627
50	-0.000870777	-0.000889834	0.004342932	0.000093868	-0.000126891	-0.000072242
51	-0.001680995	-0.000890514	0.001729458	0.000179277	-0.000230270	-0.000028666
52	-0.001702298	-0.000869385	0.001421678	0.000177072	-0.000231463	-0.000027996
53	-0.001702352	-0.000755145	0.000163214	0.000105207	-0.000208977	-0.000015986
54	-0.001546668	-0.000665455	0.000006753	0.000102991	-0.000206366	-0.000015969

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	0.	-2.	1.	3.	4.	1.57	58.	114.	172.
			2	0.	-0.	2.	3.	-3.	-4.	1.00	58.	81.	139.
2	TAN	1	2	-1.	0.	-1.	-3.	3.	4.	1.00	58.	81.	139.
			39	1.	-0.	1.	4.	-3.	-5.	1.57	58.	158.	216.
3	BEND	1	39	-1.	1.	0.	-4.	-5.	3.	1.57	39.	39.	77.
			4	0.	-1.	-1.	1.	5.	-5.	1.57	39.	41.	79.
4	BEND	1	4	-0.	1.	1.	-1.	-5.	5.	1.57	39.	41.	79.
			40	-0.	-1.	-1.	-3.	5.	-4.	1.57	39.	40.	78.
5	TAN	1	40	-0.	1.	1.	-3.	4.	-5.	1.57	58.	163.	221.
			6	0.	-1.	-1.	-15.	-4.	-1.	1.00	58.	217.	275.
6	TAN	1	6	0.	1.	-2.	15.	4.	1.	1.00	58.	217.	275.
			7	-0.	-1.	0.	14.	-4.	-0.	1.00	58.	206.	264.
7	TAN	1	7	0.	1.	-0.	-14.	4.	0.	1.00	58.	206.	264.
			8	-0.	-1.	-2.	-11.	-4.	0.	1.00	58.	164.	222.
8	TAN	1	8	0.	1.	-1.	11.	4.	-0.	1.00	58.	164.	222.
			41	-0.	-1.	-0.	-6.	-4.	1.	1.00	58.	109.	167.
9	BEND	1	41	0.	-0.	1.	6.	1.	4.	1.57	39.	42.	81.
			10	-0.	0.	-0.	-8.	-1.	1.	1.57	39.	43.	82.
10	BEND	1	10	0.	-0.	0.	8.	1.	-1.	1.57	39.	43.	82.
			42	-1.	1.	0.	-5.	-2.	6.	1.57	39.	45.	84.
11	TAN	1	42	-1.	-0.	-1.	-5.	-6.	2.	1.00	58.	117.	175.
			12	1.	0.	1.	9.	6.	-5.	1.00	58.	169.	227.
12	TAN	1	12	2.	-0.	6.	-9.	-6.	5.	1.00	58.	169.	227.
			43	-2.	0.	-5.	-4.	6.	0.	1.57	58.	165.	223.
13	BEND	1	43	2.	-5.	-0.	4.	0.	-6.	1.57	39.	40.	79.
			14	-1.	5.	2.	-1.	-1.	8.	1.57	39.	46.	85.
14	BEND	1	14	1.	-5.	-2.	1.	1.	-8.	1.57	39.	46.	85.
			44	0.	5.	2.	2.	-2.	8.	1.57	39.	45.	84.
15	TAN	1	44	0.	-2.	-5.	2.	-8.	2.	1.57	58.	184.	242.
			16	-0.	2.	5.	9.	8.	-2.	1.57	58.	264.	322.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	-2.	-2.	-9.	-8.	2.	1.00	58.	168.	226.
			17	-0.	2.	2.	13.	8.	-1.	1.00	58.	221.	279.
17	TAN	1	17	0.	-2.	1.	-13.	-8.	1.	1.00	58.	221.	279.
			45	-0.	2.	-3.	-13.	8.	-0.	1.00	58.	209.	267.
18	BEND	1	45	3.	0.	-2.	0.	13.	-8.	1.57	39.	80.	119.
			19	-0.	-0.	3.	5.	-13.	6.	1.57	39.	85.	123.
19	BEND	1	19	0.	0.	-3.	-5.	13.	-6.	1.57	39.	85.	123.
			46	2.	-0.	3.	8.	-13.	0.	1.57	39.	82.	121.
20	TAN	1	46	2.	-3.	0.	8.	-0.	13.	1.57	58.	336.	394.
			21	-2.	3.	-0.	-8.	0.	3.	1.00	58.	124.	182.
21	TAN	1	1	0.	0.	-2.	-1.	3.	4.	1.57	58.	114.	172.
			47	-0.	-0.	1.	17.	-3.	-2.	1.57	58.	380.	439.
22	BEND	1	47	0.	1.	0.	-17.	-2.	3.	1.57	39.	93.	132.
			23	-0.	-0.	-0.	10.	2.	-14.	1.57	39.	94.	133.
23	BEND	1	23	0.	0.	0.	-10.	-2.	14.	1.57	39.	94.	133.
			48	-0.	-0.	0.	-3.	2.	-17.	1.57	39.	94.	133.
24	TAN	1	48	0.	-0.	-0.	3.	17.	2.	1.57	58.	386.	444.
			25	-0.	0.	-0.	-3.	-17.	-0.	1.00	58.	243.	301.
25	TAN	1	25	0.	-0.	0.	3.	17.	0.	1.00	58.	243.	301.
			49	-0.	0.	-1.	-5.	-17.	2.	1.57	58.	393.	451.
26	BEND	1	49	-0.	1.	-0.	-5.	-2.	17.	1.57	39.	96.	135.
			27	0.	-1.	-0.	-8.	2.	-15.	1.57	39.	96.	135.
27	BEND	1	27	-0.	1.	0.	8.	-2.	15.	1.57	39.	96.	135.
			50	0.	-1.	-0.	-16.	2.	-5.	1.57	39.	94.	133.
28	TAN	1	50	0.	0.	1.	-16.	5.	-2.	1.57	58.	385.	443.
			29	-0.	-0.	-2.	7.	-5.	3.	1.00	58.	135.	193.
29	TAN	1	29	0.	0.	2.	-7.	5.	-3.	1.00	58.	135.	193.
			51	-0.	-0.	-2.	-9.	-5.	4.	1.57	58.	238.	296.
30	BEND	1	51	-0.	2.	0.	-9.	-4.	5.	1.57	39.	58.	97.
			31	-0.	-2.	-0.	4.	4.	-10.	1.57	39.	62.	101.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	0.	2.	0.	-4.	-4.	10.	1.57	39.	62.	101.
			52	-0.	-3.	-0.	-3.	3.	-10.	1.57	39.	62.	101.
32	TAN	1	52	0.	0.	-3.	3.	10.	3.	1.57	58.	254.	312.
			33	-0.	-0.	3.	3.	-10.	-2.	1.00	58.	155.	213.
33	TAN	1	33	0.	0.	-3.	-3.	10.	2.	1.00	58.	155.	213.
			53	-0.	-0.	3.	12.	-10.	-1.	1.57	58.	359.	417.
34	BEND	1	53	-3.	0.	0.	1.	-12.	10.	1.57	39.	88.	127.
			35	2.	-0.	-2.	-8.	14.	-7.	1.57	39.	95.	133.
35	BEND	1	35	-2.	0.	2.	8.	-14.	7.	1.57	39.	95.	133.
			54	-0.	-0.	-3.	-10.	15.	1.	1.57	39.	97.	136.
36	TAN	1	54	0.	3.	-0.	10.	-1.	15.	1.57	58.	396.	454.
			37	-0.	-4.	0.	-7.	1.	-14.	1.00	58.	222.	280.
37	TAN	1	37	0.	4.	-0.	7.	-1.	14.	1.00	58.	222.	280.
			38	-0.	-5.	0.	-4.	1.	-13.	1.00	58.	196.	254.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	53	-0.001702352	-0.000755145	0.000163214
2	51	-0.001680995	-0.000890514	0.001729458
3	27	-0.000832394	-0.000873918	0.004364628

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	36	396.	36	454.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
2	-1.	-0.	-1.	-0.	-0.	-0.
6	-0.	0.	-4.	-0.	0.	0.
8	-0.	0.	-3.	-0.	0.	-0.
12	3.	0.	-7.	-0.	0.	-0.
21	-2.	-0.	-3.	-8.	3.	-0.
38	-0.	-0.	-5.	-4.	13.	1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.000332270	-0.001478999	-0.000042772	0.000020882	0.000047257	0.000180927
2	0.0	-0.001478967	0.0	0.000021880	0.000034970	0.000146576
4	-0.000289486	-0.001452335	0.000045661	0.000022150	0.000023646	0.000121782
6	-0.000305509	0.0	0.0	0.000014946	-0.000005047	0.000061493
7	-0.000291489	0.000370318	-0.000001874	0.000003363	0.000002606	-0.000015180
8	-0.000282965	0.0	0.0	-0.000008461	-0.000005464	0.000001046
10	-0.000272916	-0.000080119	0.000087637	-0.000015374	-0.000002913	-0.000035647
12	0.0	-0.000087616	0.0	-0.000018898	0.000003931	-0.000068957
14	0.000203471	-0.000102278	-0.000057325	-0.000020398	0.000007240	-0.000066589
16	0.000219635	-0.000256179	-0.000084192	-0.000020628	0.000008471	-0.000041539
17	0.000220340	-0.000330121	-0.000105492	-0.000020880	0.000007884	-0.000019199
19	0.000211925	-0.000123611	-0.000006540	-0.000022289	-0.000030573	0.000022987
21	0.0	0.0	0.0	0.0	0.0	0.0
23	0.003257579	-0.001438359	-0.000309051	0.000013683	0.000129237	0.000185420
25	0.003298718	-0.000598623	-0.001050132	0.000010042	0.000152104	0.000128739
27	0.003315588	-0.000072802	-0.001919573	0.000006403	0.000174857	0.000075366
29	0.003627583	-0.000056442	-0.001991676	0.000002007	0.000219471	0.000004544
31	0.003458852	-0.000050278	-0.001926057	-0.000003210	0.000270148	-0.000028427
33	0.003452109	0.000023672	-0.001161209	-0.000005155	0.000281157	-0.000024378
35	0.003386101	0.000104022	-0.000065300	-0.000007982	0.000296858	-0.000019937
37	0.001153558	0.000039860	0.000000004	-0.000008299	0.000247262	-0.000010398
38	0.0	0.0	0.0	0.0	0.0	0.0
39	-0.000225381	-0.001478940	0.000039089	0.000022215	0.000024219	0.000122370
40	-0.000315968	-0.001388025	0.000038154	0.000022065	0.000023173	0.000121443
41	-0.000280696	-0.000061477	0.000089425	-0.000015338	-0.000003016	-0.000034886
42	-0.000253764	-0.000087997	0.000080119	-0.000015408	-0.000002786	-0.000036411
43	0.000167347	-0.000087436	-0.000044894	-0.000020385	0.000007112	-0.000067483
44	0.000218218	-0.000137389	-0.000065709	-0.000020401	0.000007336	-0.000065494
45	0.000218665	-0.000140839	-0.000022644	-0.000022266	-0.000030099	0.000023200
46	0.000195418	-0.000106680	0.000000251	-0.000022285	-0.000030986	0.000022702
47	0.003158808	-0.001479207	-0.000273414	0.000013785	0.000128657	0.000186546
48	0.003298263	-0.001340332	-0.000380726	0.000013569	0.000129728	0.000184252
49	0.003298953	-0.000113051	-0.001825564	0.000006516	0.000174371	0.000076405
50	0.003355263	-0.000056328	-0.001961390	0.000006300	0.000175430	0.000074329
51	0.003474102	-0.000056571	-0.001987058	-0.000003186	0.000269586	-0.000028548
52	0.003452563	-0.000035218	-0.001781950	-0.000003246	0.000270623	-0.000028251
53	0.003451366	0.000095185	-0.000222676	-0.000007914	0.000296416	-0.000020041
54	0.003228335	0.000104130	0.000000008	-0.000008033	0.000297209	-0.000019820

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	3.	0.	0.	-1.	-5.	-15.	1.57	58.	352.	411.
			2	-3.	-0.	-0.	1.	5.	20.	1.00	58.	297.	355.
2	TAN	1	2	-7.	0.	0.	-1.	-5.	-20.	1.00	58.	297.	355.
			39	7.	-0.	-0.	-0.	5.	8.	1.57	58.	211.	269.
3	BEND	1	39	-7.	-0.	0.	0.	8.	-5.	1.57	39.	52.	90.
			4	5.	0.	-5.	3.	-5.	4.	1.57	39.	36.	75.
4	BEND	1	4	-5.	-0.	5.	-3.	5.	-4.	1.57	39.	36.	75.
			40	-0.	0.	-7.	5.	-3.	0.	1.57	39.	30.	69.
5	TAN	1	40	-0.	7.	-0.	5.	-0.	3.	1.57	58.	124.	182.
			6	0.	-6.	0.	1.	0.	-5.	1.00	58.	75.	133.
6	TAN	1	6	0.	6.	0.	-1.	-0.	5.	1.00	58.	75.	133.
			7	-0.	-4.	-0.	-0.	0.	-1.	1.00	58.	20.	78.
7	TAN	1	7	0.	4.	0.	0.	-0.	1.	1.00	58.	20.	78.
			8	-0.	-2.	-0.	-1.	0.	3.	1.00	58.	40.	98.
8	TAN	1	8	-1.	2.	-0.	1.	-0.	-3.	1.00	58.	40.	98.
			41	1.	-1.	0.	1.	0.	-8.	1.00	58.	113.	171.
9	BEND	1	41	-1.	0.	1.	-1.	-8.	-0.	1.57	39.	43.	82.
			10	0.	-0.	-1.	1.	8.	-0.	1.57	39.	45.	83.
10	BEND	1	10	-0.	0.	1.	-1.	-8.	0.	1.57	39.	45.	83.
			42	-1.	-0.	-1.	0.	8.	-1.	1.57	39.	44.	83.
11	TAN	1	42	-1.	1.	0.	0.	1.	-8.	1.00	58.	114.	172.
			12	0.	-1.	-0.	-1.	-1.	6.	1.00	58.	94.	152.
12	TAN	1	12	-6.	1.	-0.	1.	1.	-6.	1.00	58.	94.	152.
			43	6.	-1.	0.	-0.	-1.	-8.	1.57	58.	175.	233.
13	BEND	1	43	-6.	0.	1.	0.	-8.	1.	1.57	39.	43.	82.
			14	4.	-0.	-5.	-1.	11.	-1.	1.57	39.	60.	98.
14	BEND	1	14	-4.	0.	5.	1.	-11.	1.	1.57	39.	60.	98.
			44	-1.	-0.	-6.	-1.	12.	0.	1.57	39.	64.	103.
15	TAN	1	44	-1.	6.	0.	-1.	-0.	-12.	1.57	58.	264.	322.
			16	1.	-6.	-0.	0.	0.	10.	1.57	58.	226.	284.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	-1.	3.	0.	-0.	-0.	-10.	1.00	58.	143.	202.
			17	1.	-2.	-0.	-1.	0.	8.	1.00	58.	118.	176.
17	TAN	1	17	-1.	-1.	0.	1.	-0.	-8.	1.00	58.	118.	176.
			45	1.	2.	-0.	-5.	0.	-2.	1.00	58.	76.	135.
18	BEND	1	45	0.	-1.	-2.	2.	5.	-0.	1.57	39.	29.	68.
			19	1.	1.	2.	-2.	-5.	2.	1.57	39.	29.	68.
19	BEND	1	19	-1.	-1.	-2.	2.	5.	-2.	1.57	39.	29.	68.
			46	2.	1.	0.	-0.	-4.	2.	1.57	39.	25.	64.
20	TAN	1	46	2.	-0.	-1.	-0.	-2.	4.	1.57	58.	102.	160.
			21	-3.	0.	1.	6.	2.	13.	1.00	58.	210.	268.
21	TAN	1	1	-3.	0.	0.	1.	-5.	-15.	1.57	58.	352.	411.
			47	1.	-0.	-0.	-1.	5.	-12.	1.57	58.	279.	337.
22	BEND	1	47	-1.	-0.	0.	1.	-12.	-5.	1.57	39.	68.	107.
			23	1.	0.	-1.	3.	12.	4.	1.57	39.	72.	110.
23	BEND	1	23	-1.	-0.	1.	-3.	-12.	-4.	1.57	39.	72.	110.
			48	-0.	0.	-1.	5.	12.	1.	1.57	39.	73.	111.
24	TAN	1	48	0.	1.	0.	-5.	-1.	12.	1.57	58.	297.	355.
			25	-0.	-1.	-0.	5.	1.	-12.	1.00	58.	179.	237.
25	TAN	1	25	0.	1.	0.	-5.	-1.	12.	1.00	58.	179.	237.
			49	-0.	-0.	-0.	5.	1.	-11.	1.57	58.	268.	326.
26	BEND	1	49	-0.	0.	0.	5.	11.	-1.	1.57	39.	66.	104.
			27	0.	-0.	-0.	-3.	-11.	4.	1.57	39.	65.	104.
27	BEND	1	27	-0.	0.	0.	3.	11.	-4.	1.57	39.	65.	104.
			50	0.	-0.	-0.	1.	-11.	5.	1.57	39.	65.	104.
28	TAN	1	50	0.	0.	0.	1.	-5.	11.	1.57	58.	267.	325.
			29	-1.	-0.	-0.	-1.	5.	-8.	1.00	58.	134.	192.
29	TAN	1	29	1.	0.	0.	1.	-5.	8.	1.00	58.	134.	192.
			51	-1.	-0.	-0.	-1.	5.	1.	1.57	58.	110.	168.
30	BEND	1	51	-1.	0.	0.	-1.	-1.	-5.	1.57	39.	27.	66.
			31	1.	-0.	-1.	4.	2.	3.	1.57	39.	28.	67.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	-1.	0.	1.	-4.	-2.	-3.	1.57	39.	28.	67.
			52	-0.	-0.	-2.	5.	2.	-1.	1.57	39.	29.	67.
32	TAN	1	52	0.	2.	-0.	-5.	1.	2.	1.57	58.	117.	175.
			33	-0.	-2.	0.	5.	-1.	-2.	1.00	58.	73.	131.
33	TAN	1	33	0.	2.	-0.	-5.	1.	2.	1.00	58.	73.	131.
			53	-0.	-2.	0.	5.	-1.	-1.	1.57	58.	112.	170.
34	BEND	1	53	-0.	0.	2.	1.	-5.	1.	1.57	39.	27.	66.
			35	-2.	-0.	-2.	-1.	4.	0.	1.57	39.	25.	63.
35	BEND	1	35	2.	0.	2.	1.	-4.	-0.	1.57	39.	25.	63.
			54	-3.	-0.	-0.	-1.	3.	1.	1.57	39.	18.	56.
36	TAN	1	54	3.	0.	-0.	1.	-1.	3.	1.57	58.	72.	130.
			37	-3.	-0.	0.	0.	1.	18.	1.00	58.	255.	313.
37	TAN	1	37	3.	0.	-0.	-0.	-1.	-18.	1.00	58.	255.	313.
			38	-4.	-0.	0.	2.	1.	47.	1.00	58.	661.	719.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	29	0.003627583	-0.000056442	-0.001991676
2	47	0.003158808	-0.001479207	-0.000273414
3	29	0.003627583	-0.000056442	-0.001991676

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	37	661.	37	719.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	-10.	-0.	-0.	-0.	0.	0.
6	-0.	0.	0.	0.	-0.	0.
8	-0.	-1.	-0.	0.	0.	-0.
12	-6.	-0.	0.	0.	-0.	0.
21	-3.	1.	-0.	6.	13.	-2.
38	-4.	-0.	-0.	2.	-47.	1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	-0.000264931	0.001183671	0.000049324	-0.000024053	-0.000046966	-0.000149543
2	0.0	0.001183614	0.0	-0.000025247	-0.000035096	-0.000110413
4	0.000202266	0.001165136	-0.000053467	-0.000025732	-0.000024157	-0.000084910
6	0.000206406	0.0	0.0	-0.000021599	0.000005488	-0.000057356
7	0.000186331	-0.000489191	-0.000045684	-0.000014979	-0.000000822	0.000008099
8	0.000171624	0.0	0.0	-0.000008220	-0.000002013	0.000022990
10	0.000157613	0.000393737	0.000019952	-0.000004263	-0.000000696	0.000036669
12	0.0	0.000401773	0.0	-0.000003298	0.000000102	0.000008645
14	0.000014583	0.000399333	-0.000008511	-0.000002765	0.000000489	-0.000010530
16	0.000017962	0.000364080	-0.000010755	-0.000001897	0.000000651	-0.000015043
17	0.000018221	0.000321459	-0.000012438	-0.000000971	0.000000624	-0.000018619
19	0.000015549	0.000028093	-0.000000689	0.000004167	-0.000003189	-0.000016051
21	0.0	0.0	0.0	0.0	0.0	0.0
23	-0.002924987	0.001145663	0.000344814	-0.000014660	-0.000126168	-0.000174268
25	-0.002963743	0.000353978	0.001067822	-0.000009590	-0.000148131	-0.000122653
27	-0.002981048	-0.000160628	0.001912826	-0.000004521	-0.000169778	-0.000077130
29	-0.003351305	-0.000177293	0.001962357	0.000001818	-0.000211960	-0.000017260
31	-0.003323240	-0.000179454	0.001853107	0.000009812	-0.000259868	0.000010735
33	-0.003320419	-0.000204378	0.001116087	0.000012898	-0.000270310	0.000007080
35	-0.003256996	-0.000220233	0.000062740	0.000017356	-0.000285293	0.000004345
37	-0.001110662	-0.000078936	-0.000000012	0.000016669	-0.000237885	0.000002269
38	0.0	0.0	0.0	0.0	0.0	0.0
39	0.000157988	0.001183563	-0.000045114	-0.000025781	-0.000024709	-0.000085295
40	0.000220587	0.001120355	-0.000046469	-0.000025668	-0.000023701	-0.000084858
41	0.000165760	0.000374282	0.000020517	-0.000004290	-0.000000711	0.000036456
42	0.000137866	0.000401878	0.000017850	-0.000004240	-0.000000679	0.000036778
43	0.000008776	0.000401724	-0.000006926	-0.000002794	0.000000472	-0.000010155
44	0.000017051	0.000393561	-0.000009383	-0.000002730	0.000000504	-0.000010768
45	0.000016267	0.000037586	-0.000002381	0.000004119	-0.000003144	-0.000016217
46	0.000013808	0.000022338	0.000000026	0.000004202	-0.000003215	-0.000015846
47	-0.002832144	0.001184054	0.000309325	-0.000014784	-0.000125606	-0.000175321
48	-0.002963228	0.001053537	0.000415072	-0.000014521	-0.000126645	-0.000173173
49	-0.002964038	-0.000119503	0.001821915	-0.000004660	-0.000169315	-0.000077982
50	-0.003021719	-0.000177502	0.001952522	-0.000004397	-0.000170322	-0.000076281
51	-0.003329094	-0.000177055	0.001915341	0.000009748	-0.000259341	0.000010865
52	-0.003320845	-0.000185117	0.001713008	0.000009895	-0.000260313	0.000010560
53	-0.003319717	-0.000221756	0.000213984	0.000017236	-0.000284870	0.000004370
54	-0.003105378	-0.000211926	-0.000000023	0.000017447	-0.000285631	0.000004325

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-3.	-0.	-0.	1.	5.	17.	1.57	58.	402.	460.
			2	3.	0.	0.	-1.	-5.	-23.	1.00	58.	332.	390.
2	TAN	1	2	9.	-0.	-0.	1.	5.	23.	1.00	58.	332.	390.
			39	-9.	0.	0.	-0.	-5.	-7.	1.57	58.	181.	239.
3	BEND	1	39	9.	0.	-0.	0.	-7.	5.	1.57	39.	44.	83.
			4	-6.	-0.	7.	-3.	2.	-3.	1.57	39.	27.	66.
4	BEND	1	4	6.	0.	-7.	3.	-2.	3.	1.57	39.	27.	66.
			40	0.	-0.	9.	-4.	-0.	-0.	1.57	39.	24.	63.
5	TAN	1	40	0.	-9.	0.	-4.	0.	0.	1.57	58.	99.	158.
			6	-0.	9.	-0.	-0.	-0.	4.	1.00	58.	55.	113.
6	TAN	1	6	-0.	-9.	-0.	0.	0.	-4.	1.00	58.	55.	113.
			7	0.	7.	0.	-0.	-0.	2.	1.00	58.	25.	83.
7	TAN	1	7	-0.	-7.	-0.	0.	0.	-2.	1.00	58.	25.	83.
			8	0.	4.	0.	0.	-0.	-0.	1.00	58.	7.	66.
8	TAN	1	8	0.	-4.	-0.	-0.	0.	0.	1.00	58.	7.	66.
			41	-0.	3.	0.	0.	-0.	2.	1.00	58.	34.	93.
9	BEND	1	41	0.	0.	-3.	-0.	2.	0.	1.57	39.	13.	52.
			10	2.	-0.	2.	-0.	-2.	-0.	1.57	39.	10.	49.
10	BEND	1	10	-2.	0.	-2.	0.	2.	0.	1.57	39.	10.	49.
			42	3.	-0.	0.	-0.	-0.	-0.	1.57	39.	2.	41.
11	TAN	1	42	3.	-0.	0.	-0.	0.	0.	1.00	58.	6.	64.
			12	-2.	0.	-0.	0.	-0.	12.	1.00	58.	173.	231.
12	TAN	1	12	-3.	-0.	-0.	-0.	0.	-12.	1.00	58.	173.	231.
			43	3.	0.	0.	0.	-0.	5.	1.57	58.	110.	168.
13	BEND	1	43	-3.	0.	-0.	-0.	5.	0.	1.57	39.	27.	66.
			14	3.	-0.	-2.	0.	-3.	-0.	1.57	39.	17.	56.
14	BEND	1	14	-3.	0.	2.	-0.	3.	0.	1.57	39.	17.	56.
			44	0.	-0.	-4.	-0.	-2.	-0.	1.57	39.	12.	51.
15	TAN	1	44	0.	4.	0.	-0.	0.	2.	1.57	58.	49.	107.
			16	-0.	-4.	-0.	0.	-0.	-2.	1.57	58.	39.	97.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	1.	0.	-0.	0.	2.	1.00	58.	25.	83.
			17	-0.	-1.	-0.	-0.	-0.	-1.	1.00	58.	18.	76.
17	TAN	1	17	0.	-2.	0.	0.	0.	1.	1.00	58.	18.	76.
			45	-0.	1.	-0.	-1.	-0.	2.	1.00	58.	24.	82.
18	BEND	1	45	0.	0.	-1.	-2.	1.	0.	1.57	39.	9.	48.
			19	0.	-0.	0.	1.	-0.	-1.	1.57	39.	10.	48.
19	BEND	1	19	-0.	0.	-0.	-1.	0.	1.	1.57	39.	10.	48.
			46	0.	-0.	0.	-0.	-0.	-2.	1.57	39.	10.	48.
20	TAN	1	46	0.	-0.	0.	-0.	2.	0.	1.57	58.	39.	97.
			21	0.	0.	-0.	-1.	-2.	0.	1.00	58.	31.	89.
21	TAN	1	1	3.	-0.	-0.	-1.	5.	17.	1.57	58.	402.	460.
			47	-2.	0.	0.	1.	-5.	11.	1.57	58.	262.	320.
22	BEND	1	47	2.	0.	-0.	-1.	11.	5.	1.57	39.	64.	103.
			23	-1.	-0.	1.	-3.	-11.	-4.	1.57	39.	68.	106.
23	BEND	1	23	1.	0.	-1.	3.	11.	4.	1.57	39.	68.	106.
			48	0.	-0.	1.	-5.	-12.	-1.	1.57	39.	68.	107.
24	TAN	1	48	-0.	-1.	-0.	5.	1.	-12.	1.57	58.	279.	337.
			25	0.	1.	0.	-5.	-1.	10.	1.00	58.	161.	219.
25	TAN	1	25	-0.	-1.	-0.	5.	1.	-10.	1.00	58.	161.	219.
			49	0.	0.	0.	-5.	-1.	9.	1.57	58.	227.	285.
26	BEND	1	49	0.	-0.	-0.	-5.	-9.	1.	1.57	39.	55.	94.
			27	-0.	0.	0.	3.	9.	-4.	1.57	39.	55.	94.
27	BEND	1	27	0.	-0.	-0.	-3.	-9.	4.	1.57	39.	55.	94.
			50	0.	0.	0.	-1.	9.	-5.	1.57	39.	55.	94.
28	TAN	1	50	0.	-0.	-0.	-1.	5.	-9.	1.57	58.	225.	283.
			29	1.	0.	0.	1.	-5.	7.	1.00	58.	119.	177.
29	TAN	1	29	-1.	-0.	-0.	-1.	5.	-7.	1.00	58.	119.	177.
			51	1.	0.	0.	1.	-5.	-1.	1.57	58.	106.	165.
30	BEND	1	51	1.	-0.	-0.	1.	1.	5.	1.57	39.	26.	65.
			31	-1.	0.	1.	-4.	-2.	-2.	1.57	39.	27.	66.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	-0.	-1.	4.	2.	2.	1.57	39.	27.	66.
			52	0.	0.	2.	-5.	-2.	1.	1.57	39.	28.	66.
32	TAN	1	52	-0.	-2.	0.	5.	-1.	-2.	1.57	58.	113.	171.
			33	0.	2.	-0.	-5.	1.	1.	1.00	58.	69.	127.
33	TAN	1	33	-0.	-2.	0.	5.	-1.	-1.	1.00	58.	69.	127.
			53	0.	2.	-0.	-5.	1.	0.	1.57	58.	106.	165.
34	BEND	1	53	0.	-0.	-2.	-0.	5.	-1.	1.57	39.	26.	65.
			35	2.	0.	2.	1.	-4.	1.	1.57	39.	23.	62.
35	BEND	1	35	-2.	-0.	-2.	-1.	4.	-1.	1.57	39.	23.	62.
			54	2.	0.	0.	1.	-3.	-0.	1.57	39.	16.	55.
36	TAN	1	54	-2.	-0.	0.	-1.	0.	-3.	1.57	58.	67.	126.
			37	3.	0.	-0.	-1.	-0.	-17.	1.00	58.	245.	303.
37	TAN	1	37	-3.	-0.	0.	1.	0.	17.	1.00	58.	245.	303.
			38	4.	0.	-0.	-3.	-0.	-45.	1.00	58.	638.	696.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	29	-0.003351305	-0.000177293	0.001962357
2	47	-0.002832144	0.001184054	0.000309325
3	29	-0.003351305	-0.000177293	0.001962357

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	37	638.	37	696.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	12.	0.	0.	0.	-0.	-0.
6	0.	-0.	-0.	-0.	0.	-0.
8	0.	0.	0.	-0.	-0.	0.
12	-6.	0.	0.	-0.	-0.	0.
21	0.	-0.	-0.	-1.	0.	2.
38	4.	0.	0.	-3.	45.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	-0.000578196	0.005198300	-0.000166274	0.000082280	0.000027186	-0.000271623
2	0.0	0.005197883	0.0	0.000083320	0.000024489	-0.000307186
4	0.000744251	0.005123381	0.000185544	0.000083640	0.000022004	-0.000337165
6	0.000821853	0.0	0.0	0.000087948	0.000003075	-0.000239410
7	0.000827228	-0.001902951	0.000162298	0.000094930	-0.000008380	-0.000011945
8	0.000832715	0.0	0.0	0.000102058	0.000030191	0.000285363
10	0.000785975	0.004953030	-0.000561430	0.000106220	0.000039117	0.000225907
12	0.0	0.005004343	0.0	0.000111418	0 000029391	0.000068592
14	-0.000088568	0.005006652	0.000310695	0.000115226	0.000024697	0.000005513
16	-0.000089493	0.004942998	0.000271373	0.000119588	0.000021517	-0.000067092
17	-0.000089326	0.004668918	0.000221317	0.000124256	0.000018757	-0.000151320
19	-0.000085043	0.000867169	0.000003275	0.000150281	0.000015221	-0.000244261
21	0.0	0.0	0.0	0.0	0.0	0.0
23	-0.002810120	0.005184915	-0.001067880	0.000037425	0.000045237	-0.000068688
25	-0.002824915	0.004965015	-0.001318684	-0.000000769	0.000044824	-0.000010505
27	-0.002813875	0.005078021	-0.001525310	-0.000038934	0.000035688	0.000049918
29	-0.002079554	0.005088162	-0.001037013	-0.000095246	0.000006835	0.000140589
31	-0.000454167	0.005037792	0.000179866	-0.000183542	-0.000026127	0.000221575
33	-0.000405275	0.004405208	0.000139824	-0.000221188	-0.000031791	0.000230076
35	-0.000397196	0.003489249	0.000008592	-0.000274928	-0.000036135	0.000216258
37	-0.000130729	0.001231463	0.000000329	-0.000257897	-0.000028711	0.000112716
38	0.0	0.0	0.0	0.0	0.0	0.0
39	0.000565560	0.005197488	0.000146036	0.000083628	0.000022128	-0.000335812
40	0.000818549	0.004943956	0.000192276	0.000083657	0.000021898	-0.000338353
41	0.000835907	0.004831899	-0.000563945	0.000106203	0.000039261	0.000229482
42	0.000667274	0.005002473	-0.000513705	0.000106242	0.000038935	0.000222259
43	-0.000084896	0.005005151	0.000255052	0.000115087	0.000024870	0.000008076
44	-0.000089644	0.005009100	0.000322972	0.000115387	0.000024557	0.000002859
45	-0.000088404	0.001030914	0.000011343	0.000149927	0.000015178	-0.000246675
46	-0.000076910	0.000733424	-0.000000084	0.000150435	0.000015244	-0.000241199
47	-0.002773390	0.005200066	-0.001037890	0.000038040	0.000045059	-0.000069943
48	-0.002825093	0.005148876	-0.001100125	0.000036683	0.000045383	-0.000067464
49	-0.002824737	0.005051963	-0.001514780	-0.000038221	0.000035925	0.000048605
50	-0.002787020	0.005089071	-0.001512349	-0.000039548	0.000035381	0.000051243
51	-0.000571554	0.005086504	0.000088640	-0.000182261	-0.000025649	0.000220788
52	-0.000405359	0.004919853	0.000206274	-0.000185066	-0.000026536	0.000222260
53	-0.000405153	0.003664876	0.000027785	-0.000273365	-0.000036078	0.000217338
54	-0.000377980	0.003295328	0.000000628	-0.000276148	-0.000036165	0.000214866

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-2.	0.	-1.	-1.	-18.	1.57	58.	402.	460.
			2	-0.	2.	-0.	0.	1.	19.	1.00	58.	265.	323.
2	TAN	1	2	-2.	-2.	-0.	-0.	-1.	-19.	1.00	58.	265.	323.
			39	2.	2.	0.	0.	1.	15.	1.57	58.	336.	394.
3	BEND	1	39	-2.	0.	-2.	-0.	15.	-1.	1.57	39.	82.	121.
			4	3.	-0.	0.	1.	-13.	1.	1.57	39.	73.	112.
4	BEND	1	4	-3.	0.	-0.	-1.	13.	-1.	1.57	39.	73.	112.
			40	2.	-0.	-2.	1.	-12.	-0.	1.57	39.	64.	103.
5	TAN	1	40	2.	2.	0.	1.	0.	12.	1.57	58.	262.	320.
			6	-3.	-2.	-0.	-2.	-0.	26.	1.00	58.	367.	425.
6	TAN	1	6	-2.	2.	-0.	2.	0.	-26.	1.00	58.	367.	425.
			7	-0.	-2.	0.	1.	-0.	2.	1.00	58.	33.	92.
7	TAN	1	7	0.	2.	-0.	-1.	0.	-2.	1.00	58.	33.	92.
			8	-2.	-2.	0.	3.	-0.	32.	1.00	58.	451.	509.
8	TAN	1	8	-5.	2.	0.	-3.	0.	-32.	1.00	58.	451.	509.
			41	4.	-2.	-0.	-1.	-0.	-37.	1.00	58.	521.	579.
9	BEND	1	41	-4.	-0.	2.	1.	-37.	0.	1.57	39.	200.	239.
			10	1.	0.	-4.	-1.	38.	1.	1.57	39.	210.	249.
10	BEND	1	10	-1.	-0.	4.	1.	-38.	-1.	1.57	39.	210.	249.
			42	-2.	0.	-4.	-0.	38.	2.	1.57	39.	209.	247.
11	TAN	1	42	-2.	4.	-0.	-0.	-2.	-38.	1.00	58.	542.	600.
			12	2.	-3.	0.	2.	2.	28.	1.00	58.	404.	462.
12	TAN	1	12	-1.	3.	0.	-2.	-2.	-28.	1.00	58.	404.	462.
			43	1.	-3.	-0.	2.	2.	27.	1.57	58.	604.	662.
13	BEND	1	43	-1.	-0.	3.	-2.	27.	-2.	1.57	39.	148.	186.
			14	-2.	0.	-3.	2.	-27.	0.	1.57	39.	150.	188.
14	BEND	1	14	2.	-0.	3.	-2.	27.	-0.	1.57	39.	150.	188.
			44	-3.	0.	-1.	2.	-29.	-1.	1.57	39.	157.	196.
15	TAN	1	44	-3.	1.	-0.	2.	1.	29.	1.57	58.	644.	702.
			16	3.	-1.	0.	-1.	-1.	-35.	1.57	58.	785.	843.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	1.	-0.	1.	1.	35.	1.00	58.	498.	557.
			17	-1.	-1.	0.	-1.	-1.	-34.	1.00	58.	484.	542.
17	TAN	1	17	4.	1.	-0.	1.	1.	34.	1.00	58.	484.	542.
			45	-5.	-1.	0.	0.	-1.	23.	1.00	58.	322.	380.
18	BEND	1	45	-0.	5.	1.	-23.	-0.	1.	1.57	39.	124.	163.
			19	-0.	-5.	-1.	18.	0.	-18.	1.57	39.	138.	177.
19	BEND	1	19	0.	5.	1.	-18.	-0.	18.	1.57	39.	138.	177.
			46	-1.	-5.	-0.	2.	0.	-26.	1.57	39.	144.	183.
20	TAN	1	46	-1.	0.	5.	2.	26.	-0.	1.57	58.	590.	648.
			21	1.	-0.	-6.	-41.	-26.	-4.	1.00	58.	696.	755.
21	TAN	1	1	-0.	-2.	0.	1.	-1.	-18.	1.57	58.	402.	460.
			47	0.	1.	-0.	-6.	1.	13.	1.57	58.	328.	386.
22	BEND	1	47	-0.	-0.	-1.	6.	13.	-1.	1.57	39.	80.	119.
			23	1.	0.	0.	-4.	-13.	5.	1.57	39.	79.	118.
23	BEND	1	23	-1.	-0.	-0.	4.	13.	-5.	1.57	39.	79.	118.
			48	0.	0.	-0.	1.	-13.	6.	1.57	39.	78.	116.
24	TAN	1	48	-0.	0.	0.	-1.	-6.	-13.	1.57	58.	318.	376.
			25	-0.	-0.	-0.	-1.	6.	12.	1.00	58.	195.	253.
25	TAN	1	25	0.	0.	0.	1.	-6.	-12.	1.00	58.	195.	253.
			49	-1.	-0.	-0.	-3.	6.	14.	1.57	58.	342.	400.
26	BEND	1	49	-1.	0.	0.	-3.	-14.	-6.	1.57	39.	84.	122.
			27	0.	-0.	-1.	7.	14.	2.	1.57	39.	85.	124.
27	BEND	1	27	-0.	0.	1.	-7.	-14.	-2.	1.57	39.	85.	124.
			50	-0.	-0.	-1.	7.	14.	-3.	1.57	39.	86.	124.
28	TAN	1	50	-0.	1.	0.	7.	3.	-14.	1.57	58.	350.	408.
			29	0.	-1.	-0.	-9.	-3.	11.	1.00	58.	213.	271.
29	TAN	1	29	-0.	1.	0.	9.	3.	-11.	1.00	58.	213.	271.
			51	0.	-2.	-0.	-12.	-3.	9.	1.57	58.	344.	402.
30	BEND	1	51	0.	0.	2.	-12.	-9.	3.	1.57	39.	84.	123.
			31	-2.	-0.	-1.	7.	8.	-11.	1.57	39.	83.	122.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	0.	1.	-7.	-8.	11.	1.57	39.	83.	122.
			52	-3.	-0.	0.	-3.	6.	-13.	1.57	39.	79.	118.
32	TAN	1	52	3.	-0.	-0.	3.	13.	6.	1.57	58.	325.	383.
			33	-3.	0.	0.	-2.	-13.	-1.	1.00	58.	182.	240.
33	TAN	1	33	3.	-0.	-0.	2.	13.	1.	1.00	58.	182.	240.
			53	-3.	0.	0.	-1.	-13.	9.	1.57	58.	345.	403.
34	BEND	1	53	-0.	3.	-0.	-9.	1.	13.	1.57	39.	84.	123.
			35	1.	-3.	-0.	-1.	-0.	-16.	1.57	39.	87.	126.
35	BEND	1	35	-1.	3.	0.	1.	0.	16.	1.57	39.	87.	126.
			54	0.	-3.	-0.	-10.	-0.	-11.	1.57	39.	83.	122.
36	TAN	1	54	-0.	0.	-3.	10.	11.	-0.	1.57	58.	339.	397.
			37	0.	-0.	4.	16.	-11.	-2.	1.00	58.	281.	339.
37	TAN	1	37	-0.	0.	-4.	-16.	11.	2.	1.00	58.	281.	339.
			38	0.	-0.	5.	51.	-11.	-5.	1.00	58.	744.	802.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	48	-0.002825093	0.005148876	-0.001100125
2	47	-0.002773390	0.005200066	-0.001037890
3	27	-0.002813875	0.005078021	-0.001525310

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	15	785.	15	843.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	-2.	0.	0.	-0.	0.	0.
6	-0.	-5.	-0.	-0.	0.	-0.
8	-0.	-8.	0.	-0.	-0.	-0.
12	1.	-0.	-0.	-0.	0.	0.
21	1.	-6.	0.	-41.	-4.	26.
38	0.	-5.	-0.	51.	5.	-11.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.000242863	-0.002867253	0.000115151	-0.000057249	-0.000026575	0.000114222
2	0.0	-0.002866603	0.0	-0.000057399	-0.000022157	0.000128101
4	-0.000313120	-0.002832796	-0.000126348	-0.000056868	-0.000018083	0.000152197
6	-0.000335302	0.0	0.0	-0.000049014	-0.000002702	0.000086776
7	-0.000316998	-0.001690251	-0.000012959	-0.000036339	0.000001899	-0.000063080
8	-0.000298314	0.0	0.0	-0.000023399	-0.000004919	0.000157745
10	-0.000283059	0.001450983	0.000079986	-0.000015818	-0.000003440	-0.000020031
12	0.0	0.001447871	0.0	-0.000015122	0.000001453	-0.000057970
14	0.000130704	0.001439787	-0.000042745	-0.000014707	0.000003822	-0.000041163
16	0.000139220	0.001329367	-0.000058269	-0.000013050	0.000004786	-0.000045871
17	0.000138836	0.001193243	-0.000070520	-0.000011287	0.000004568	-0.000065380
19	0.000132384	0.000005590	-0.000004205	-0.000001469	-0.000019651	-0.000064584
21	0.0	0.0	0.0	0.0	0.0	0.0
23	0.001004661	-0.002872443	0.000765548	-0.000027987	-0.000056086	-0.000008653
25	0.001002807	-0.003019772	0.001081526	-0.000001483	-0.000060268	-0.000044504
27	0.000990266	-0.003301999	0.001391036	0.000025001	-0.000057949	-0.000057830
29	0.000494078	-0.003314654	0.001073658	0.000064677	-0.000045281	-0.000073418
31	-0.000305454	-0.003289698	0.000223117	0.000127862	-0.000030760	-0.000110482
33	-0.000329716	-0.002969535	0.000112670	0.000154957	-0.000028720	-0.000118259
35	-0.000323332	-0.002480540	0.000005811	0.000193631	-0.000028578	-0.000113559
37	-0.000108294	-0.000888303	-0.000000245	0.000184550	-0.000023581	-0.000059180
38	0.0	0.0	0.0	0.0	0.0	0.0
39	-0.000233529	-0.002866002	-0.000100151	-0.000056922	-0.000018292	0.000150216
40	-0.000346550	-0.002751363	-0.000129305	-0.000056804	-0.000017908	0.000154313
41	-0.000287447	0.001460822	0.000081608	-0.000015873	-0.000003520	-0.000017385
42	-0.000271156	0.001446297	0.000072370	-0.000015773	-0.000003343	-0.000022513
43	0.000108973	0.001448693	-0.000034075	-0.000014760	0.000003725	-0.000041656
44	0.000139566	0.001418433	-0.000048042	-0.000014636	0.000003897	-0.000040861
45	0.000136724	0.000039756	-0.000014563	-0.000001592	-0.000019349	-0.000065265
46	0.000121763	-0.000007827	0.000000164	-0.000001369	-0.000019907	-0.000063761
47	0.001008965	-0.002870572	0.000738247	-0.000028422	-0.000055843	-0.000007569
48	0.001002651	-0.002877454	0.000801493	-0.000027464	-0.000056286	-0.000009691
49	0.001002963	-0.003271321	0.001365707	0.000024499	-0.000058033	-0.000057727
50	0.000959588	-0.003314713	0.001390408	0.000025434	-0.000057829	-0.000057928
51	-0.000247010	-0.003313964	0.000297409	0.000126948	-0.000031001	-0.000109932
52	-0.000329790	-0.003230843	0.000178733	0.000128951	-0.000030554	-0.000110994
53	-0.000329609	-0.002583610	0.000020937	0.000192522	-0.000028535	-0.000114129
54	-0.000308143	-0.002352470	-0.000000468	0.000194499	-0.000028621	-0.000112811

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	3.	-0.	0.	2.	7.	1.57	58.	171.	229.
			2	-0.	-3.	0.	0.	-2.	-7.	1.00	58.	100.	158.
2	TAN	1	2	-7.	3.	-0.	-0.	2.	7.	1.00	58.	100.	158.
			39	7.	-3.	0.	0.	-2.	-19.	1.57	58.	430.	488.
3	BEND	1	39	-7.	0.	3.	-0.	-19.	2.	1.57	39.	105.	144.
			4	3.	-0.	-7.	-1.	22.	-2.	1.57	39.	121.	160.
4	BEND	1	4	-3.	0.	7.	1.	-22.	2.	1.57	39.	121.	160.
			40	-4.	-0.	-7.	-2.	22.	-0.	1.57	39.	120.	158.
5	TAN	1	40	-4.	7.	0.	-2.	0.	-22.	1.57	58.	490.	548.
			6	4.	-7.	-0.	0.	-0.	-32.	1.00	58.	449.	507.
6	TAN	1	6	3.	7.	0.	-0.	0.	32.	1.00	58.	449.	507.
			7	-1.	-7.	-0.	-0.	-0.	10.	1.00	58.	144.	202.
7	TAN	1	7	1.	7.	0.	0.	0.	-10.	1.00	58.	144.	202.
			8	2.	-7.	-0.	-1.	-0.	-1.	1.00	58.	13.	71.
8	TAN	1	8	-1.	7.	-0.	1.	0.	1.	1.00	58.	13.	71.
			41	3.	-7.	0.	1.	-0.	-28.	1.00	58.	393.	451.
9	BEND	1	41	-3.	0.	7.	-1.	-28.	0.	1.57	39.	151.	190.
			10	-3.	-0.	-7.	0.	28.	-1.	1.57	39.	150.	189.
10	BEND	1	10	3.	0.	7.	-0.	-28.	1.	1.57	39.	150.	189.
			42	-7.	-0.	-3.	-0.	24.	-1.	1.57	39.	133.	172.
11	TAN	1	42	-7.	3.	0.	-0.	1.	-24.	1.00	58.	346.	404.
			12	7.	-3.	-0.	-0.	-1.	-9.	1.00	58.	129.	187.
12	TAN	1	12	1.	3.	-0.	0.	1.	9.	1.00	58.	129.	187.
			43	-1.	-3.	0.	0.	-1.	-6.	1.57	58.	132.	190.
13	BEND	1	43	1.	0.	3.	-0.	-6.	1.	1.57	39.	32.	71.
			14	-4.	-0.	-2.	-0.	4.	-1.	1.57	39.	24.	63.
14	BEND	1	14	4.	0.	2.	0.	-4.	1.	1.57	39.	24.	63.
			44	-4.	-0.	1.	-1.	2.	-1.	1.57	39.	12.	51.
15	TAN	1	44	-4.	-1.	0.	-1.	1.	-2.	1.57	58.	49.	107.
			16	4.	1.	-0.	0.	-1.	-7.	1.57	58.	150.	208.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	-1.	-1.	0.	-0.	1.	7.	1.00	58.	95.	153.
			17	1.	1.	-0.	-0.	-1.	-9.	1.00	58.	134.	192.
17	TAN	1	17	2.	-1.	0.	0.	1.	9.	1.00	58.	134.	192.
			45	-1.	1.	-0.	-3.	-1.	7.	1.00	58.	105.	163.
18	BEND	1	45	0.	1.	-1.	-7.	3.	1.	1.57	39.	40.	79.
			19	1.	-0.	1.	5.	-3.	-5.	1.57	39.	41.	80.
19	BEND	1	19	-1.	0.	-1.	-5.	3.	5.	1.57	39.	41.	80.
			46	1.	-0.	0.	-0.	-2.	-7.	1.57	39.	40.	79.
20	TAN	1	46	1.	-0.	0.	-0.	7.	2.	1.57	58.	164.	222.
			21	-1.	0.	0.	1.	-7.	8.	1.00	58.	150.	209.
21	TAN	1	1	-0.	3.	-0.	-0.	2.	7.	1.57	58.	171.	229.
			47	0.	-2.	0.	4.	-2.	-11.	1.57	58.	275.	333.
22	BEND	1	47	-0.	0.	2.	-4.	-11.	2.	1.57	39.	67.	106.
			23	-1.	-0.	-1.	2.	11.	-4.	1.57	39.	66.	105.
23	BEND	1	23	1.	0.	1.	-2.	-11.	4.	1.57	39.	66.	105.
			48	-1.	-0.	-0.	-2.	11.	-4.	1.57	39.	63.	102.
24	TAN	1	48	1.	0.	-0.	2.	4.	11.	1.57	58.	257.	315.
			25	-1.	-0.	0.	-0.	-4.	-5.	1.00	58.	92.	150.
25	TAN	1	25	1.	0.	-0.	0.	4.	5.	1.00	58.	92.	150.
			49	-1.	-0.	0.	1.	-4.	-1.	1.57	58.	104.	162.
26	BEND	1	49	-1.	-0.	0.	1.	1.	4.	1.57	39.	25.	64.
			27	0.	0.	-1.	-4.	-1.	-2.	1.57	39.	26.	64.
27	BEND	1	27	-0.	-0.	1.	4.	1.	2.	1.57	39.	26.	64.
			50	-0.	0.	-0.	-5.	-1.	1.	1.57	39.	27.	65.
28	TAN	1	50	-0.	0.	-0.	-5.	-1.	1.	1.57	58.	109.	167.
			29	0.	0.	0.	7.	1.	-3.	1.00	58.	106.	164.
29	TAN	1	29	-0.	-0.	-0.	-7.	-1.	3.	1.00	58.	106.	164.
			51	0.	1.	0.	9.	1.	-6.	1.57	58.	240.	298.
30	BEND	1	51	0.	-0.	-1.	9.	6.	-1.	1.57	39.	59.	97.
			31	1.	0.	1.	-5.	-6.	7.	1.57	39.	59.	98.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	-1.	-0.	-1.	5.	6.	-7.	1.57	39.	59.	98.
			52	1.	0.	0.	1.	-5.	9.	1.57	39.	57.	96.
32	TAN	1	52	-1.	-0.	0.	-1.	-9.	-5.	1.57	58.	234.	293.
			33	2.	0.	-0.	1.	9.	2.	1.00	58.	132.	190.
33	TAN	1	33	-2.	-0.	0.	-1.	-9.	-2.	1.00	58.	132.	190.
			53	2.	0.	-0.	-0.	9.	-4.	1.57	58.	226.	284.
34	BEND	1	53	0.	-2.	-0.	4.	0.	-9.	1.57	39.	55.	94.
			35	0.	2.	0.	2.	-0.	10.	1.57	39.	56.	95.
35	BEND	1	35	-0.	-2.	-0.	-2.	0.	-10.	1.57	39.	56.	95.
			54	0.	2.	0.	8.	-0.	6.	1.57	39.	52.	91.
36	TAN	1	54	-0.	-0.	2.	-8.	-6.	-0.	1.57	58.	213.	271.
			37	0.	0.	-3.	-11.	6.	-2.	1.00	58.	180.	238.
37	TAN	1	37	-0.	-0.	3.	11.	-6.	2.	1.00	58.	180.	238.
			38	0.	0.	-4.	-37.	6.	-4.	1.00	58.	538.	596.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	47	0.001008965	-0.002870572	0.000738247
2	50	0.000959588	-0.003314713	0.001390408
3	27	0.000990266	-0.003301999	0.001391036

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	37	538.	37	596.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	-7.	-0.	-0.	-0.	-0.	-0.
6	-0.	7.	-0.	-0.	-0.	0.
8	-0.	0.	-0.	-0.	0.	0.
12	8.	-0.	0.	0.	-0.	-0.
21	-1.	0.	-0.	1.	8.	7.
38	0.	4.	0.	-37.	4.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.013612654	-0.061123826	0.002164977	-0.001097783	-0.000004790	0.006380074
2	0.0	-0.059180327	0.0	-0.001056861	-0.000049256	0.007280134
4	-0.017251931	-0.055339001	-0.002326207	-0.001010650	-0.000090011	0.007312283
6	-0.004754499	0.0	0.0	-0.000563063	-0.000203731	0.001301403
7	0.017371420	0.010713708	0.003550390	0.000160863	-0.000047637	-0.000200024
8	0.039958302	0.0	0.0	0.000899871	0.000383813	-0.000457318
10	0.051632013	0.042510532	-0.007214110	0.001332568	0.000580759	0.008989558
12	0.0	0.049613398	0.0	0.001464938	0.000602016	0.008280706
14	-0.017767992	0.053434063	0.004059382	0.001546359	0.000612526	0.005103894
16	-0.016165916	0.064232707	0.002694742	0.001670826	0.000606017	0.002247653
17	-0.013728645	0.066484451	0.001205660	0.001803620	0.000577648	-0.000249200
19	0.000200691	0.014668182	-0.003588959	0.002541672	0.000029402	-0.003934883
21	0.0	0.0	0.003999997	0.0	0.0	0.0
23	0.072666883	-0.073847473	0.016215399	-0.000790584	0.000291348	0.003043232
25	0.078477502	-0.059701070	0.014517147	-0.000384818	0.000458075	0.002121528
27	0.083666921	-0.053675193	0.011307891	0.000020509	0.000758423	0.000195835
29	0.073201299	-0.061198119	0.008793186	0.000673770	0.001515671	-0.002858066
31	0.038384773	-0.068716407	-0.001426041	0.001789176	0.002378227	-0.004619580
33	0.034645725	-0.055955775	0.005003069	0.002279555	0.002542358	-0.004638303
35	0.030346613	-0.038350210	0.014801353	0.002979689	0.002719213	-0.004253317
37	0.009967010	-0.013252042	0.007806949	0.002808661	0.002183614	-0.002217156
38	0.0	0.0	0.0	0.0	0.0	0.0
39	-0.013528079	-0.057479762	-0.001809365	-0.001012933	-0.000088164	0.007362593
40	-0.018352721	-0.051255144	-0.002499748	-0.001007976	-0.000091497	0.007244706
41	0.053095568	0.037557770	-0.007198676	0.001329702	0.000580135	0.008864615
42	0.047003556	0.045022409	-0.006634489	0.001335050	0.000581397	0.009099040
43	-0.015239757	0.051788077	0.003375354	0.001542294	0.000611783	0.005237136
44	-0.018359460	0.056310624	0.004074007	0.001551311	0.000613082	0.004973553
45	-0.000323652	0.017333861	-0.003786239	0.002533986	0.000035555	-0.003973309
46	0.000427904	0.012447942	-0.003076840	0.002545356	0.000023667	-0.003885540
47	0.070837677	-0.073999465	0.015857629	-0.000796781	0.000289800	0.003050500
48	0.073852897	-0.072446883	0.016234286	-0.000782980	0.000292782	0.003035324
49	0.083102107	-0.053581730	0.011711426	0.000013345	0.000751133	0.000245220
50	0.083970010	-0.054152932	0.011128712	0.000026678	0.000767397	0.000145810
51	0.041050401	-0.069215000	-0.001004326	0.001772178	0.002367155	-0.004610371
52	0.036849376	-0.066474319	-0.000555899	0.001809372	0.002387614	-0.004626144
53	0.031462673	-0.041269917	0.013573565	0.002958708	0.002715266	-0.004274666
54	0.028686564	-0.035827953	0.014882006	0.002996133	0.002721937	-0.004226454

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-27.	-44.	-6.	-15.	-18.	436.	2.10	58.	13001.	13059.
			2	27.	44.	6.	27.	18.	-490.	1.00	58.	6957.	7015.
2	TAN	1	2	504.	-44.	1.	-27.	-18.	490.	1.00	58.	6957.	7015.
			39	-504.	44.	-1.	25.	18.	393.	2.10	58.	11728.	11786.
3	BEND	1	39	504.	-1.	-44.	-25.	393.	-18.	2.10	39.	2867.	2906.
			4	-326.	1.	388.	29.	-651.	-5.	2.10	39.	4739.	4778.
4	BEND	1	4	326.	-1.	-388.	-29.	651.	5.	2.10	39.	4739.	4778.
			40	44.	1.	504.	17.	-738.	-24.	2.10	39.	5375.	5414.
5	TAN	1	40	44.	-504.	-1.	17.	24.	738.	2.10	58.	21990.	22048.
			6	-44.	504.	1.	1.	-24.	-91.	1.00	58.	1332.	1390.
6	TAN	1	6	2.	-504.	-0.	-1.	24.	91.	1.00	58.	1332.	1390.
			7	-2.	504.	0.	12.	-24.	-38.	1.00	58.	658.	716.
7	TAN	1	7	2.	-504.	-0.	-12.	24.	38.	1.00	58.	658.	716.
			8	-2.	504.	0.	24.	-24.	16.	1.00	58.	531.	589.
8	TAN	1	8	92.	-504.	1.	-24.	24.	-16.	1.00	58.	531.	589.
			41	-92.	504.	-1.	4.	-24.	1330.	1.00	58.	18851.	18909.
9	BEND	1	41	92.	-1.	-504.	-4.	1330.	24.	2.10	39.	9677.	9715.
			10	291.	1.	422.	-14.	-1268.	-20.	2.10	39.	9226.	9265.
10	BEND	1	10	-291.	-1.	-422.	14.	1268.	20.	2.10	39.	9226.	9265.
			42	504.	1.	92.	-25.	-1021.	-3.	2.10	39.	7428.	7467.
11	TAN	1	42	504.	-92.	-1.	-25.	3.	1021.	1.00	58.	14470.	14529.
			12	-504.	92.	1.	31.	-3.	1375.	1.00	58.	19496.	19554.
12	TAN	1	12	15.	-92.	-4.	-31.	3.	-1375.	1.00	58.	19496.	19554.
			43	-15.	92.	4.	39.	-3.	1408.	2.10	58.	41931.	41989.
13	BEND	1	43	15.	4.	-92.	-39.	1408.	3.	2.10	39.	10250.	10288.
			14	55.	-4.	76.	27.	-1396.	-31.	2.10	39.	10159.	10198.
14	BEND	1	14	-55.	4.	-76.	-27.	1396.	31.	2.10	39.	10159.	10198.
			44	92.	-4.	15.	-1.	-1350.	-42.	2.10	39.	9827.	9866.
15	TAN	1	44	92.	-15.	4.	-1.	42.	1350.	2.10	58.	40205.	40263.
			16	-92.	15.	-4.	-7.	-42.	-1143.	2.10	58.	34036.	34094.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	92.	-15.	4.	7.	42.	1143.	1.00	58.	16208.	16266.
			17	-92.	15.	-4.	-16.	-42.	-912.	1.00	58.	12946.	13004.
17	TAN	1	17	92.	-15.	4.	16.	42.	912.	1.00	58.	12946.	13004.
			45	-92.	15.	-4.	-65.	-42.	355.	1.00	58.	5150.	5208.
18	BEND	1	45	4.	92.	-15.	-355.	65.	42.	2.10	39.	2644.	2682.
			19	8.	-92.	13.	270.	-64.	-301.	2.10	39.	2979.	3018.
19	BEND	1	19	-8.	92.	-13.	-270.	64.	301.	2.10	39.	2979.	3018.
			46	15.	-92.	4.	27.	-57.	-424.	2.10	39.	3119.	3158.
20	TAN	1	46	15.	-4.	92.	27.	424.	57.	2.10	58.	12762.	12820.
			21	-15.	4.	-92.	-695.	-424.	50.	1.00	58.	11565.	11624.
21	TAN	1	1	27.	-44.	-6.	15.	-18.	436.	2.10	58.	13001.	13059.
			47	-27.	44.	6.	62.	18.	-81.	2.10	58.	3078.	3136.
22	BEND	1	47	27.	6.	-44.	-62.	-81.	-18.	2.10	39.	752.	791.
			23	12.	-6.	50.	59.	76.	-33.	2.10	39.	742.	781.
23	BEND	1	23	-12.	6.	-50.	-59.	-76.	33.	2.10	39.	742.	781.
			48	44.	-6.	27.	22.	94.	-66.	2.10	39.	850.	889.
24	TAN	1	48	-44.	-27.	-6.	-22.	66.	94.	2.10	58.	3479.	3537.
			25	44.	27.	6.	50.	-66.	-302.	1.00	58.	4441.	4499.
25	TAN	1	25	-44.	-27.	-6.	-50.	66.	302.	1.00	58.	4441.	4499.
			49	44.	27.	6.	77.	-66.	-511.	2.10	58.	15498.	15556.
26	BEND	1	49	44.	-6.	-27.	77.	511.	66.	2.10	39.	3788.	3827.
			27	-12.	6.	50.	-105.	-528.	9.	2.10	39.	3917.	3956.
27	BEND	1	27	12.	-6.	-50.	105.	528.	-9.	2.10	39.	3917.	3956.
			50	27.	6.	44.	-71.	-523.	82.	2.10	39.	3889.	3927.
28	TAN	1	50	27.	-44.	-6.	-71.	-82.	523.	2.10	58.	15908.	15966.
			29	-27.	44.	6.	113.	82.	-329.	1.00	58.	5066.	5124.
29	TAN	1	29	27.	-44.	-6.	-113.	-82.	329.	1.00	58.	5066.	5124.
			51	-27.	44.	6.	161.	82.	-108.	2.10	58.	6261.	6319.
30	BEND	1	51	-27.	-6.	-44.	161.	108.	-82.	2.10	39.	1530.	1569.
			31	50.	6.	12.	-59.	-84.	173.	2.10	39.	1464.	1502.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	-50.	-6.	-12.	59.	84.	-173.	2.10	39.	1464.	1502.
			52	44.	6.	-27.	77.	-55.	165.	2.10	39.	1387.	1426.
32	TAN	1	52	-44.	27.	6.	-77.	-165.	-55.	2.10	58.	5674.	5732.
			33	44.	-27.	-6.	64.	165.	-44.	1.00	58.	2590.	2648.
33	TAN	1	33	-44.	27.	6.	-64.	-165.	44.	1.00	58.	2590.	2648.
			53	44.	-27.	-6.	45.	165.	-186.	2.10	58.	7539.	7597.
34	BEND	1	53	6.	-44.	27.	186.	-45.	-165.	2.10	39.	1843.	1882.
			35	-23.	44.	-15.	-38.	36.	258.	2.10	39.	1919.	1957.
35	BEND	1	35	23.	-44.	15.	38.	-36.	-258.	2.10	39.	1919.	1957.
			54	-27.	44.	6.	132.	21.	219.	2.10	39.	1870.	1909.
36	TAN	1	54	27.	-6.	44.	-132.	-219.	21.	2.10	58.	7652.	7710.
			37	-27.	6.	-44.	-186.	219.	174.	1.00	58.	4758.	4816.
37	TAN	1	37	27.	-6.	44.	186.	-219.	-174.	1.00	58.	4758.	4816.
			38	-27.	6.	-44.	-537.	219.	388.	1.00	58.	9889.	9947.

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	50	0.083970010	-0.054152932	0.011128712
2	47	0.070837677	-0.073999465	0.015857629
3	48	0.073852897	-0.072446883	0.016234286

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	41931.	12	41989.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	531.	0.	-7.	-0.	0.	-0.
6	0.	-42.	1.	-0.	-0.	0.
8	0.	90.	2.	-0.	-0.	-0.
12	-490.	0.	2.	-0.	-0.	0.
21	-15.	-92.	-4.	-695.	50.	424.
38	-27.	44.	6.	-537.	-388.	219.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS    8.19 ** LAST STEP "UPDT" TIME IS    6.01 ** DELTA TIME IS    2.18 *
* ELAPSED SECONDS                            97.3                                64.1                     33.2 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    8.22 ** LAST STEP "ST3D" TIME IS    8.19 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            97.4                                97.3                      0.2 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 37
NUMBER OF JOINTS 38
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	0.9600	3	0.6800				
2	1	1.9600	3	0.6800						
3	1	1.0000	2	0.9600	5	0.6800				
4	1	1.9600	5	0.6800						
5	1	1.0000	2	0.9600	4	0.6800				
6	1	1.9600	4	0.6800						
7	1	1.0000	2	0.9600	6	0.6800				
8	1	1.9600	6	0.6800						
9	1	1.0000	2	1.9000	3	1.1600				
10	1	2.9000	3	1.1600						
11	1	1.0000	2	1.9000	5	1.1600				
12	1	2.9000	5	1.1600						
13	1	1.0000	2	1.9000	4	1.1600				
14	1	2.9000	4	1.1600						
15	1	1.0000	2	1.9000	6	1.1600				
16	1	2.9000	6	1.1600						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS    8.42 ** LAST STEP "BEGP" TIME IS    8.22 ** DELTA TIME IS    0.20 *
* ELAPSED SECONDS                          101.7                                97.4                       4.2 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	1.	3.	5.	9.	19.	1.57	58.	481.	539.
			2	2.	1.	4.	3.	9.	23.	1.00	58.	353.	411.
2	TAN	1	2	6.	1.	1.	3.	9.	23.	1.00	58.	353.	411.
			39	6.	1.	1.	4.	9.	15.	1.57	58.	395.	453.
3	BEND	1	39	6.	1.	1.	4.	15.	9.	1.57	39.	97.	135.
			4	4.	2.	4.	4.	12.	10.	1.57	39.	87.	126.
4	BEND	1	4	4.	2.	4.	4.	12.	10.	1.57	39.	87.	126.
			40	1.	2.	6.	8.	11.	5.	1.57	39.	78.	116.
5	TAN	1	40	1.	6.	2.	8.	5.	11.	1.57	58.	317.	376.
			6	1.	6.	2.	25.	5.	6.	1.00	58.	366.	424.
6	TAN	1	6	0.	6.	4.	25.	5.	6.	1.00	58.	366.	424.
			7	0.	4.	0.	24.	5.	2.	1.00	58.	350.	408.
7	TAN	1	7	0.	4.	0.	24.	5.	2.	1.00	58.	350.	408.
			8	0.	3.	4.	32.	5.	2.	1.00	58.	463.	521.
8	TAN	1	8	1.	3.	4.	32.	5.	2.	1.00	58.	463.	521.
			41	1.	2.	2.	13.	5.	7.	1.00	58.	223.	281.
9	BEND	1	41	1.	2.	2.	13.	7.	5.	1.57	39.	86.	125.
			10	1.	2.	2.	13.	7.	7.	1.57	39.	88.	127.
10	BEND	1	10	1.	2.	2.	13.	7.	7.	1.57	39.	88.	127.
			42	2.	2.	1.	5.	7.	14.	1.57	39.	91.	130.
11	TAN	1	42	2.	1.	2.	5.	14.	7.	1.00	58.	237.	295.
			12	1.	1.	2.	13.	14.	12.	1.00	58.	322.	380.
12	TAN	1	12	8.	1.	9.	13.	14.	12.	1.00	58.	322.	380.
			43	7.	1.	9.	8.	14.	6.	1.57	58.	388.	446.
13	BEND	1	43	7.	9.	1.	8.	6.	14.	1.57	39.	95.	134.
			14	5.	9.	6.	2.	9.	17.	1.57	39.	106.	145.
14	BEND	1	14	5.	9.	6.	2.	9.	17.	1.57	39.	106.	145.
			44	1.	9.	7.	7.	10.	14.	1.57	39.	103.	142.
15	TAN	1	44	1.	7.	9.	7.	14.	10.	1.57	58.	423.	481.
			16	1.	7.	9.	13.	14.	9.	1.57	58.	475.	533.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	5.	3.	13.	14.	9.	1.00	58.	302.	360.
			17	1.	5.	3.	21.	14.	7.	1.00	58.	375.	433.
17	TAN	1	17	1.	3.	3.	21.	14.	7.	1.00	58.	375.	433.
			45	1.	4.	3.	22.	14.	2.	1.00	58.	375.	433.
18	BEND	1	45	3.	1.	4.	2.	22.	14.	1.57	39.	144.	183.
			19	2.	1.	5.	11.	23.	12.	1.57	39.	151.	190.
19	BEND	1	19	2.	1.	5.	11.	23.	12.	1.57	39.	151.	190.
			46	5.	1.	3.	15.	21.	3.	1.57	39.	141.	179.
20	TAN	1	46	5.	3.	1.	15.	3.	21.	1.57	58.	575.	633.
			21	5.	4.	1.	19.	3.	13.	1.00	58.	328.	386.
21	TAN	1	1	2.	1.	3.	5.	9.	19.	1.57	58.	481.	539.
			47	1.	1.	1.	34.	9.	13.	1.57	58.	841.	899.
22	BEND	1	47	1.	1.	1.	34.	13.	9.	1.57	39.	206.	244.
			23	1.	1.	1.	22.	13.	31.	1.57	39.	219.	258.
23	BEND	1	23	1.	1.	1.	22.	13.	31.	1.57	39.	219.	258.
			48	1.	0.	1.	9.	13.	35.	1.57	39.	208.	246.
24	TAN	1	48	1.	1.	0.	9.	35.	13.	1.57	58.	850.	908.
			25	1.	1.	0.	9.	35.	9.	1.00	58.	523.	581.
25	TAN	1	25	1.	1.	0.	9.	35.	9.	1.00	58.	523.	581.
			49	1.	0.	1.	13.	35.	10.	1.57	58.	855.	913.
26	BEND	1	49	1.	1.	0.	13.	10.	35.	1.57	39.	209.	248.
			27	1.	2.	0.	19.	10.	34.	1.57	39.	219.	258.
27	BEND	1	27	1.	2.	0.	19.	10.	34.	1.57	39.	219.	258.
			50	0.	2.	1.	33.	11.	14.	1.57	39.	206.	245.
28	TAN	1	50	0.	1.	2.	33.	14.	11.	1.57	58.	843.	901.
			29	1.	1.	3.	15.	14.	11.	1.00	58.	329.	387.
29	TAN	1	29	1.	1.	3.	15.	14.	11.	1.00	58.	329.	387.
			51	1.	1.	5.	17.	14.	8.	1.57	58.	527.	585.
30	BEND	1	51	1.	5.	1.	17.	8.	14.	1.57	39.	129.	168.
			31	1.	5.	2.	10.	8.	23.	1.57	39.	141.	180.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	2.	10.	8.	23.	1.57	39.	141.	180.
			52	1.	5.	1.	10.	8.	21.	1.57	39.	135.	174.
32	TAN	1	52	1.	1.	5.	10.	21.	8.	1.57	58.	553.	611.
			33	1.	2.	6.	9.	21.	6.	1.00	58.	335.	393.
33	TAN	1	33	1.	2.	6.	9.	21.	6.	1.00	58.	335.	393.
			53	1.	2.	6.	28.	21.	3.	1.57	58.	782.	840.
34	BEND	1	53	6.	1.	2.	3.	28.	21.	1.57	39.	191.	230.
			35	6.	1.	6.	17.	31.	13.	1.57	39.	204.	243.
35	BEND	1	35	6.	1.	6.	17.	31.	13.	1.57	39.	204.	243.
			54	2.	1.	7.	20.	31.	3.	1.57	39.	204.	242.
36	TAN	1	54	2.	7.	1.	20.	3.	31.	1.57	58.	833.	891.
			37	2.	8.	1.	15.	3.	39.	1.00	58.	600.	658.
37	TAN	1	37	2.	8.	1.	15.	3.	39.	1.00	58.	600.	658.
			38	3.	9.	1.	10.	3.	57.	1.00	58.	820.	878.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	855.	25	913.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
2	8.	-2.	-5.	6.	-18.	-46.
6	-11.	1.	6.	-11.	49.	12.
8	-5.	1.	8.	-11.	64.	5.
12	9.	-1.	-11.	26.	-29.	-24.
21	5.	1.	-4.	19.	13.	-3.
38	3.	-1.	9.	10.	-57.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	1.	3.	8.	8.	20.	1.57	58.	519.	577.
			2	2.	1.	4.	1.	8.	25.	1.00	58.	368.	426.
2	TAN	1	2	6.	1.	1.	1.	8.	25.	1.00	58.	368.	426.
			39	6.	1.	1.	1.	8.	14.	1.57	58.	366.	424.
3	BEND	1	39	6.	1.	1.	1.	14.	8.	1.57	39.	89.	128.
			4	5.	1.	4.	5.	11.	7.	1.57	39.	74.	113.
4	BEND	1	4	5.	1.	4.	5.	11.	7.	1.57	39.	74.	113.
			40	1.	2.	6.	7.	9.	2.	1.57	39.	65.	103.
5	TAN	1	40	1.	6.	2.	7.	2.	9.	1.57	58.	265.	323.
			6	1.	6.	2.	20.	2.	6.	1.00	58.	303.	361.
6	TAN	1	6	0.	6.	4.	20.	2.	6.	1.00	58.	303.	361.
			7	0.	4.	0.	21.	2.	2.	1.00	58.	301.	359.
7	TAN	1	7	0.	4.	0.	21.	2.	2.	1.00	58.	301.	359.
			8	0.	3.	5.	42.	2.	2.	1.00	58.	603.	661.
8	TAN	1	8	1.	3.	5.	42.	2.	2.	1.00	58.	603.	661.
			41	1.	2.	3.	13.	2.	6.	1.00	58.	211.	269.
9	BEND	1	41	1.	3.	2.	13.	6.	2.	1.57	39.	81.	120.
			10	1.	2.	2.	10.	6.	11.	1.57	39.	87.	126.
10	BEND	1	10	1.	2.	2.	10.	6.	11.	1.57	39.	87.	126.
			42	2.	2.	1.	0.	6.	15.	1.57	39.	88.	127.
11	TAN	1	42	2.	1.	2.	0.	15.	6.	1.00	58.	229.	287.
			12	1.	1.	1.	8.	15.	10.	1.00	58.	284.	342.
12	TAN	1	12	6.	1.	7.	8.	15.	10.	1.00	58.	284.	342.
			43	6.	1.	7.	8.	15.	6.	1.57	58.	411.	469.
13	BEND	1	43	6.	7.	1.	8.	6.	15.	1.57	39.	100.	139.
			14	4.	8.	5.	1.	7.	18.	1.57	39.	106.	145.
14	BEND	1	14	4.	8.	5.	1.	7.	18.	1.57	39.	106.	145.
			44	1.	8.	6.	9.	8.	14.	1.57	39.	101.	140.
15	TAN	1	44	1.	6.	8.	9.	14.	8.	1.57	58.	414.	472.
			16	1.	6.	8.	9.	14.	7.	1.57	58.	399.	457.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	4.	2.	9.	14.	7.	1.00	58.	253.	311.
			17	1.	4.	3.	15.	14.	6.	1.00	58.	303.	362.
17	TAN	1	17	1.	2.	3.	15.	14.	6.	1.00	58.	303.	362.
			45	1.	3.	1.	16.	14.	2.	1.00	58.	303.	361.
18	BEND	1	45	1.	1.	3.	2.	16.	14.	1.57	39.	117.	156.
			19	2.	1.	3.	10.	16.	11.	1.57	39.	121.	159.
19	BEND	1	19	2.	1.	3.	10.	16.	11.	1.57	39.	121.	159.
			46	3.	1.	0.	14.	14.	3.	1.57	39.	110.	149.
20	TAN	1	46	3.	0.	1.	14.	3.	14.	1.57	58.	450.	509.
			21	4.	1.	1.	17.	3.	12.	1.00	58.	302.	360.
21	TAN	1	1	2.	1.	3.	8.	8.	20.	1.57	58.	519.	577.
			47	1.	1.	1.	35.	8.	14.	1.57	58.	867.	925.
22	BEND	1	47	1.	1.	1.	35.	14.	8.	1.57	39.	212.	251.
			23	1.	1.	1.	24.	14.	31.	1.57	39.	226.	265.
23	BEND	1	23	1.	1.	1.	24.	14.	31.	1.57	39.	226.	265.
			48	1.	0.	1.	8.	13.	36.	1.57	39.	214.	253.
24	TAN	1	48	1.	1.	0.	8.	36.	13.	1.57	58.	875.	933.
			25	1.	1.	1.	8.	36.	10.	1.00	58.	541.	599.
25	TAN	1	25	1.	1.	1.	8.	36.	10.	1.00	58.	541.	599.
			49	1.	0.	1.	13.	36.	9.	1.57	58.	875.	933.
26	BEND	1	49	1.	1.	0.	13.	9.	36.	1.57	39.	214.	253.
			27	1.	2.	0.	20.	9.	35.	1.57	39.	224.	263.
27	BEND	1	27	1.	2.	0.	20.	9.	35.	1.57	39.	224.	263.
			50	0.	2.	1.	35.	10.	14.	1.57	39.	211.	249.
28	TAN	1	50	0.	1.	2.	35.	14.	10.	1.57	58.	861.	919.
			29	1.	1.	3.	16.	14.	10.	1.00	58.	332.	390.
29	TAN	1	29	1.	1.	3.	16.	14.	10.	1.00	58.	332.	390.
			51	1.	1.	5.	18.	14.	8.	1.57	58.	535.	593.
30	BEND	1	51	1.	5.	1.	18.	8.	14.	1.57	39.	131.	170.
			31	1.	5.	2.	10.	8.	23.	1.57	39.	144.	182.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	2.	10.	8.	23.	1.57	39.	144.	182.
			52	1.	5.	2.	10.	8.	21.	1.57	39.	137.	176.
32	TAN	1	52	1.	2.	5.	10.	21.	8.	1.57	58.	562.	620.
			33	1.	2.	6.	9.	21.	6.	1.00	58.	340.	399.
33	TAN	1	33	1.	2.	6.	9.	21.	6.	1.00	58.	340.	399.
			53	1.	2.	6.	28.	21.	4.	1.57	58.	794.	852.
34	BEND	1	53	6.	1.	2.	4.	28.	21.	1.57	39.	194.	233.
			35	6.	1.	6.	18.	31.	13.	1.57	39.	207.	246.
35	BEND	1	35	6.	1.	6.	18.	31.	13.	1.57	39.	207.	246.
			54	2.	1.	7.	21.	31.	3.	1.57	39.	207.	246.
36	TAN	1	54	2.	7.	1.	21.	3.	31.	1.57	58.	846.	904.
			37	3.	8.	1.	16.	3.	39.	1.00	58.	603.	661.
37	TAN	1	37	3.	8.	1.	16.	3.	39.	1.00	58.	603.	661.
			38	3.	10.	1.	11.	3.	56.	1.00	58.	814.	872.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	875.	25	933.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	8.	-2.	-4.	2.	-17.	-49.
6	-11.	1.	6.	-4.	41.	13.
8	-5.	1.	10.	-4.	85.	5.
12	8.	-1.	-8.	16.	-30.	-20.
21	4.	1.	-1.	17.	12.	-3.
38	3.	-1.	10.	11.	-56.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	2.	4.	5.	7.	21.	1.57	58.	502.	560.
			2	0.	2.	4.	3.	7.	22.	1.00	58.	325.	383.
2	TAN	1	2	3.	2.	1.	3.	7.	22.	1.00	58.	325.	383.
			39	3.	2.	1.	4.	7.	19.	1.57	58.	464.	522.
3	BEND	1	39	3.	1.	2.	4.	19.	7.	1.57	39.	113.	152.
			4	3.	2.	1.	3.	18.	8.	1.57	39.	108.	147.
4	BEND	1	4	3.	2.	1.	3.	18.	8.	1.57	39.	108.	147.
			40	2.	2.	3.	5.	16.	5.	1.57	39.	99.	137.
5	TAN	1	40	2.	3.	2.	5.	5.	16.	1.57	58.	404.	462.
			6	3.	3.	2.	25.	5.	20.	1.00	58.	461.	519.
6	TAN	1	6	1.	3.	4.	25.	5.	20.	1.00	58.	461.	519.
			7	0.	3.	0.	24.	5.	2.	1.00	58.	355.	413.
7	TAN	1	7	0.	3.	0.	24.	5.	2.	1.00	58.	355.	413.
			8	2.	3.	4.	33.	5.	22.	1.00	58.	573.	632.
8	TAN	1	8	4.	3.	4.	33.	5.	22.	1.00	58.	573.	632.
			41	3.	3.	2.	13.	5.	27.	1.00	58.	428.	486.
9	BEND	1	41	3.	2.	3.	13.	27.	5.	1.57	39.	165.	203.
			10	2.	2.	4.	13.	28.	7.	1.57	39.	172.	211.
10	BEND	1	10	2.	2.	4.	13.	28.	7.	1.57	39.	172.	211.
			42	3.	2.	3.	5.	28.	15.	1.57	39.	173.	212.
11	TAN	1	42	3.	3.	2.	5.	15.	28.	1.00	58.	449.	507.
			12	3.	2.	2.	14.	15.	27.	1.00	58.	473.	531.
12	TAN	1	12	4.	2.	9.	14.	15.	27.	1.00	58.	473.	531.
			43	4.	2.	9.	9.	15.	19.	1.57	58.	571.	629.
13	BEND	1	43	4.	9.	2.	9.	19.	15.	1.57	39.	139.	178.
			14	3.	9.	4.	3.	20.	17.	1.57	39.	143.	182.
14	BEND	1	14	3.	9.	4.	3.	20.	17.	1.57	39.	143.	182.
			44	2.	9.	4.	8.	22.	15.	1.57	39.	150.	189.
15	TAN	1	44	2.	4.	9.	8.	15.	22.	1.57	58.	615.	673.
			16	2.	4.	9.	14.	15.	26.	1.57	58.	736.	794.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	4.	3.	14.	15.	26.	1.00	58.	467.	525.
			17	0.	4.	3.	21.	15.	25.	1.00	58.	512.	570.
17	TAN	1	17	2.	4.	3.	21.	15.	25.	1.00	58.	512.	570.
			45	3.	4.	3.	19.	15.	16.	1.00	58.	416.	474.
18	BEND	1	45	3.	3.	4.	16.	19.	15.	1.57	39.	160.	199.
			19	1.	3.	5.	21.	20.	23.	1.57	39.	203.	241.
19	BEND	1	19	1.	3.	5.	21.	20.	23.	1.57	39.	203.	241.
			46	4.	4.	3.	16.	19.	19.	1.57	39.	168.	207.
20	TAN	1	46	4.	3.	4.	16.	19.	19.	1.57	58.	687.	745.
			21	4.	4.	4.	43.	19.	7.	1.00	58.	670.	728.
21	TAN	1	1	0.	2.	4.	5.	7.	21.	1.57	58.	502.	560.
			47	0.	1.	1.	38.	7.	14.	1.57	58.	914.	972.
22	BEND	1	47	0.	1.	1.	38.	14.	7.	1.57	39.	223.	262.
			23	1.	1.	0.	23.	14.	32.	1.57	39.	225.	264.
23	BEND	1	23	1.	1.	0.	23.	14.	32.	1.57	39.	225.	264.
			48	1.	1.	0.	6.	13.	39.	1.57	39.	225.	264.
24	TAN	1	48	1.	0.	1.	6.	39.	13.	1.57	58.	920.	978.
			25	1.	0.	1.	6.	39.	9.	1.00	58.	569.	627.
25	TAN	1	25	1.	0.	1.	6.	39.	9.	1.00	58.	569.	627.
			49	1.	0.	2.	11.	39.	12.	1.57	58.	935.	993.
26	BEND	1	49	1.	2.	0.	11.	12.	39.	1.57	39.	229.	267.
			27	1.	2.	1.	21.	12.	33.	1.57	39.	224.	263.
27	BEND	1	27	1.	2.	1.	21.	12.	33.	1.57	39.	224.	263.
			50	0.	2.	1.	38.	13.	13.	1.57	39.	227.	266.
28	TAN	1	50	0.	1.	2.	38.	13.	13.	1.57	58.	928.	986.
			29	0.	2.	3.	21.	13.	13.	1.00	58.	395.	453.
29	TAN	1	29	0.	2.	3.	21.	13.	13.	1.00	58.	395.	453.
			51	0.	2.	5.	25.	13.	13.	1.57	58.	698.	756.
30	BEND	1	51	0.	5.	2.	25.	13.	13.	1.57	39.	171.	209.
			31	2.	5.	2.	12.	12.	28.	1.57	39.	179.	218.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	5.	2.	12.	12.	28.	1.57	39.	179.	218.
			52	2.	5.	0.	9.	11.	29.	1.57	39.	178.	216.
32	TAN	1	52	2.	0.	5.	9.	29.	11.	1.57	58.	727.	785.
			33	3.	0.	6.	7.	29.	5.	1.00	58.	433.	491.
33	TAN	1	33	3.	0.	6.	7.	29.	5.	1.00	58.	433.	491.
			53	3.	0.	6.	25.	29.	9.	1.57	58.	880.	938.
34	BEND	1	53	6.	3.	0.	9.	25.	29.	1.57	39.	215.	254.
			35	5.	3.	5.	17.	28.	24.	1.57	39.	220.	259.
35	BEND	1	35	5.	3.	5.	17.	28.	24.	1.57	39.	220.	259.
			54	0.	3.	7.	27.	29.	10.	1.57	39.	224.	262.
36	TAN	1	54	0.	7.	3.	27.	10.	29.	1.57	58.	915.	973.
			37	0.	8.	3.	26.	10.	29.	1.00	58.	565.	623.
37	TAN	1	37	0.	8.	3.	26.	10.	29.	1.00	58.	565.	623.
			38	0.	10.	4.	44.	10.	29.	1.00	58.	752.	811.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	935.	25	993.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	3.	-4.	-5.	6.	-13.	-44.
6	-5.	4.	6.	-11.	50.	40.
8	-5.	5.	8.	-11.	67.	44.
12	6.	-5.	-11.	27.	-29.	-53.
21	4.	4.	-4.	43.	7.	-19.
38	0.	-4.	10.	44.	-29.	10.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	2.	4.	8.	6.	22.	1.57	58.	543.	601.
			2	1.	2.	4.	1.	6.	23.	1.00	58.	341.	399.
2	TAN	1	2	3.	2.	1.	1.	6.	23.	1.00	58.	341.	399.
			39	3.	2.	1.	1.	6.	19.	1.57	58.	438.	496.
3	BEND	1	39	3.	1.	2.	1.	19.	6.	1.57	39.	107.	146.
			4	3.	1.	1.	3.	17.	5.	1.57	39.	97.	136.
4	BEND	1	4	3.	1.	1.	3.	17.	5.	1.57	39.	97.	136.
			40	2.	2.	3.	5.	15.	2.	1.57	39.	87.	126.
5	TAN	1	40	2.	3.	2.	5.	2.	15.	1.57	58.	355.	413.
			6	2.	3.	2.	21.	2.	20.	1.00	58.	415.	473.
6	TAN	1	6	1.	3.	4.	21.	2.	20.	1.00	58.	415.	473.
			7	0.	3.	0.	21.	2.	3.	1.00	58.	307.	365.
7	TAN	1	7	0.	3.	0.	21.	2.	3.	1.00	58.	307.	365.
			8	2.	3.	5.	44.	2.	22.	1.00	58.	696.	755.
8	TAN	1	8	4.	3.	5.	44.	2.	22.	1.00	58.	696.	755.
			41	3.	3.	3.	14.	2.	26.	1.00	58.	416.	474.
9	BEND	1	41	3.	3.	3.	14.	26.	2.	1.57	39.	160.	199.
			10	2.	2.	4.	10.	27.	11.	1.57	39.	168.	207.
10	BEND	1	10	2.	2.	4.	10.	27.	11.	1.57	39.	168.	207.
			42	3.	2.	3.	0.	26.	15.	1.57	39.	166.	204.
11	TAN	1	42	3.	3.	2.	0.	15.	26.	1.00	58.	430.	488.
			12	3.	2.	1.	9.	15.	25.	1.00	58.	435.	493.
12	TAN	1	12	2.	2.	7.	9.	15.	25.	1.00	58.	435.	493.
			43	2.	2.	7.	9.	15.	19.	1.57	58.	591.	649.
13	BEND	1	43	2.	7.	2.	9.	19.	15.	1.57	39.	145.	183.
			14	3.	7.	3.	2.	19.	17.	1.57	39.	140.	179.
14	BEND	1	14	3.	7.	3.	2.	19.	17.	1.57	39.	140.	179.
			44	2.	8.	2.	10.	20.	15.	1.57	39.	145.	184.
15	TAN	1	44	2.	2.	8.	10.	15.	20.	1.57	58.	594.	652.
			16	2.	2.	8.	10.	15.	24.	1.57	58.	670.	728.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	2.	2.	10.	15.	24.	1.00	58.	425.	483.
			17	0.	2.	3.	16.	15.	24.	1.00	58.	453.	511.
17	TAN	1	17	2.	2.	3.	16.	15.	24.	1.00	58.	453.	511.
			45	3.	2.	1.	13.	15.	16.	1.00	58.	362.	421.
18	BEND	1	45	1.	3.	2.	16.	13.	15.	1.57	39.	140.	178.
			19	1.	3.	2.	21.	13.	23.	1.57	39.	182.	221.
19	BEND	1	19	1.	3.	2.	21.	13.	23.	1.57	39.	182.	221.
			46	2.	3.	0.	15.	12.	19.	1.57	39.	147.	185.
20	TAN	1	46	2.	0.	3.	15.	19.	12.	1.57	58.	600.	658.
			21	2.	1.	4.	41.	19.	6.	1.00	58.	650.	708.
21	TAN	1	1	1.	2.	4.	8.	6.	22.	1.57	58.	543.	601.
			47	1.	1.	1.	39.	6.	15.	1.57	58.	942.	1000.
22	BEND	1	47	1.	1.	1.	39.	15.	6.	1.57	39.	230.	269.
			23	1.	1.	0.	24.	14.	32.	1.57	39.	232.	271.
23	BEND	1	23	1.	1.	0.	24.	14.	32.	1.57	39.	232.	271.
			48	1.	1.	1.	5.	14.	40.	1.57	39.	231.	270.
24	TAN	1	48	1.	1.	1.	5.	40.	14.	1.57	58.	947.	1005.
			25	1.	1.	1.	6.	40.	10.	1.00	58.	588.	646.
25	TAN	1	25	1.	1.	1.	6.	40.	10.	1.00	58.	588.	646.
			49	1.	1.	2.	12.	40.	11.	1.57	58.	955.	1013.
26	BEND	1	49	1.	2.	1.	12.	11.	40.	1.57	39.	233.	272.
			27	1.	2.	1.	22.	11.	34.	1.57	39.	229.	267.
27	BEND	1	27	1.	2.	1.	22.	11.	34.	1.57	39.	229.	267.
			50	1.	2.	1.	39.	12.	13.	1.57	39.	231.	270.
28	TAN	1	50	1.	1.	2.	39.	13.	12.	1.57	58.	946.	1004.
			29	1.	2.	3.	22.	13.	12.	1.00	58.	398.	456.
29	TAN	1	29	1.	2.	3.	22.	13.	12.	1.00	58.	398.	456.
			51	1.	2.	5.	26.	13.	13.	1.57	58.	706.	764.
30	BEND	1	51	1.	5.	2.	26.	13.	13.	1.57	39.	173.	211.
			31	2.	5.	2.	12.	12.	29.	1.57	39.	182.	220.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	5.	2.	12.	12.	29.	1.57	39.	182.	220.
			52	2.	6.	1.	9.	11.	30.	1.57	39.	180.	219.
32	TAN	1	52	2.	1.	6.	9.	30.	11.	1.57	58.	736.	794.
			33	3.	1.	6.	7.	30.	6.	1.00	58.	439.	497.
33	TAN	1	33	3.	1.	6.	7.	30.	6.	1.00	58.	439.	497.
			53	3.	1.	7.	25.	30.	9.	1.57	58.	893.	951.
34	BEND	1	53	7.	3.	1.	9.	25.	30.	1.57	39.	218.	257.
			35	5.	3.	5.	17.	28.	24.	1.57	39.	223.	262.
35	BEND	1	35	5.	3.	5.	17.	28.	24.	1.57	39.	223.	262.
			54	1.	3.	7.	28.	30.	10.	1.57	39.	227.	266.
36	TAN	1	54	1.	7.	3.	28.	10.	30.	1.57	58.	929.	987.
			37	1.	8.	3.	27.	10.	29.	1.00	58.	573.	631.
37	TAN	1	37	1.	8.	3.	27.	10.	29.	1.00	58.	573.	631.
			38	1.	10.	4.	45.	10.	28.	1.00	58.	764.	822.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	955.	25	1013.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	3.	-4.	-4.	1.	-12.	-47.
6	-5.	4.	6.	-3.	42.	41.
8	-5.	5.	10.	-3.	88.	44.
12	5.	-5.	-8.	17.	-31.	-50.
21	2.	4.	-1.	41.	6.	-19.
38	1.	-4.	10.	45.	-28.	10.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	1.	3.	5.	9.	20.	1.57	58.	512.	570.
			2	2.	1.	4.	3.	9.	25.	1.00	58.	376.	434.
2	TAN	1	2	8.	1.	1.	3.	9.	25.	1.00	58.	376.	434.
			39	8.	1.	1.	4.	9.	14.	1.57	58.	375.	433.
3	BEND	1	39	8.	1.	1.	4.	14.	9.	1.57	39.	92.	130.
			4	5.	2.	5.	4.	10.	10.	1.57	39.	79.	118.
4	BEND	1	4	5.	2.	5.	4.	10.	10.	1.57	39.	79.	118.
			40	1.	2.	7.	8.	9.	5.	1.57	39.	69.	108.
5	TAN	1	40	1.	7.	2.	8.	5.	9.	1.57	58.	282.	340.
			6	1.	7.	2.	24.	5.	5.	1.00	58.	361.	419.
6	TAN	1	6	0.	7.	4.	24.	5.	5.	1.00	58.	361.	419.
			7	0.	6.	0.	24.	5.	2.	1.00	58.	351.	409.
7	TAN	1	7	0.	6.	0.	24.	5.	2.	1.00	58.	351.	409.
			8	0.	4.	4.	32.	5.	1.	1.00	58.	456.	514.
8	TAN	1	8	0.	4.	4.	32.	5.	1.	1.00	58.	456.	514.
			41	0.	3.	2.	12.	5.	3.	1.00	58.	197.	255.
9	BEND	1	41	0.	2.	3.	12.	3.	5.	1.57	39.	76.	114.
			10	2.	2.	2.	12.	3.	7.	1.57	39.	77.	116.
10	BEND	1	10	2.	2.	2.	12.	3.	7.	1.57	39.	77.	116.
			42	3.	2.	0.	5.	2.	14.	1.57	39.	80.	118.
11	TAN	1	42	3.	0.	2.	5.	14.	2.	1.00	58.	207.	265.
			12	3.	0.	2.	12.	14.	16.	1.00	58.	344.	402.
12	TAN	1	12	5.	0.	9.	12.	14.	16.	1.00	58.	344.	402.
			43	5.	0.	9.	8.	14.	4.	1.57	58.	362.	420.
13	BEND	1	43	5.	9.	0.	8.	4.	14.	1.57	39.	88.	127.
			14	4.	9.	4.	1.	3.	17.	1.57	39.	95.	134.
14	BEND	1	14	4.	9.	4.	1.	3.	17.	1.57	39.	95.	134.
			44	0.	9.	6.	7.	3.	14.	1.57	39.	89.	128.
15	TAN	1	44	0.	6.	9.	7.	14.	3.	1.57	58.	366.	424.
			16	0.	6.	9.	13.	14.	3.	1.57	58.	440.	498.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	4.	3.	13.	14.	3.	1.00	58.	279.	337.
			17	0.	4.	3.	21.	14.	3.	1.00	58.	358.	416.
17	TAN	1	17	0.	4.	3.	21.	14.	3.	1.00	58.	358.	416.
			45	0.	4.	3.	19.	14.	2.	1.00	58.	340.	398.
18	BEND	1	45	3.	0.	4.	2.	19.	14.	1.57	39.	131.	170.
			19	1.	0.	4.	10.	20.	12.	1.57	39.	137.	176.
19	BEND	1	19	1.	0.	4.	10.	20.	12.	1.57	39.	137.	176.
			46	3.	0.	3.	14.	19.	2.	1.57	39.	129.	167.
20	TAN	1	46	3.	3.	0.	14.	2.	19.	1.57	58.	526.	584.
			21	3.	4.	0.	16.	2.	5.	1.00	58.	232.	290.
21	TAN	1	1	2.	1.	3.	5.	9.	20.	1.57	58.	512.	570.
			47	1.	1.	1.	34.	9.	13.	1.57	58.	840.	898.
22	BEND	1	47	1.	1.	1.	34.	13.	9.	1.57	39.	205.	244.
			23	1.	1.	1.	22.	13.	31.	1.57	39.	218.	257.
23	BEND	1	23	1.	1.	1.	22.	13.	31.	1.57	39.	218.	257.
			48	1.	0.	1.	9.	12.	35.	1.57	39.	207.	246.
24	TAN	1	48	1.	1.	0.	9.	35.	12.	1.57	58.	848.	906.
			25	1.	1.	0.	9.	35.	8.	1.00	58.	522.	580.
25	TAN	1	25	1.	1.	0.	9.	35.	8.	1.00	58.	522.	580.
			49	1.	0.	1.	13.	35.	9.	1.57	58.	850.	908.
26	BEND	1	49	1.	1.	0.	13.	9.	35.	1.57	39.	208.	246.
			27	1.	2.	1.	19.	9.	34.	1.57	39.	216.	255.
27	BEND	1	27	1.	2.	1.	19.	9.	34.	1.57	39.	216.	255.
			50	0.	2.	1.	34.	9.	14.	1.57	39.	205.	243.
28	TAN	1	50	0.	1.	2.	34.	14.	9.	1.57	58.	837.	895.
			29	1.	1.	3.	16.	14.	10.	1.00	58.	324.	383.
29	TAN	1	29	1.	1.	3.	16.	14.	10.	1.00	58.	324.	383.
			51	1.	1.	5.	18.	14.	8.	1.57	58.	529.	588.
30	BEND	1	51	1.	5.	1.	18.	8.	14.	1.57	39.	129.	168.
			31	1.	5.	2.	10.	8.	22.	1.57	39.	140.	179.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	2.	10.	8.	22.	1.57	39.	140.	179.
			52	1.	5.	1.	10.	8.	21.	1.57	39.	136.	175.
32	TAN	1	52	1.	1.	5.	10.	21.	8.	1.57	58.	556.	614.
			33	1.	2.	6.	8.	21.	6.	1.00	58.	336.	394.
33	TAN	1	33	1.	2.	6.	8.	21.	6.	1.00	58.	336.	394.
			53	1.	2.	6.	28.	21.	3.	1.57	58.	782.	840.
34	BEND	1	53	6.	1.	2.	3.	28.	21.	1.57	39.	191.	230.
			35	5.	1.	6.	17.	31.	13.	1.57	39.	203.	242.
35	BEND	1	35	5.	1.	6.	17.	31.	13.	1.57	39.	203.	242.
			54	2.	1.	7.	21.	31.	2.	1.57	39.	204.	242.
36	TAN	1	54	2.	7.	1.	21.	2.	31.	1.57	58.	833.	891.
			37	2.	8.	1.	16.	2.	39.	1.00	58.	595.	653.
37	TAN	1	37	2.	8.	1.	16.	2.	39.	1.00	58.	595.	653.
			38	3.	9.	1.	11.	2.	56.	1.00	58.	806.	864.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	850.	25	908.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	10.	-2.	-5.	6.	-18.	-49.
6	-14.	1.	6.	-11.	49.	10.
8	-9.	0.	8.	-11.	63.	2.
12	8.	-0.	-10.	25.	-27.	-31.
21	3.	0.	-4.	16.	5.	-2.
38	3.	-1.	9.	11.	-56.	2.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	1.	3.	8.	8.	22.	1.57	58.	550.	608.
			2	2.	1.	4.	1.	8.	26.	1.00	58.	391.	449.
2	TAN	1	2	8.	1.	1.	1.	8.	26.	1.00	58.	391.	449.
			39	8.	1.	1.	1.	8.	13.	1.57	58.	345.	403.
3	BEND	1	39	8.	1.	1.	1.	13.	8.	1.57	39.	84.	123.
			4	6.	1.	5.	5.	9.	7.	1.57	39.	66.	105.
4	BEND	1	4	6.	1.	5.	5.	9.	7.	1.57	39.	66.	105.
			40	1.	2.	7.	7.	7.	2.	1.57	39.	56.	95.
5	TAN	1	40	1.	7.	2.	7.	2.	7.	1.57	58.	229.	287.
			6	1.	7.	2.	20.	2.	6.	1.00	58.	297.	355.
6	TAN	1	6	0.	7.	4.	20.	2.	6.	1.00	58.	297.	355.
			7	0.	6.	0.	21.	2.	2.	1.00	58.	303.	361.
7	TAN	1	7	0.	6.	0.	21.	2.	2.	1.00	58.	303.	361.
			8	0.	4.	5.	42.	2.	1.	1.00	58.	596.	654.
8	TAN	1	8	0.	4.	5.	42.	2.	1.	1.00	58.	596.	654.
			41	0.	3.	3.	13.	2.	3.	1.00	58.	186.	244.
9	BEND	1	41	0.	3.	3.	13.	3.	2.	1.57	39.	72.	110.
			10	2.	2.	2.	9.	2.	11.	1.57	39.	78.	117.
10	BEND	1	10	2.	2.	2.	9.	2.	11.	1.57	39.	78.	117.
			42	3.	2.	0.	0.	0.	15.	1.57	39.	79.	118.
11	TAN	1	42	3.	0.	2.	0.	15.	0.	1.00	58.	206.	264.
			12	3.	0.	1.	8.	15.	14.	1.00	58.	306.	364.
12	TAN	1	12	4.	0.	7.	8.	15.	14.	1.00	58.	306.	364.
			43	4.	0.	7.	8.	15.	4.	1.57	58.	385.	443.
13	BEND	1	43	4.	7.	0.	8.	4.	15.	1.57	39.	94.	133.
			14	3.	7.	3.	1.	2.	18.	1.57	39.	97.	136.
14	BEND	1	14	3.	7.	3.	1.	2.	18.	1.57	39.	97.	136.
			44	0.	8.	5.	9.	2.	14.	1.57	39.	90.	128.
15	TAN	1	44	0.	5.	8.	9.	14.	2.	1.57	58.	367.	425.
			16	0.	5.	8.	9.	14.	2.	1.57	58.	367.	425.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	3.	2.	9.	14.	2.	1.00	58.	233.	291.
			17	0.	3.	3.	15.	14.	1.	1.00	58.	288.	346.
17	TAN	1	17	0.	3.	3.	15.	14.	1.	1.00	58.	288.	346.
			45	0.	3.	1.	13.	14.	2.	1.00	58.	272.	330.
18	BEND	1	45	1.	0.	3.	2.	13.	14.	1.57	39.	105.	144.
			19	1.	0.	2.	10.	13.	11.	1.57	39.	108.	146.
19	BEND	1	19	1.	0.	2.	10.	13.	11.	1.57	39.	108.	146.
			46	2.	0.	0.	14.	12.	2.	1.57	39.	100.	138.
20	TAN	1	46	2.	0.	0.	14.	2.	12.	1.57	58.	407.	465.
			21	2.	1.	0.	14.	2.	3.	1.00	58.	209.	267.
21	TAN	1	1	2.	1.	3.	8.	8.	22.	1.57	58.	550.	608.
			47	1.	1.	1.	36.	8.	13.	1.57	58.	866.	924.
22	BEND	1	47	1.	1.	1.	36.	13.	8.	1.57	39.	212.	250.
			23	1.	1.	1.	23.	13.	31.	1.57	39.	225.	263.
23	BEND	1	23	1.	1.	1.	23.	13.	31.	1.57	39.	225.	263.
			48	1.	0.	1.	8.	13.	36.	1.57	39.	214.	252.
24	TAN	1	48	1.	1.	0.	8.	36.	13.	1.57	58.	874.	932.
			25	1.	1.	1.	8.	36.	9.	1.00	58.	540.	598.
25	TAN	1	25	1.	1.	1.	8.	36.	9.	1.00	58.	540.	598.
			49	1.	1.	1.	13.	36.	8.	1.57	58.	871.	929.
26	BEND	1	49	1.	1.	1.	13.	8.	36.	1.57	39.	213.	252.
			27	1.	2.	0.	19.	8.	35.	1.57	39.	222.	260.
27	BEND	1	27	1.	2.	0.	19.	8.	35.	1.57	39.	222.	260.
			50	0.	2.	1.	35.	8.	14.	1.57	39.	209.	248.
28	TAN	1	50	0.	1.	2.	35.	14.	8.	1.57	58.	856.	914.
			29	1.	1.	3.	16.	14.	9.	1.00	58.	328.	386.
29	TAN	1	29	1.	1.	3.	16.	14.	9.	1.00	58.	328.	386.
			51	1.	1.	5.	18.	14.	8.	1.57	58.	538.	596.
30	BEND	1	51	1.	5.	1.	18.	8.	14.	1.57	39.	131.	170.
			31	1.	5.	2.	10.	8.	23.	1.57	39.	142.	181.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	2.	10.	8.	23.	1.57	39.	142.	181.
			52	1.	5.	1.	10.	8.	22.	1.57	39.	138.	177.
32	TAN	1	52	1.	1.	5.	10.	22.	8.	1.57	58.	565.	623.
			33	1.	2.	6.	8.	22.	6.	1.00	58.	342.	400.
33	TAN	1	33	1.	2.	6.	8.	22.	6.	1.00	58.	342.	400.
			53	1.	2.	6.	28.	22.	3.	1.57	58.	794.	852.
34	BEND	1	53	6.	1.	2.	3.	28.	22.	1.57	39.	194.	233.
			35	6.	1.	6.	17.	31.	13.	1.57	39.	206.	245.
35	BEND	1	35	6.	1.	6.	17.	31.	13.	1.57	39.	206.	245.
			54	2.	1.	7.	21.	31.	3.	1.57	39.	207.	246.
36	TAN	1	54	2.	7.	1.	21.	3.	31.	1.57	58.	846.	904.
			37	2.	8.	1.	16.	3.	39.	1.00	58.	598.	656.
37	TAN	1	37	2.	8.	1.	16.	3.	39.	1.00	58.	598.	656.
			38	3.	10.	1.	12.	3.	55.	1.00	58.	801.	859.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	874.	24	932.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	10.	-2.	-4.	2.	-17.	-53.
6	-14.	1.	6.	-3.	40.	11.
8	-9.	0.	10.	-3.	84.	2.
12	7.	-0.	-8.	15.	-29.	-28.
21	2.	0.	-1.	14.	3.	-2.
38	3.	-1.	10.	12.	-55.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	3.	4.	5.	7.	14.	2.10	58.	482.	540.
			2	0.	3.	4.	3.	7.	14.	1.00	58.	223.	281.
2	TAN	1	2	6.	3.	1.	3.	7.	14.	1.00	58.	223.	281.
			39	6.	3.	1.	4.	7.	22.	2.10	58.	702.	760.
3	BEND	1	39	6.	1.	3.	4.	22.	7.	2.10	39.	172.	210.
			4	3.	2.	6.	3.	24.	8.	2.10	39.	185.	224.
4	BEND	1	4	3.	2.	6.	3.	24.	8.	2.10	39.	185.	224.
			40	3.	2.	6.	6.	23.	5.	2.10	39.	179.	218.
5	TAN	1	40	3.	6.	2.	6.	5.	23.	2.10	58.	734.	792.
			6	3.	6.	2.	24.	5.	24.	1.00	58.	490.	548.
6	TAN	1	6	2.	6.	4.	24.	5.	24.	1.00	58.	490.	548.
			7	1.	6.	0.	24.	5.	8.	1.00	58.	366.	424.
7	TAN	1	7	1.	6.	0.	24.	5.	8.	1.00	58.	366.	424.
			8	1.	6.	4.	32.	5.	1.	1.00	58.	461.	519.
8	TAN	1	8	1.	6.	4.	32.	5.	1.	1.00	58.	461.	519.
			41	2.	6.	2.	13.	5.	20.	1.00	58.	351.	409.
9	BEND	1	41	2.	2.	6.	13.	20.	5.	2.10	39.	180.	219.
			10	3.	2.	6.	12.	20.	7.	2.10	39.	181.	220.
10	BEND	1	10	3.	2.	6.	12.	20.	7.	2.10	39.	181.	220.
			42	6.	2.	2.	5.	18.	14.	2.10	39.	172.	210.
11	TAN	1	42	6.	2.	2.	5.	14.	18.	1.00	58.	335.	393.
			12	6.	2.	2.	12.	14.	14.	1.00	58.	328.	386.
12	TAN	1	12	4.	2.	9.	12.	14.	14.	1.00	58.	328.	386.
			43	4.	2.	9.	8.	14.	5.	2.10	58.	500.	558.
13	BEND	1	43	4.	9.	2.	8.	5.	14.	2.10	39.	122.	161.
			14	5.	9.	3.	1.	4.	17.	2.10	39.	131.	170.
14	BEND	1	14	5.	9.	3.	1.	4.	17.	2.10	39.	131.	170.
			44	3.	9.	4.	7.	3.	15.	2.10	39.	121.	160.
15	TAN	1	44	3.	4.	9.	7.	15.	3.	2.10	58.	497.	555.
			16	3.	4.	9.	13.	15.	6.	2.10	58.	616.	674.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	4.	3.	13.	15.	6.	1.00	58.	293.	351.
			17	1.	4.	3.	21.	15.	8.	1.00	58.	378.	436.
17	TAN	1	17	1.	4.	3.	21.	15.	8.	1.00	58.	378.	436.
			45	0.	4.	3.	21.	15.	5.	1.00	58.	370.	428.
18	BEND	1	45	3.	0.	4.	5.	21.	15.	2.10	39.	190.	229.
			19	1.	0.	5.	13.	22.	14.	2.10	39.	209.	248.
19	BEND	1	19	1.	0.	5.	13.	22.	14.	2.10	39.	209.	248.
			46	4.	0.	3.	14.	20.	6.	2.10	39.	185.	223.
20	TAN	1	46	4.	3.	0.	14.	6.	20.	2.10	58.	755.	813.
			21	4.	4.	0.	15.	6.	10.	1.00	58.	269.	327.
21	TAN	1	1	0.	3.	4.	5.	7.	14.	2.10	58.	482.	540.
			47	0.	2.	1.	37.	7.	13.	2.10	58.	1173.	1232.
22	BEND	1	47	0.	1.	2.	37.	13.	7.	2.10	39.	287.	326.
			23	1.	1.	1.	21.	13.	31.	2.10	39.	289.	328.
23	BEND	1	23	1.	1.	1.	21.	13.	31.	2.10	39.	289.	328.
			48	2.	1.	0.	6.	12.	37.	2.10	39.	288.	327.
24	TAN	1	48	2.	0.	1.	6.	37.	12.	2.10	58.	1178.	1236.
			25	1.	0.	1.	6.	37.	4.	1.00	58.	538.	596.
25	TAN	1	25	1.	0.	1.	6.	37.	4.	1.00	58.	538.	596.
			49	1.	0.	1.	10.	37.	3.	2.10	58.	1154.	1212.
26	BEND	1	49	1.	1.	0.	10.	3.	37.	2.10	39.	282.	321.
			27	1.	2.	1.	20.	4.	33.	2.10	39.	279.	317.
27	BEND	1	27	1.	2.	1.	20.	4.	33.	2.10	39.	279.	317.
			50	0.	2.	1.	36.	4.	12.	2.10	39.	278.	316.
28	TAN	1	50	0.	1.	2.	36.	12.	4.	2.10	58.	1136.	1194.
			29	0.	1.	3.	19.	12.	7.	1.00	58.	336.	394.
29	TAN	1	29	0.	1.	3.	19.	12.	7.	1.00	58.	336.	394.
			51	0.	2.	5.	23.	12.	11.	2.10	58.	836.	894.
30	BEND	1	51	0.	5.	2.	23.	11.	12.	2.10	39.	204.	243.
			31	1.	5.	1.	11.	11.	26.	2.10	39.	217.	256.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	1.	11.	11.	26.	2.10	39.	217.	256.
			52	2.	5.	0.	8.	10.	27.	2.10	39.	216.	255.
32	TAN	1	52	2.	0.	5.	8.	27.	10.	2.10	58.	885.	943.
			33	2.	0.	6.	6.	27.	6.	1.00	58.	399.	457.
33	TAN	1	33	2.	0.	6.	6.	27.	6.	1.00	58.	399.	457.
			53	2.	0.	6.	25.	27.	6.	2.10	58.	1099.	1157.
34	BEND	1	53	6.	2.	0.	6.	25.	27.	2.10	39.	269.	307.
			35	4.	2.	5.	18.	28.	20.	2.10	39.	280.	319.
35	BEND	1	35	4.	2.	5.	18.	28.	20.	2.10	39.	280.	319.
			54	0.	2.	7.	25.	29.	6.	2.10	39.	285.	324.
36	TAN	1	54	0.	7.	2.	25.	6.	29.	2.10	58.	1165.	1223.
			37	0.	8.	3.	22.	6.	28.	1.00	58.	520.	578.
37	TAN	1	37	0.	8.	3.	22.	6.	28.	1.00	58.	520.	578.
			38	0.	10.	3.	34.	6.	28.	1.00	58.	634.	692.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	1178.	24	1236.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	6.	-6.	-5.	6.	-14.	-27.
6	-12.	5.	6.	-11.	49.	48.
8	-12.	2.	8.	-11.	64.	2.
12	10.	-5.	-11.	25.	-28.	-27.
21	4.	0.	-4.	15.	10.	-6.
38	0.	-3.	10.	34.	-28.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	3.	3.	8.	6.	15.	1.57	58.	403.	461.
			2	1.	3.	4.	1.	6.	15.	1.00	58.	235.	293.
2	TAN	1	2	6.	3.	1.	1.	6.	15.	1.00	58.	235.	293.
			39	6.	3.	1.	1.	6.	22.	1.57	58.	501.	560.
3	BEND	1	39	6.	1.	3.	1.	22.	6.	1.57	39.	123.	161.
			4	3.	1.	5.	3.	23.	5.	1.57	39.	129.	168.
4	BEND	1	4	3.	1.	5.	3.	23.	5.	1.57	39.	129.	168.
			40	3.	2.	6.	5.	22.	2.	1.57	39.	124.	162.
5	TAN	1	40	3.	6.	2.	5.	2.	22.	1.57	58.	506.	564.
			6	3.	6.	2.	20.	2.	24.	1.00	58.	449.	507.
6	TAN	1	6	2.	6.	4.	20.	2.	24.	1.00	58.	449.	507.
			7	1.	6.	0.	21.	2.	8.	1.00	58.	321.	379.
7	TAN	1	7	1.	6.	0.	21.	2.	8.	1.00	58.	321.	379.
			8	1.	6.	5.	42.	2.	1.	1.00	58.	601.	659.
8	TAN	1	8	1.	6.	5.	42.	2.	1.	1.00	58.	601.	659.
			41	2.	6.	3.	13.	2.	20.	1.00	58.	339.	397.
9	BEND	1	41	2.	3.	6.	13.	20.	2.	1.57	39.	130.	169.
			10	3.	2.	6.	9.	19.	11.	1.57	39.	133.	171.
10	BEND	1	10	3.	2.	6.	9.	19.	11.	1.57	39.	133.	171.
			42	6.	2.	2.	0.	17.	15.	1.57	39.	122.	161.
11	TAN	1	42	6.	2.	2.	0.	15.	17.	1.00	58.	318.	376.
			12	6.	2.	1.	8.	15.	12.	1.00	58.	291.	349.
12	TAN	1	12	3.	2.	7.	8.	15.	12.	1.00	58.	291.	349.
			43	3.	2.	7.	8.	15.	5.	1.57	58.	399.	457.
13	BEND	1	43	3.	7.	2.	8.	5.	15.	1.57	39.	97.	136.
			14	4.	8.	3.	1.	3.	18.	1.57	39.	100.	139.
14	BEND	1	14	4.	8.	3.	1.	3.	18.	1.57	39.	100.	139.
			44	3.	8.	3.	9.	2.	14.	1.57	39.	92.	130.
15	TAN	1	44	3.	3.	8.	9.	14.	2.	1.57	58.	375.	433.
			16	3.	3.	8.	9.	14.	5.	1.57	58.	386.	444.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	3.	2.	9.	14.	5.	1.00	58.	245.	303.
			17	1.	3.	3.	15.	14.	7.	1.00	58.	308.	366.
17	TAN	1	17	1.	3.	3.	15.	14.	7.	1.00	58.	308.	366.
			45	0.	3.	1.	15.	14.	5.	1.00	58.	301.	359.
18	BEND	1	45	1.	0.	3.	5.	15.	14.	1.57	39.	116.	155.
			19	2.	0.	3.	12.	15.	14.	1.57	39.	129.	167.
19	BEND	1	19	2.	0.	3.	12.	15.	14.	1.57	39.	129.	167.
			46	3.	0.	0.	14.	13.	6.	1.57	39.	109.	148.
20	TAN	1	46	3.	0.	0.	14.	6.	13.	1.57	58.	447.	505.
			21	3.	1.	0.	14.	6.	9.	1.00	58.	245.	303.
21	TAN	1	1	1.	3.	3.	8.	6.	15.	1.57	58.	403.	461.
			47	1.	2.	1.	38.	6.	14.	1.57	58.	908.	966.
22	BEND	1	47	1.	1.	2.	38.	14.	6.	1.57	39.	222.	261.
			23	1.	1.	1.	23.	13.	31.	1.57	39.	224.	262.
23	BEND	1	23	1.	1.	1.	23.	13.	31.	1.57	39.	224.	262.
			48	2.	1.	1.	6.	12.	38.	1.57	39.	222.	261.
24	TAN	1	48	2.	1.	1.	6.	38.	12.	1.57	58.	910.	968.
			25	1.	1.	1.	5.	38.	5.	1.00	58.	555.	613.
25	TAN	1	25	1.	1.	1.	5.	38.	5.	1.00	58.	555.	613.
			49	1.	1.	2.	10.	38.	2.	1.57	58.	891.	949.
26	BEND	1	49	1.	2.	1.	10.	2.	38.	1.57	39.	218.	257.
			27	1.	2.	1.	20.	2.	34.	1.57	39.	215.	254.
27	BEND	1	27	1.	2.	1.	20.	2.	34.	1.57	39.	215.	254.
			50	1.	2.	1.	37.	3.	12.	1.57	39.	214.	253.
28	TAN	1	50	1.	1.	2.	37.	12.	3.	1.57	58.	876.	934.
			29	1.	1.	3.	20.	12.	7.	1.00	58.	341.	399.
29	TAN	1	29	1.	1.	3.	20.	12.	7.	1.00	58.	341.	399.
			51	1.	1.	5.	23.	12.	11.	1.57	58.	635.	693.
30	BEND	1	51	1.	5.	1.	23.	11.	12.	1.57	39.	155.	194.
			31	1.	5.	1.	11.	11.	26.	1.57	39.	165.	204.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	5.	1.	11.	11.	26.	1.57	39.	165.	204.
			52	2.	5.	1.	8.	10.	27.	1.57	39.	164.	203.
32	TAN	1	52	2.	1.	5.	8.	27.	10.	1.57	58.	673.	731.
			33	2.	1.	6.	6.	27.	6.	1.00	58.	405.	463.
33	TAN	1	33	2.	1.	6.	6.	27.	6.	1.00	58.	405.	463.
			53	2.	1.	6.	25.	27.	6.	1.57	58.	837.	895.
34	BEND	1	53	6.	2.	1.	6.	25.	27.	1.57	39.	205.	243.
			35	4.	2.	5.	18.	28.	20.	1.57	39.	213.	252.
35	BEND	1	35	4.	2.	5.	18.	28.	20.	1.57	39.	213.	252.
			54	1.	2.	7.	26.	30.	7.	1.57	39.	217.	256.
36	TAN	1	54	1.	7.	2.	26.	7.	30.	1.57	58.	888.	946.
			37	1.	8.	3.	23.	7.	28.	1.00	58.	527.	585.
37	TAN	1	37	1.	8.	3.	23.	7.	28.	1.00	58.	527.	585.
			38	1.	10.	3.	36.	7.	27.	1.00	58.	643.	701.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	910.	24	968.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	7.	-6.	-4.	1.	-13.	-31.
6	-12.	5.	6.	-4.	40.	49.
8	-12.	2.	10.	-4.	85.	2.
12	9.	-5.	-8.	15.	-30.	-24.
21	3.	0.	-1.	14.	9.	-6.
38	1.	-3.	10.	36.	-27.	7.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	3.	1.	5.	7.	15.	29.	1.57	58.	748.	806.
			2	4.	1.	6.	6.	15.	36.	1.00	58.	561.	619.
2	TAN	1	2	10.	1.	2.	6.	15.	36.	1.00	58.	561.	619.
			39	10.	1.	2.	8.	15.	23.	1.57	58.	635.	693.
3	BEND	1	39	10.	2.	1.	8.	23.	15.	1.57	39.	155.	194.
			4	6.	3.	7.	6.	19.	16.	1.57	39.	141.	180.
4	BEND	1	4	6.	3.	7.	6.	19.	16.	1.57	39.	141.	180.
			40	1.	3.	10.	13.	17.	10.	1.57	39.	126.	165.
5	TAN	1	40	1.	10.	3.	13.	10.	17.	1.57	58.	517.	575.
			6	1.	9.	4.	39.	10.	9.	1.00	58.	580.	638.
6	TAN	1	6	0.	9.	6.	39.	10.	9.	1.00	58.	580.	638.
			7	0.	7.	0.	37.	10.	3.	1.00	58.	544.	602.
7	TAN	1	7	0.	7.	0.	37.	10.	3.	1.00	58.	544.	602.
			8	0.	4.	6.	43.	10.	4.	1.00	58.	621.	679.
8	TAN	1	8	1.	4.	5.	43.	10.	4.	1.00	58.	621.	679.
			41	1.	3.	2.	19.	10.	12.	1.00	58.	349.	407.
9	BEND	1	41	1.	2.	3.	19.	12.	10.	1.57	39.	134.	173.
			10	1.	2.	2.	21.	12.	8.	1.57	39.	138.	177.
10	BEND	1	10	1.	2.	2.	21.	12.	8.	1.57	39.	138.	177.
			42	2.	2.	1.	10.	13.	21.	1.57	39.	143.	182.
11	TAN	1	42	2.	1.	2.	10.	21.	13.	1.00	58.	372.	430.
			12	2.	1.	3.	22.	21.	19.	1.00	58.	509.	567.
12	TAN	1	12	13.	1.	15.	22.	21.	19.	1.00	58.	509.	567.
			43	12.	1.	14.	11.	21.	10.	1.57	58.	575.	634.
13	BEND	1	43	12.	14.	1.	11.	10.	21.	1.57	39.	141.	179.
			14	8.	14.	9.	3.	15.	25.	1.57	39.	162.	201.
14	BEND	1	14	8.	14.	9.	3.	15.	25.	1.57	39.	162.	201.
			44	1.	14.	12.	10.	17.	22.	1.57	39.	161.	199.
15	TAN	1	44	1.	12.	14.	10.	22.	17.	1.57	58.	657.	715.
			16	1.	12.	14.	22.	22.	15.	1.57	58.	759.	817.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	8.	5.	22.	22.	15.	1.00	58.	482.	540.
			17	1.	8.	5.	34.	22.	13.	1.00	58.	597.	655.
17	TAN	1	17	1.	6.	4.	34.	22.	13.	1.00	58.	597.	655.
			45	1.	7.	6.	36.	22.	4.	1.00	58.	601.	660.
18	BEND	1	45	6.	1.	7.	4.	36.	22.	1.57	39.	232.	270.
			19	3.	1.	9.	16.	38.	18.	1.57	39.	245.	283.
19	BEND	1	19	3.	1.	9.	16.	38.	18.	1.57	39.	245.	283.
			46	8.	1.	6.	22.	35.	4.	1.57	39.	227.	266.
20	TAN	1	46	8.	6.	1.	22.	4.	35.	1.57	58.	930.	988.
			21	8.	8.	1.	29.	4.	23.	1.00	58.	526.	585.
21	TAN	1	1	3.	1.	5.	7.	15.	29.	1.57	58.	748.	806.
			47	2.	1.	2.	50.	15.	21.	1.57	58.	1252.	1310.
22	BEND	1	47	2.	2.	1.	50.	21.	15.	1.57	39.	306.	345.
			23	2.	1.	2.	33.	21.	46.	1.57	39.	329.	368.
23	BEND	1	23	2.	1.	2.	33.	21.	46.	1.57	39.	329.	368.
			48	1.	1.	2.	14.	21.	51.	1.57	39.	309.	348.
24	TAN	1	48	1.	2.	1.	14.	51.	21.	1.57	58.	1265.	1323.
			25	1.	1.	1.	14.	51.	15.	1.00	58.	775.	833.
25	TAN	1	25	1.	1.	1.	14.	51.	15.	1.00	58.	775.	833.
			49	1.	1.	2.	20.	51.	17.	1.57	58.	1273.	1331.
26	BEND	1	49	1.	2.	1.	20.	17.	51.	1.57	39.	311.	350.
			27	1.	2.	1.	28.	18.	50.	1.57	39.	328.	367.
27	BEND	1	27	1.	2.	1.	28.	18.	50.	1.57	39.	328.	367.
			50	0.	3.	1.	49.	18.	21.	1.57	39.	307.	346.
28	TAN	1	50	0.	1.	3.	49.	21.	18.	1.57	58.	1258.	1316.
			29	1.	1.	5.	23.	21.	17.	1.00	58.	500.	558.
29	TAN	1	29	1.	1.	5.	23.	21.	17.	1.00	58.	500.	558.
			51	2.	1.	7.	26.	21.	11.	1.57	58.	788.	846.
30	BEND	1	51	2.	7.	1.	26.	11.	21.	1.57	39.	193.	231.
			31	2.	7.	2.	15.	12.	34.	1.57	39.	212.	250.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	7.	2.	15.	12.	34.	1.57	39.	212.	250.
			52	1.	8.	2.	16.	12.	31.	1.57	39.	201.	240.
32	TAN	1	52	1.	2.	8.	16.	31.	12.	1.57	58.	824.	882.
			33	1.	3.	8.	13.	31.	9.	1.00	58.	498.	556.
33	TAN	1	33	1.	3.	8.	13.	31.	9.	1.00	58.	498.	556.
			53	1.	3.	9.	42.	31.	5.	1.57	58.	1165.	1223.
34	BEND	1	53	9.	1.	3.	5.	42.	31.	1.57	39.	285.	324.
			35	8.	1.	9.	25.	46.	19.	1.57	39.	304.	343.
35	BEND	1	35	8.	1.	9.	25.	46.	19.	1.57	39.	304.	343.
			54	3.	1.	10.	30.	46.	4.	1.57	39.	302.	341.
36	TAN	1	54	3.	10.	1.	30.	4.	46.	1.57	58.	1236.	1294.
			37	4.	12.	1.	22.	4.	61.	1.00	58.	923.	981.
37	TAN	1	37	4.	12.	1.	22.	4.	61.	1.00	58.	923.	981.
			38	5.	14.	1.	14.	4.	92.	1.00	58.	1317.	1375.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	37	1317.	37	1375.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
2	14.	-3.	-7.	11.	-29.	-73.
6	-19.	2.	10.	-20.	77.	19.
8	-9.	1.	11.	-20.	85.	8.
12	15.	-2.	-17.	44.	-42.	-39.
21	8.	1.	-8.	29.	23.	-4.
38	5.	-1.	14.	14.	-92.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	3.	1.	5.	12.	13.	32.	1.57	58.	819.	877.
			2	4.	1.	5.	1.	13.	39.	1.00	58.	590.	648.
2	TAN	1	2	10.	1.	1.	1.	13.	39.	1.00	58.	590.	648.
			39	10.	1.	2.	1.	13.	22.	1.57	58.	573.	631.
3	BEND	1	39	10.	2.	1.	1.	22.	13.	1.57	39.	140.	179.
			4	7.	2.	6.	7.	17.	11.	1.57	39.	115.	154.
4	BEND	1	4	7.	2.	6.	7.	17.	11.	1.57	39.	115.	154.
			40	1.	3.	10.	11.	14.	3.	1.57	39.	100.	139.
5	TAN	1	40	1.	10.	3.	11.	3.	14.	1.57	58.	410.	468.
			6	1.	9.	3.	30.	3.	10.	1.00	58.	453.	511.
6	TAN	1	6	0.	9.	6.	30.	3.	10.	1.00	58.	453.	511.
			7	0.	7.	1.	31.	3.	3.	1.00	58.	446.	504.
7	TAN	1	7	0.	7.	1.	31.	3.	3.	1.00	58.	446.	504.
			8	0.	4.	7.	63.	3.	4.	1.00	58.	894.	952.
8	TAN	1	8	1.	4.	8.	63.	3.	4.	1.00	58.	894.	952.
			41	1.	3.	4.	20.	3.	11.	1.00	58.	322.	380.
9	BEND	1	41	1.	4.	3.	20.	11.	3.	1.57	39.	124.	163.
			10	1.	4.	2.	15.	11.	16.	1.57	39.	133.	171.
10	BEND	1	10	1.	4.	2.	15.	11.	16.	1.57	39.	133.	171.
			42	2.	3.	1.	1.	9.	23.	1.57	39.	134.	172.
11	TAN	1	42	2.	1.	3.	1.	23.	9.	1.00	58.	347.	405.
			12	2.	1.	2.	12.	23.	16.	1.00	58.	430.	488.
12	TAN	1	12	11.	1.	10.	12.	23.	16.	1.00	58.	430.	488.
			43	10.	1.	11.	12.	23.	11.	1.57	58.	622.	680.
13	BEND	1	43	10.	11.	1.	12.	11.	23.	1.57	39.	152.	191.
			14	7.	11.	8.	2.	13.	27.	1.57	39.	161.	200.
14	BEND	1	14	7.	11.	8.	2.	13.	27.	1.57	39.	161.	200.
			44	1.	12.	10.	14.	14.	20.	1.57	39.	155.	194.
15	TAN	1	44	1.	10.	12.	14.	20.	14.	1.57	58.	634.	692.
			16	1.	10.	12.	13.	20.	12.	1.57	58.	606.	664.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	6.	4.	13.	20.	12.	1.00	58.	385.	443.
			17	1.	6.	4.	23.	20.	10.	1.00	58.	456.	514.
17	TAN	1	17	1.	4.	5.	23.	20.	10.	1.00	58.	456.	514.
			45	1.	5.	2.	25.	20.	4.	1.00	58.	458.	516.
18	BEND	1	45	2.	1.	5.	4.	25.	20.	1.57	39.	176.	215.
			19	3.	1.	5.	15.	25.	17.	1.57	39.	183.	222.
19	BEND	1	19	3.	1.	5.	15.	25.	17.	1.57	39.	183.	222.
			46	5.	1.	1.	20.	22.	4.	1.57	39.	166.	205.
20	TAN	1	46	5.	1.	1.	20.	4.	22.	1.57	58.	678.	736.
			21	6.	2.	1.	26.	4.	20.	1.00	58.	475.	533.
21	TAN	1	1	3.	1.	5.	12.	13.	32.	1.57	58.	819.	877.
			47	2.	1.	1.	52.	13.	22.	1.57	58.	1303.	1361.
22	BEND	1	47	2.	1.	1.	52.	22.	13.	1.57	39.	319.	357.
			23	2.	1.	2.	35.	22.	47.	1.57	39.	342.	381.
23	BEND	1	23	2.	1.	2.	35.	22.	47.	1.57	39.	342.	381.
			48	1.	0.	2.	13.	22.	53.	1.57	39.	321.	360.
24	TAN	1	48	1.	2.	0.	13.	53.	22.	1.57	58.	1315.	1373.
			25	1.	1.	1.	13.	53.	16.	1.00	58.	811.	869.
25	TAN	1	25	1.	1.	1.	13.	53.	16.	1.00	58.	811.	869.
			49	1.	1.	2.	20.	53.	15.	1.57	58.	1311.	1369.
26	BEND	1	49	1.	2.	1.	20.	15.	53.	1.57	39.	320.	359.
			27	1.	2.	1.	29.	15.	52.	1.57	39.	337.	376.
27	BEND	1	27	1.	2.	1.	29.	15.	52.	1.57	39.	337.	376.
			50	1.	3.	1.	51.	16.	22.	1.57	39.	316.	355.
28	TAN	1	50	1.	1.	3.	51.	22.	16.	1.57	58.	1292.	1350.
			29	1.	1.	5.	23.	22.	16.	1.00	58.	506.	564.
29	TAN	1	29	1.	1.	5.	23.	22.	16.	1.00	58.	506.	564.
			51	2.	1.	7.	26.	22.	11.	1.57	58.	804.	862.
30	BEND	1	51	2.	7.	1.	26.	11.	22.	1.57	39.	197.	235.
			31	2.	7.	2.	15.	12.	34.	1.57	39.	216.	255.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	7.	2.	15.	12.	34.	1.57	39.	216.	255.
			52	1.	8.	3.	16.	12.	32.	1.57	39.	206.	245.
32	TAN	1	52	1.	3.	8.	16.	32.	12.	1.57	58.	843.	901.
			33	1.	3.	8.	13.	32.	10.	1.00	58.	510.	568.
33	TAN	1	33	1.	3.	8.	13.	32.	10.	1.00	58.	510.	568.
			53	1.	3.	9.	42.	32.	6.	1.57	58.	1189.	1247.
34	BEND	1	53	9.	1.	3.	6.	42.	32.	1.57	39.	291.	329.
			35	9.	1.	9.	26.	47.	19.	1.57	39.	310.	349.
35	BEND	1	35	9.	1.	9.	26.	47.	19.	1.57	39.	310.	349.
			54	3.	1.	10.	31.	47.	5.	1.57	39.	308.	347.
36	TAN	1	54	3.	10.	1.	31.	5.	47.	1.57	58.	1262.	1320.
			37	4.	12.	1.	24.	5.	61.	1.00	58.	929.	987.
37	TAN	1	37	4.	12.	1.	24.	5.	61.	1.00	58.	929.	987.
			38	5.	14.	1.	17.	5.	90.	1.00	58.	1305.	1363.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	1315.	24	1373.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	14.	-2.	-7.	3.	-26.	-79.
6	-19.	1.	9.	-6.	60.	21.
8	-9.	1.	15.	-6.	126.	8.
12	12.	-2.	-12.	24.	-45.	-32.
21	6.	1.	-2.	26.	20.	-4.
38	5.	-1.	14.	17.	-90.	5.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	3.	5.	7.	10.	33.	1.57	58.	783.	841.
			2	1.	3.	6.	5.	10.	34.	1.00	58.	513.	571.
2	TAN	1	2	4.	3.	2.	5.	10.	34.	1.00	58.	513.	571.
			39	4.	4.	2.	8.	10.	31.	1.57	58.	752.	810.
3	BEND	1	39	4.	2.	4.	8.	31.	10.	1.57	39.	184.	223.
			4	5.	2.	2.	4.	29.	13.	1.57	39.	176.	215.
4	BEND	1	4	5.	2.	2.	4.	29.	13.	1.57	39.	176.	215.
			40	4.	3.	4.	8.	27.	10.	1.57	39.	162.	201.
5	TAN	1	40	4.	4.	3.	8.	10.	27.	1.57	58.	663.	721.
			6	4.	4.	3.	40.	10.	33.	1.00	58.	745.	803.
6	TAN	1	6	2.	4.	6.	40.	10.	33.	1.00	58.	745.	803.
			7	0.	4.	1.	38.	10.	4.	1.00	58.	553.	611.
7	TAN	1	7	0.	4.	1.	38.	10.	4.	1.00	58.	553.	611.
			8	3.	4.	7.	45.	10.	37.	1.00	58.	839.	897.
8	TAN	1	8	6.	4.	5.	45.	10.	37.	1.00	58.	839.	897.
			41	5.	4.	2.	20.	10.	45.	1.00	58.	713.	772.
9	BEND	1	41	5.	2.	4.	20.	45.	10.	1.57	39.	275.	313.
			10	3.	2.	6.	21.	48.	9.	1.57	39.	287.	326.
10	BEND	1	10	3.	2.	6.	21.	48.	9.	1.57	39.	287.	326.
			42	4.	3.	5.	10.	48.	21.	1.57	39.	290.	329.
11	TAN	1	42	4.	5.	3.	10.	21.	48.	1.00	58.	753.	811.
			12	4.	4.	3.	23.	21.	45.	1.00	58.	774.	832.
12	TAN	1	12	6.	4.	14.	23.	21.	45.	1.00	58.	774.	832.
			43	6.	4.	14.	13.	21.	32.	1.57	58.	910.	968.
13	BEND	1	43	6.	14.	4.	13.	32.	21.	1.57	39.	223.	261.
			14	6.	14.	7.	5.	34.	25.	1.57	39.	232.	271.
14	BEND	1	14	6.	14.	7.	5.	34.	25.	1.57	39.	232.	271.
			44	4.	14.	6.	11.	37.	23.	1.57	39.	246.	284.
15	TAN	1	44	4.	6.	14.	11.	23.	37.	1.57	58.	1005.	1063.
			16	3.	6.	14.	23.	23.	44.	1.57	58.	1223.	1281.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	6.	5.	23.	23.	44.	1.00	58.	777.	835.
			17	1.	6.	5.	34.	23.	43.	1.00	58.	843.	901.
17	TAN	1	17	4.	6.	4.	34.	23.	43.	1.00	58.	843.	901.
			45	6.	6.	5.	31.	23.	28.	1.00	58.	675.	733.
18	BEND	1	45	5.	6.	6.	28.	31.	23.	1.57	39.	260.	299.
			19	2.	6.	8.	35.	33.	37.	1.57	39.	329.	368.
19	BEND	1	19	2.	6.	8.	35.	33.	37.	1.57	39.	329.	368.
			46	6.	6.	6.	24.	31.	32.	1.57	39.	275.	314.
20	TAN	1	46	6.	6.	6.	24.	32.	31.	1.57	58.	1125.	1183.
			21	6.	7.	7.	70.	32.	12.	1.00	58.	1107.	1165.
21	TAN	1	1	1.	3.	5.	7.	10.	33.	1.57	58.	783.	841.
			47	1.	2.	2.	56.	10.	23.	1.57	58.	1374.	1433.
22	BEND	1	47	1.	2.	2.	56.	23.	10.	1.57	39.	336.	375.
			23	2.	2.	1.	33.	22.	47.	1.57	39.	339.	378.
23	BEND	1	23	2.	2.	1.	33.	22.	47.	1.57	39.	339.	378.
			48	1.	1.	1.	9.	21.	57.	1.57	39.	338.	377.
24	TAN	1	48	1.	1.	1.	9.	57.	21.	1.57	58.	1382.	1440.
			25	1.	1.	1.	9.	57.	15.	1.00	58.	853.	911.
25	TAN	1	25	1.	1.	1.	9.	57.	15.	1.00	58.	853.	911.
			49	2.	1.	2.	17.	57.	20.	1.57	58.	1411.	1469.
26	BEND	1	49	2.	2.	1.	17.	20.	57.	1.57	39.	345.	384.
			27	1.	3.	1.	32.	21.	48.	1.57	39.	338.	376.
27	BEND	1	27	1.	3.	1.	32.	21.	48.	1.57	39.	338.	376.
			50	1.	3.	2.	56.	21.	19.	1.57	39.	343.	382.
28	TAN	1	50	1.	2.	3.	56.	19.	21.	1.57	58.	1404.	1462.
			29	1.	3.	5.	33.	19.	21.	1.00	58.	613.	671.
29	TAN	1	29	1.	3.	5.	33.	19.	21.	1.00	58.	613.	671.
			51	1.	4.	7.	39.	19.	20.	1.57	58.	1080.	1138.
30	BEND	1	51	1.	7.	4.	39.	20.	19.	1.57	39.	264.	303.
			31	3.	8.	3.	18.	20.	43.	1.57	39.	277.	315.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	3.	8.	3.	18.	20.	43.	1.57	39.	277.	315.
			52	4.	8.	1.	13.	17.	45.	1.57	39.	274.	312.
32	TAN	1	52	4.	1.	8.	13.	45.	17.	1.57	58.	1120.	1178.
			33	4.	1.	9.	10.	45.	8.	1.00	58.	665.	723.
33	TAN	1	33	4.	1.	9.	10.	45.	8.	1.00	58.	665.	723.
			53	5.	1.	10.	37.	45.	14.	1.57	58.	1337.	1395.
34	BEND	1	53	10.	5.	1.	14.	37.	45.	1.57	39.	327.	365.
			35	7.	5.	7.	25.	41.	38.	1.57	39.	333.	372.
35	BEND	1	35	7.	5.	7.	25.	41.	38.	1.57	39.	333.	372.
			54	1.	5.	10.	41.	43.	16.	1.57	39.	337.	376.
36	TAN	1	54	1.	10.	5.	41.	16.	43.	1.57	58.	1300.	1438.
			37	1.	12.	6.	40.	16.	43.	1.00	58.	865.	923.
37	TAN	1	37	1.	12.	6.	40.	16.	43.	1.00	58.	865.	923.
			38	1.	14.	7.	72.	- 16.	44.	1.00	58.	1210.	1269.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	1411.	25	1469.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	5.	-7.	-7.	11.	-21.	-69.
6	-8.	7.	10.	-19.	79.	66.
8	-8.	9.	11.	-19.	90.	75.
12	10.	-8.	-17.	45.	-43.	-90.
21	6.	7.	-7.	70.	12.	-32.
38	1.	-7.	14.	72.	-44.	16.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	3.	5.	12.	9.	36.	1.57	58.	862.	920.
			2	1.	3.	6.	1.	9.	37.	1.00	58.	545.	603.
2	TAN	1	2	4.	3.	1.	1.	9.	37.	1.00	58.	545.	603.
			39	4.	4.	1.	1.	9.	30.	1.57	58.	699.	757.
3	BEND	1	39	4.	1.	4.	1.	30.	9.	1.57	39.	171.	210.
			4	6.	2.	1.	5.	27.	7.	1.57	39.	154.	193.
4	BEND	1	4	6.	2.	1.	5.	27.	7.	1.57	39.	154.	193.
			40	4.	2.	4.	7.	24.	3.	1.57	39.	138.	177.
5	TAN	1	40	4.	4.	2.	7.	3.	24.	1.57	58.	564.	623.
			6	4.	4.	3.	31.	3.	34.	1.00	58.	657.	715.
6	TAN	1	6	3.	4.	6.	31.	3.	34.	1.00	58.	657.	715.
			7	0.	4.	1.	32.	3.	4.	1.00	58.	457.	515.
7	TAN	1	7	0.	4.	1.	32.	3.	4.	1.00	58.	457.	515.
			8	3.	4.	7.	65.	3.	38.	1.00	58.	1069.	1127.
8	TAN	1	8	6.	4.	8.	65.	3.	38.	1.00	58.	1069.	1127.
			41	5.	4.	4.	20.	3.	44.	1.00	58.	689.	747.
9	BEND	1	41	5.	4.	4.	20.	44.	3.	1.57	39.	265.	304.
			10	3.	4.	6.	15.	46.	17.	1.57	39.	278.	316.
10	BEND	1	10	3.	4.	6.	15.	46.	17.	1.57	39.	278.	316.
			42	4.	3.	5.	1.	44.	23.	1.57	39.	274.	312.
11	TAN	1	42	4.	5.	3.	1.	23.	44.	1.00	58.	711.	769.
			12	4.	4.	2.	13.	23.	41.	1.00	58.	698.	756.
12	TAN	1	12	4.	4.	10.	13.	23.	41.	1.00	58.	698.	756.
			43	4.	4.	11.	14.	23.	33.	1.57	58.	950.	1008.
13	BEND	1	43	4.	11.	4.	14.	33.	23.	1.57	39.	232.	271.
			14	4.	11.	5.	4.	32.	26.	1.57	39.	224.	263.
14	BEND	1	14	4.	11.	5.	4.	32.	26.	1.57	39.	224.	263.
			44	3.	11.	4.	15.	34.	22.	1.57	39.	235.	273.
15	TAN	1	44	3.	4.	11.	15.	22.	34.	1.57	58.	960.	1018.
			16	3.	4.	12.	15.	22.	41.	1.57	58.	1095.	1153.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	4.	3.	15.	22.	41.	1.00	58.	695.	753.
			17	1.	4.	4.	23.	22.	40.	1.00	58.	729.	787.
17	TAN	1	17	4.	4.	5.	23.	22.	40.	1.00	58.	729.	787.
			45	6.	4.	1.	20.	22.	28.	1.00	58.	571.	629.
18	BEND	1	45	1.	6.	4.	28.	20.	22.	1.57	39.	220.	259.
			19	2.	6.	3.	34.	20.	36.	1.57	39.	289.	328.
19	BEND	1	19	2.	6.	3.	34.	20.	36.	1.57	39.	289.	328.
			46	4.	6.	0.	23.	18.	32.	1.57	39.	234.	273.
20	TAN	1	46	4.	0.	6.	23.	32.	18.	1.57	58.	957.	1015.
			21	4.	2.	7.	68.	32.	10.	1.00	58.	1068.	1126.
21	TAN	1	1	1.	3.	5.	12.	9.	36.	1.57	58.	862.	920.
			47	1.	2.	2.	59.	9.	24.	1.57	58.	1430.	1488.
22	BEND	1	47	1.	2.	2.	59.	24.	9.	1.57	39.	350.	388.
			23	2.	1.	0.	36.	23.	48.	1.57	39.	352.	391.
23	BEND	1	23	2.	1.	0.	36.	23.	48.	1.57	39.	352.	391.
			48	1.	1.	1.	8.	22.	60.	1.57	39.	351.	390.
24	TAN	1	48	1.	1.	1.	8.	60.	22.	1.57	58.	1436.	1494.
			25	1.	1.	1.	9.	60.	17.	1.00	58.	890.	948.
25	TAN	1	25	1.	1.	1.	9.	60.	17.	1.00	58.	890.	948.
			49	2.	1.	2.	18.	60.	18.	1.57	58.	1448.	1506.
26	BEND	1	49	2.	2.	1.	18.	18.	60.	1.57	39.	354.	393.
			27	1.	3.	1.	34.	19.	50.	1.57	39.	346.	385.
27	BEND	1	27	1.	3.	1.	34.	19.	50.	1.57	39.	346.	385.
			50	1.	3.	2.	58.	19.	20.	1.57	39.	351.	390.
28	TAN	1	50	1.	2.	3.	58.	20.	19.	1.57	58.	1437.	1495.
			29	1.	3.	5.	34.	20.	20.	1.00	58.	618.	676.
29	TAN	1	29	1.	3.	5.	34.	20.	20.	1.00	58.	618.	676.
			51	1.	4.	7.	40.	20.	20.	1.57	58.	1096.	1154.
30	BEND	1	51	1.	7.	4.	40.	20.	20.	1.57	39.	268.	307.
			31	3.	8.	3.	18.	20.	44.	1.57	39.	281.	320.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	3.	8.	3.	18.	20.	44.	1.57	39.	281.	320.
			52	4.	8.	1.	14.	18.	46.	1.57	39.	278.	317.
32	TAN	1	52	4.	1.	8.	14.	46.	18.	1.57	58.	1138.	1197.
			33	4.	1.	9.	10.	46.	8.	1.00	58.	677.	735.
33	TAN	1	33	4.	1.	9.	10.	46.	8.	1.00	58.	677.	735.
			53	5.	1.	10.	38.	46.	15.	1.57	58.	1363.	1421.
34	BEND	1	53	10.	5.	1.	15.	38.	46.	1.57	39.	333.	372.
			35	7.	5.	7.	26.	42.	37.	1.57	39.	339.	377.
35	BEND	1	35	7.	5.	7.	26.	42.	37.	1.57	39.	339.	377.
			54	1.	5.	11.	42.	44.	17.	1.57	39.	344.	383.
36	TAN	1	54	1.	11.	5.	42.	17.	44.	1.57	58.	1409.	1467.
			37	1.	12.	6.	42.	17.	43.	1.00	58.	882.	940.
37	TAN	1	37	1.	12.	6.	42.	17.	43.	1.00	58.	882.	940.
			38	1.	15.	6.	74.	17.	42.	1.00	58.	1234.	1292.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	25	1448.	25	1506.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	5.	-7.	-7.	2.	-18.	-75.
6	-8.	7.	8.	-5.	62.	69.
8	-8.	9.	15.	-5.	130.	75.
12	8.	-8.	-12.	26.	-46.	-83.
21	4.	7.	-2.	68.	10.	-32.
38	1.	-6.	15.	74.	-42.	17.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	3.	1.	5.	7.	15.	32.	1.57	58.	801.	859.
			2	4.	1.	6.	6.	15.	39.	1.00	58.	599.	658.
2	TAN	1	2	13.	1.	2.	6.	15.	39.	1.00	58.	599.	658.
			39	13.	1.	2.	8.	15.	21.	1.57	58.	601.	659.
3	BEND	1	39	13.	2.	1.	8.	21.	15.	1.57	39.	147.	186.
			4	8.	3.	9.	6.	16.	16.	1.57	39.	128.	167.
4	BEND	1	4	8.	3.	9.	6.	16.	16.	1.57	39.	128.	167.
			40	1.	3.	12.	12.	13.	10.	1.57	39.	112.	151.
5	TAN	1	40	1.	12.	3.	12.	10.	13.	1.57	58.	459.	517.
			6	1.	12.	4.	38.	10.	8.	1.00	58.	570.	628.
6	TAN	1	6	0.	12.	6.	38.	10.	8.	1.00	58.	570.	628.
			7	0.	10.	0.	37.	10.	3.	1.00	58.	546.	604.
7	TAN	1	7	0.	10.	0.	37.	10.	3.	1.00	58.	546.	604.
			8	0.	7.	6.	42.	10.	1.	1.00	58.	608.	666.
8	TAN	1	8	0.	7.	4.	42.	10.	1.	1.00	58.	608.	666.
			41	0.	5.	2.	18.	10.	6.	1.00	58.	302.	360.
9	BEND	1	41	0.	2.	5.	18.	6.	10.	1.57	39.	116.	155.
			10	4.	2.	4.	19.	5.	8.	1.57	39.	118.	156.
10	BEND	1	10	4.	2.	4.	19.	5.	8.	1.57	39.	118.	156.
			42	5.	2.	0.	10.	4.	20.	1.57	39.	121.	160.
11	TAN	1	42	5.	0.	2.	10.	20.	4.	1.00	58.	315.	373.
			12	5.	0.	3.	21.	20.	26.	1.00	58.	549.	607.
12	TAN	1	12	9.	0.	14.	21.	20.	26.	1.00	58.	549.	607.
			43	9.	0.	14.	11.	20.	7.	1.57	58.	529.	587.
13	BEND	1	43	9.	14.	0.	11.	7.	20.	1.57	39.	129.	168.
			14	7.	14.	6.	2.	6.	25.	1.57	39.	141.	180.
14	BEND	1	14	7.	14.	6.	2.	6.	25.	1.57	39.	141.	180.
			44	0.	14.	9.	9.	6.	22.	1.57	39.	134.	172.
15	TAN	1	44	0.	9.	14.	9.	22.	6.	1.57	58.	546.	604.
			16	0.	10.	14.	21.	22.	5.	1.57	58.	693.	751.

BLOWER DRAIN LINE
BLOWER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	6.	5.	21.	22.	5.	1.00	58.	440.	498.
			17	0.	6.	5.	33.	22.	4.	1.00	58.	567.	625.
17	TAN	1	17	0.	7.	4.	33.	22.	4.	1.00	58.	567.	625.
			45	0.	6.	5.	31.	22.	3.	1.00	58.	540.	599.
18	BEND	1	45	5.	0.	6.	3.	31.	22.	1.57	39.	208.	247.
			19	2.	0.	8.	15.	33.	18.	1.57	39.	219.	258.
19	BEND	1	19	2.	0.	8.	15.	33.	18.	1.57	39.	219.	258.
			46	6.	0.	6.	22.	31.	3.	1.57	39.	206.	245.
20	TAN	1	46	6.	6.	0.	22.	3.	31.	1.57	58.	844.	902.
			21	6.	7.	0.	24.	3.	7.	1.00	58.	358.	416.
21	TAN	1	1	3.	1.	5.	7.	15.	32.	1.57	58.	801.	859.
			47	2.	1.	2.	50.	15.	20.	1.57	58.	1249.	1307.
22	BEND	1	47	2.	2.	1.	50.	20.	15.	1.57	39.	305.	344.
			23	2.	1.	2.	32.	20.	46.	1.57	39.	326.	365.
23	BEND	1	23	2.	1.	2.	32.	20.	46.	1.57	39.	326.	365.
			48	1.	1.	2.	14.	20.	51.	1.57	39.	309.	347.
24	TAN	1	48	1.	2.	1.	14.	51.	20.	1.57	58.	1262.	1320.
			25	1.	1.	1.	14.	51.	13.	1.00	58.	772.	830.
25	TAN	1	25	1.	1.	1.	14.	51.	13.	1.00	58.	772.	830.
			49	1.	1.	2.	19.	51.	15.	1.57	58.	1262.	1320.
26	BEND	1	49	1.	2.	1.	19.	15.	51.	1.57	39.	309.	347.
			27	1.	2.	1.	28.	15.	50.	1.57	39.	323.	362.
27	BEND	1	27	1.	2.	1.	28.	15.	50.	1.57	39.	323.	362.
			50	0.	3.	1.	49.	16.	21.	1.57	39.	304.	343.
28	TAN	1	50	0.	1.	3.	49.	21.	16.	1.57	58.	1245.	1303.
			29	1.	1.	5.	23.	21.	16.	1.00	58.	493.	551.
29	TAN	1	29	1.	1.	5.	23.	21.	16.	1.00	58.	493.	551.
			51	2.	1.	7.	26.	21.	12.	1.57	58.	792.	850.
30	BEND	1	51	2.	7.	1.	26.	12.	21.	1.57	39.	194.	232.
			31	2.	7.	2.	15.	12.	33.	1.57	39.	210.	248.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	2.	7.	2.	15.	12.	33.	1.57	39.	210.	248.
			52	1.	8.	2.	15.	12.	32.	1.57	39.	203.	241.
32	TAN	1	52	1.	2.	8.	15.	32.	12.	1.57	58.	829.	887.
			33	1.	2.	8.	13.	32.	9.	1.00	58.	501.	559.
33	TAN	1	33	1.	2.	8.	13.	32.	9.	1.00	58.	501.	559.
			53	1.	3.	9.	41.	32.	4.	1.57	58.	1165.	1223.
34	BEND	1	53	9.	1.	3.	4.	41.	32.	1.57	39.	285.	324.
			35	8.	1.	9.	25.	46.	20.	1.57	39.	302.	341.
35	BEND	1	35	8.	1.	9.	25.	46.	20.	1.57	39.	302.	341.
			54	3.	1.	10.	31.	46.	3.	1.57	39.	302.	341.
36	TAN	1	54	3.	10.	1.	31.	3.	46.	1.57	58.	1237.	1295.
			37	4.	12.	1.	23.	3.	60.	1.00	58.	915.	973.
37	TAN	1	37	4.	12.	1.	23.	3.	60.	1.00	58.	915.	973.
			38	5.	14.	1.	16.	3.	90.	1.00	58.	1294.	1352.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	37	1294.	37	1352.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
2	16.	-3.	-7.	12.	-29.	-79.
6	-24.	2.	10.	-19.	77.	15.
8	-14.	1.	11.	-19.	84.	2.
12	13.	-1.	-17.	42.	-39.	-52.
21	6.	0.	-7.	24.	7.	-3.
38	5.	-1.	14.	16.	-90.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	4.	1.	5.	12.	13.	35.	1.57	58.	872.	930.
			2	4.	1.	5.	1.	13.	42.	1.00	58.	629.	687.
2	TAN	1	2	13.	1.	1.	1.	13.	42.	1.00	58.	629.	687.
			39	13.	1.	2.	1.	13.	20.	1.57	58.	538.	596.
3	BEND	1	39	13.	2.	1.	1.	20.	13.	1.57	39.	131.	170.
			4	9.	2.	8.	7.	13.	10.	1.57	39.	101.	140.
4	BEND	1	4	9.	2.	8.	7.	13.	10.	1.57	39.	101.	140.
			40	1.	3.	12.	11.	11.	3.	1.57	39.	85.	124.
5	TAN	1	40	1.	12.	3.	11.	3.	11.	1.57	58.	350.	408.
			6	1.	12.	3.	30.	3.	9.	1.00	58.	442.	500.
6	TAN	1	6	0.	12.	6.	30.	3.	9.	1.00	58.	442.	500.
			7	0.	10.	1.	31.	3.	4.	1.00	58.	449.	507.
7	TAN	1	7	0.	10.	1.	31.	3.	4.	1.00	58.	449.	507.
			8	0.	7.	7.	62.	3.	2.	1.00	58.	882.	940.
8	TAN	1	8	0.	7.	8.	62.	3.	2.	1.00	58.	882.	940.
			41	0.	5.	4.	19.	3.	4.	1.00	58.	277.	335.
9	BEND	1	41	0.	4.	5.	19.	4.	3.	1.57	39.	107.	145.
			10	4.	3.	4.	14.	3.	16.	1.57	39.	116.	154.
10	BEND	1	10	4.	3.	4.	14.	3.	16.	1.57	39.	116.	154.
			42	5.	3.	0.	0.	1.	21.	1.57	39.	117.	156.
11	TAN	1	42	5.	0.	3.	0.	21.	1.	1.00	58.	305.	363.
			12	5.	0.	2.	11.	21.	23.	1.00	58.	471.	529.
12	TAN	1	12	7.	0.	10.	11.	21.	23.	1.00	58.	471.	529.
			43	7.	0.	11.	12.	21.	7.	1.57	58.	575.	633.
13	BEND	1	43	7.	11.	0.	12.	7.	21.	1.57	39.	141.	179.
			14	5.	11.	5.	1.	4.	26.	1.57	39.	144.	183.
14	BEND	1	14	5.	11.	5.	1.	4.	26.	1.57	39.	144.	183.
			44	0.	11.	7.	13.	3.	20.	1.57	39.	133.	172.
15	TAN	1	44	0.	7.	11.	13.	20.	3.	1.57	58.	545.	603.
			16	0.	8.	12.	13.	20.	3.	1.57	58.	544.	602.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	0.	4.	3.	13.	20.	3.	1.00	58.	346.	404.
			17	0.	4.	4.	22.	20.	2.	1.00	58.	427.	485.
17	TAN	1	17	0.	5.	5.	22.	20.	2.	1.00	58.	427.	485.
			45	0.	4.	1.	20.	20.	3.	1.00	58.	405.	463.
18	BEND	1	45	1.	0.	4.	3.	20.	20.	1.57	39.	156.	194.
			19	2.	0.	3.	14.	20.	17.	1.57	39.	160.	199.
19	BEND	1	19	2.	0.	3.	14.	20.	17.	1.57	39.	160.	199.
			46	4.	0.	0.	20.	18.	3.	1.57	39.	148.	186.
20	TAN	1	46	4.	0.	0.	20.	3.	18.	1.57	58.	604.	662.
			21	3.	2.	0.	21.	3.	5.	1.00	58.	312.	371.
21	TAN	1	1	4.	1.	5.	12.	13.	35.	1.57	58.	872.	930.
			47	2.	1.	1.	53.	13.	21.	1.57	58.	1300.	1358.
22	BEND	1	47	2.	1.	1.	53.	21.	13.	1.57	39.	318.	356.
			23	2.	1.	2.	35.	21.	47.	1.57	39.	339.	378.
23	BEND	1	23	2.	1.	2.	35.	21.	47.	1.57	39.	339.	378.
			48	1.	0.	2.	12.	21.	54.	1.57	39.	321.	359.
24	TAN	1	48	1.	2.	0.	12.	54.	21.	1.57	58.	1312.	1370.
			25	1.	1.	1.	13.	54.	15.	1.00	58.	808.	866.
25	TAN	1	25	1.	1.	1.	13.	54.	15.	1.00	58.	808.	866.
			49	1.	1.	2.	20.	54.	13.	1.57	58.	1302.	1361.
26	BEND	1	49	1.	2.	1.	20.	13.	54.	1.57	39.	318.	357.
			27	1.	2.	1.	29.	13.	52.	1.57	39.	333.	372.
27	BEND	1	27	1.	2.	1.	29.	13.	52.	1.57	39.	333.	372.
			50	1.	3.	1.	52.	14.	21.	1.57	39.	313.	352.
28	TAN	1	50	1.	1.	3.	52.	21.	14.	1.57	58.	1282.	1340.
			29	1.	1.	5.	24.	21.	15.	1.00	58.	499.	557.
29	TAN	1	29	1.	1.	5.	24.	21.	15.	1.00	58.	499.	557.
			51	2.	1.	7.	27.	21.	12.	1.57	58.	809.	867.
30	BEND	1	51	2.	7.	1.	27.	12.	21.	1.57	39.	198.	236.
			31	1.	7.	2.	15.	12.	34.	1.57	39.	214.	253.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	7.	2.	15.	12.	34.	1.57	39.	214.	253.
			52	1.	8.	2.	16.	12.	32.	1.57	39.	207.	246.
32	TAN	1	52	1.	2.	8.	16.	32.	12.	1.57	58.	848.	906.
			33	1.	3.	8.	13.	32.	9.	1.00	58.	513.	571.
33	TAN	1	33	1.	3.	8.	13.	32.	9.	1.00	58.	513.	571.
			53	1.	3.	9.	42.	32.	5.	1.57	58.	1189.	1247.
34	BEND	1	53	9.	1.	3.	5.	42.	32.	1.57	39.	291.	329.
			35	8.	1.	9.	26.	46.	20.	1.57	39.	309.	347.
35	BEND	1	35	8.	1.	9.	26.	46.	20.	1.57	39.	309.	347.
			54	3.	1.	10.	31.	47.	4.	1.57	39.	308.	347.
36	TAN	1	54	3.	10.	1.	31.	4.	47.	1.57	58.	1262.	1320.
			37	4.	12.	1.	24.	4.	60.	1.00	58.	920.	978.
37	TAN	1	37	4.	12.	1.	24.	4.	60.	1.00	58.	920.	978.
			38	5.	14.	1.	19.	4.	88.	1.00	58.	1282.	1340.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	1312.	24	1370.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	17.	-3.	-7.	3.	-26.	-85.
6	-24.	2.	9.	-5.	60.	18.
8	-14.	0.	15.	-5.	124.	3.
12	11.	-1.	-12.	23.	-43.	-45.
21	3.	0.	-2.	21.	5.	-3.
38	5.	-1.	14.	19.	-88.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	4.	5.	6.	11.	21.	1.57	58.	542.	600.
			2	1.	5.	6.	5.	11.	21.	1.00	58.	340.	398.
2	TAN	1	2	10.	5.	2.	5.	11.	21.	1.00	58.	340.	398.
			39	10.	5.	2.	8.	11.	36.	1.57	58.	858.	916.
3	BEND	1	39	10.	2.	5.	8.	36.	11.	1.57	39.	210.	248.
			4	4.	2.	10.	4.	39.	14.	1.57	39.	229.	268.
4	BEND	1	4	4.	2.	10.	4.	39.	14.	1.57	39.	229.	268.
			40	5.	3.	10.	9.	39.	10.	1.57	39.	223.	262.
5	TAN	1	40	5.	10.	3.	9.	10.	39.	1.57	58.	913.	971.
			6	5.	10.	3.	38.	10.	40.	1.00	58.	797.	855.
6	TAN	1	6	3.	10.	6.	38.	10.	40.	1.00	58.	797.	855.
			7	1.	10.	0.	37.	10.	13.	1.00	58.	574.	632.
7	TAN	1	7	1.	10.	0.	37.	10.	13.	1.00	58.	574.	632.
			8	2.	10.	6.	42.	10.	1.	1.00	58.	616.	674.
8	TAN	1	8	2.	10.	5.	42.	10.	1.	1.00	58.	616.	674.
			41	3.	10.	2.	19.	10.	35.	1.00	58.	579.	637.
9	BEND	1	41	3.	2.	10.	19.	35.	10.	1.57	39.	223.	262.
			10	5.	2.	9.	20.	35.	9.	1.57	39.	224.	262.
10	BEND	1	10	5.	2.	9.	20.	35.	9.	1.57	39.	224.	262.
			42	10.	2.	3.	10.	32.	21.	1.57	39.	212.	251.
11	TAN	1	42	10.	3.	2.	10.	21.	32.	1.00	58.	551.	609.
			12	10.	4.	3.	21.	21.	22.	1.00	58.	521.	579.
12	TAN	1	12	7.	4.	14.	21.	21.	22.	1.00	58.	521.	579.
			43	7.	4.	14.	11.	21.	8.	1.57	58.	552.	611.
13	BEND	1	43	7.	14.	4.	11.	8.	21.	1.57	39.	135.	174.
			14	8.	14.	6.	2.	8.	26.	1.57	39.	147.	186.
14	BEND	1	14	8.	14.	6.	2.	8.	26.	1.57	39.	147.	186.
			44	5.	14.	7.	10.	6.	22.	1.57	39.	136.	175.
15	TAN	1	44	5.	7.	14.	10.	22.	6.	1.57	58.	557.	615.
			16	5.	7.	14.	22.	22.	11.	1.57	58.	733.	791.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	7.	5.	22.	22.	11.	1.00	58.	465.	523.
			17	2.	7.	5.	34.	22.	14.	1.00	58.	604.	662.
17	TAN	1	17	2.	7.	4.	34.	22.	14.	1.00	58.	604.	662.
			45	1.	7.	5.	34.	22.	9.	1.00	58.	592.	650.
18	BEND	1	45	5.	1.	7.	9.	34.	22.	1.57	39.	228.	267.
			19	2.	1.	9.	19.	36.	22.	1.57	39.	253.	291.
19	BEND	1	19	2.	1.	9.	19.	36.	22.	1.57	39.	253.	291.
			46	7.	0.	6.	22.	33.	9.	1.57	39.	223.	262.
20	TAN	1	46	7.	6.	0.	22.	9.	33.	1.57	58.	914.	972.
			21	7.	7.	1.	23.	9.	16.	1.00	58.	426.	484.
21	TAN	1	1	1.	4.	5.	6.	11.	21.	1.57	58.	542.	600.
			47	1.	3.	2.	54.	11.	21.	1.57	58.	1316.	1374.
22	BEND	1	47	1.	2.	3.	54.	21.	11.	1.57	39.	322.	360.
			23	2.	1.	2.	31.	20.	46.	1.57	39.	325.	363.
23	BEND	1	23	2.	1.	2.	31.	20.	46.	1.57	39.	325.	363.
			48	3.	1.	1.	10.	19.	55.	1.57	39.	323.	361.
24	TAN	1	48	3.	1.	1.	10.	55.	19.	1.57	58.	1320.	1378.
			25	2.	1.	1.	8.	55.	7.	1.00	58.	797.	855.
25	TAN	1	25	2.	1.	1.	8.	55.	7.	1.00	58.	797.	855.
			49	2.	1.	2.	15.	55.	6.	1.57	58.	1284.	1342.
26	BEND	1	49	2.	2.	1.	15.	6.	55.	1.57	39.	314.	353.
			27	1.	3.	1.	29.	6.	48.	1.57	39.	310.	348.
27	BEND	1	27	1.	3.	1.	29.	6.	48.	1.57	39.	310.	348.
			50	1.	3.	1.	54.	7.	17.	1.57	39.	309.	348.
28	TAN	1	50	1.	1.	3.	54.	17.	7.	1.57	58.	1265.	1323.
			29	1.	2.	5.	29.	17.	12.	1.00	58.	510.	568.
29	TAN	1	29	1.	2.	5.	29.	17.	12.	1.00	58.	510.	568.
			51	1.	2.	7.	35.	17.	17.	1.57	58.	959.	1017.
30	BEND	1	51	1.	7.	2.	35.	17.	17.	1.57	39.	234.	273.
			31	1.	8.	2.	17.	17.	39.	1.57	39.	249.	287.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	8.	2.	17.	17.	39.	1.57	39.	249.	287.
			52	3.	8.	1.	11.	16.	41.	1.57	39.	247.	286.
32	TAN	1	52	3.	1.	8.	11.	41.	16.	1.57	58.	1012.	1070.
			33	3.	1.	9.	8.	41.	9.	1.00	58.	607.	665.
33	TAN	1	33	3.	1.	9.	8.	41.	9.	1.00	58.	607.	665.
			53	3.	1.	9.	36.	41.	9.	1.57	58.	1240.	1298.
34	BEND	1	53	9.	3.	1.	9.	36.	41.	1.57	39.	303.	342.
			35	7.	4.	7.	26.	41.	31.	1.57	39.	315.	354.
35	BEND	1	35	7.	4.	7.	26.	41.	31.	1.57	39.	315.	354.
			54	1.	4.	10.	38.	43.	10.	1.57	39.	319.	358.
36	TAN	1	54	1.	10.	4.	38.	10.	43.	1.57	58.	1307.	1365.
			37	1.	12.	4.	34.	10.	42.	1.00	58.	786.	844.
37	TAN	1	37	1.	12.	4.	34.	10.	42.	1.00	58.	786.	844.
			38	1.	14.	5.	56.	10.	43.	1.00	58.	1004.	1062.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	1320.	24	1378.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
2	11.	-9.	-7.	11.	-22.	-41.
6	-20.	9.	10.	-20.	77.	80.
8	-20.	3.	11.	-20.	85.	3.
12	17.	-8.	-17.	41.	-41.	-45.
21	7.	1.	-7.	23.	16.	-9.
38	1.	-5.	14.	56.	-43.	10.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	1.	4.	5.	11.	10.	23.	1.57	58.	620.	678.
			2	1.	5.	6.	1.	10.	24.	1.00	58.	363.	421.
2	TAN	1	2	10.	5.	1.	1.	10.	24.	1.00	58.	363.	421.
			39	10.	5.	1.	2.	10.	35.	1.57	58.	807.	865.
3	BEND	1	39	10.	1.	5.	2.	35.	10.	1.57	39.	197.	236.
			4	5.	2.	9.	5.	37.	8.	1.57	39.	209.	248.
4	BEND	1	4	5.	2.	9.	5.	37.	8.	1.57	39.	209.	248.
			40	5.	2.	10.	8.	36.	3.	1.57	39.	201.	240.
5	TAN	1	40	5.	10.	2.	8.	3.	36.	1.57	58.	823.	881.
			6	5.	10.	3.	30.	3.	41.	1.00	58.	720.	778.
6	TAN	1	6	3.	10.	6.	30.	3.	41.	1.00	58.	720.	778.
			7	1.	10.	1.	31.	3.	13.	1.00	58.	484.	542.
7	TAN	1	7	1.	10.	1.	31.	3.	13.	1.00	58.	484.	542.
			8	2.	10.	7.	63.	3.	2.	1.00	58.	890.	948.
8	TAN	1	8	1.	10.	8.	63.	3.	2.	1.00	58.	890.	948.
			41	3.	10.	4.	20.	3.	34.	1.00	58.	553.	611.
9	BEND	1	41	3.	4.	10.	20.	34.	3.	1.57	39.	213.	252.
			10	5.	3.	9.	14.	33.	17.	1.57	39.	216.	254.
10	BEND	1	10	5.	3.	9.	14.	33.	17.	1.57	39.	216.	254.
			42	10.	3.	3.	0.	28.	22.	1.57	39.	197.	236.
11	TAN	1	42	10.	3.	3.	0.	22.	28.	1.00	58.	512.	570.
			12	10.	4.	2.	11.	22.	19.	1.00	58.	444.	502.
12	TAN	1	12	5.	4.	10.	11.	22.	19.	1.00	58.	444.	502.
			43	5.	4.	11.	12.	22.	8.	1.57	58.	599.	657.
13	BEND	1	43	5.	11.	4.	12.	8.	22.	1.57	39.	146.	185.
			14	6.	11.	4.	1.	5.	27.	1.57	39.	149.	188.
14	BEND	1	14	6.	11.	4.	1.	5.	27.	1.57	39.	149.	188.
			44	4.	12.	5.	14.	3.	21.	1.57	39.	136.	175.
15	TAN	1	44	4.	5.	12.	14.	21.	3.	1.57	58.	558.	616.
			16	5.	5.	12.	13.	21.	9.	1.57	58.	581.	639.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	16	1.	5.	3.	13.	21.	9.	1.00	58.	369.	427.
			17	1.	5.	4.	23.	21.	12.	1.00	58.	464.	522.
17	TAN	1	17	2.	5.	5.	23.	21.	12.	1.00	58.	464.	522.
			45	1.	5.	1.	23.	21.	9.	1.00	58.	456.	514.
18	BEND	1	45	1.	1.	5.	9.	23.	21.	1.57	39.	175.	214.
			19	3.	0.	4.	18.	23.	21.	1.57	39.	196.	235.
19	BEND	1	19	3.	0.	4.	18.	23.	21.	1.57	39.	196.	235.
			46	5.	0.	1.	20.	20.	9.	1.57	39.	165.	204.
20	TAN	1	46	5.	1.	0.	20.	9.	20.	1.57	58.	674.	732.
			21	5.	2.	1.	21.	9.	14.	1.00	58.	377.	435.
21	TAN	1	1	1.	4.	5.	11.	10.	23.	1.57	58.	620.	678.
			47	1.	3.	2.	57.	10.	22.	1.57	58.	1371.	1429.
22	BEND	1	47	1.	2.	3.	57.	22.	10.	1.57	39.	335.	374.
			23	2.	1.	2.	34.	21.	47.	1.57	39.	337.	376.
23	BEND	1	23	2.	1.	2.	34.	21.	47.	1.57	39.	337.	376.
			48	3.	1.	1.	9.	20.	58.	1.57	39.	336.	374.
24	TAN	1	48	3.	1.	1.	9.	58.	20.	1.57	58.	1373.	1431.
			25	2.	1.	1.	8.	58.	8.	1.00	58.	832.	890.
25	TAN	1	25	2.	1.	1.	8.	58.	8.	1.00	58.	832.	890.
			49	2.	1.	2.	16.	58.	3.	1.57	58.	1334.	1392.
26	BEND	1	49	2.	2.	1.	16.	3.	58.	1.57	39.	326.	365.
			27	1.	3.	1.	31.	4.	50.	1.57	39.	322.	360.
27	BEND	1	27	1.	3.	1.	31.	4.	50.	1.57	39.	322.	360.
			50	1.	3.	1.	56.	4.	18.	1.57	39.	321.	359.
28	TAN	1	50	1.	1.	3.	56.	18.	4.	1.57	58.	1312.	1370.
			29	1.	1.	5.	30.	18.	10.	1.00	58.	519.	577.
29	TAN	1	29	1.	1.	5.	30.	18.	10.	1.00	58.	519.	577.
			51	1.	2.	7.	36.	18.	17.	1.57	58.	974.	1032.
30	BEND	1	51	1.	7.	2.	36.	17.	18.	1.57	39.	238.	277.
			31	1.	8.	2.	17.	17.	40.	1.57	39.	253.	292.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	BEND	1	31	1.	8.	2.	17.	17.	40.	1.57	39.	253.	292.
			52	3.	8.	1.	12.	16.	42.	1.57	39.	252.	291.
32	TAN	1	52	3.	1.	8.	12.	42.	16.	1.57	58.	1031.	1089.
			33	3.	1.	9.	8.	42.	10.	1.00	58.	619.	677.
33	TAN	1	33	3.	1.	9.	8.	42.	10.	1.00	58.	619.	677.
			53	3.	1.	10.	37.	42.	10.	1.57	58.	1265.	1323.
34	BEND	1	53	10.	3.	1.	10.	37.	42.	1.57	39.	309.	348.
			35	7.	3.	8.	27.	42.	31.	1.57	39.	321.	360.
35	BEND	1	35	7.	3.	8.	27.	42.	31.	1.57	39.	321.	360.
			54	1.	4.	10.	39.	44.	11.	1.57	39.	326.	365.
36	TAN	1	54	1.	10.	4.	39.	11.	44.	1.57	58.	1335.	1393.
			37	1.	12.	4.	36.	11.	42.	1.00	58.	801.	859.
37	TAN	1	37	1.	12.	4.	36.	11.	42.	1.00	58.	801.	859.
			38	1.	14.	5.	58.	11.	41.	1.00	58.	1024.	1082.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	24	1373.	24	1431.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
2	11.	-9.	-7.	2.	-19.	-47.
6	-20.	9.	8.	-6.	60.	82.
8	-20.	3.	15.	-6.	125.	3.
12	15.	-8.	-12.	22.	-45.	-38.
21	5.	1.	-2.	21.	14.	-9.
38	1.	-5.	14.	58.	-41.	11.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 23

```
* CPU SECONDS ** THIS STEP "STRE" TIME IS   13.68 ** LAST STEP "COMB" TIME IS    8.42 ** DELTA TIME IS    5.26 *
* ELAPSED SECONDS                           147.5                                101.7                     45.8 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   13.68 ** LAST STEP "STRE" TIME IS   13.68 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           147.5                                147.5                      0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   13.70 ** LAST STEP "SUPR" TIME IS   13.68 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           147.6                                147.5                      0.1 *
```

```
START NC3600 PLOT PRODUCTION NO TAPE 15
BLOWER DRAIN LINE
GEOMETRY
BLOWER DRAIN LINE
COORDINATES INCHES
1 0 0 0
2 0 2 0
4 0 4.5 0
6 15.5 4.5 0
7 39.5 4.5 0
8 64 4.5 0
10 79 4.5 0
12 79 10 0
14 79 13 0
16 82 13 0
17 84.5 13 0
19 104.5 13 0
21 104.5 13 6
23 0 -14 0
25 5.5 -14 0
27 11 -14 0
29 11 -22 0
31 11 -31 0
33 8 -31 0
35 4 -31 0
37 4 -31 -8
38 4 -31 -16
BOUNDARY
2 ANCHOR
21 ANCHOR
38 ANCHOR
6 YZSTOP
8 YZSTOP
12 ZXSTOP
MATERIAL 304SS
0 27700000 .3
SIF
101 2.1 2.1 1
102 2.1 2.1 1
BRANCH 1 304SS 50 1
RUN 1 2 1.05 .113 .09 1
RUN 2 0 1.05 .113 .09 2
ELBOW 4 .75 1.55 .25 .26 0 101
RUN 0 6 1.05 .113 .01 1
RUN 6 7 1.05 .113 .09 0
RUN 7 8
RUN 8 0 1.05 .113 .09 2
ELBOW 10 .75 1.55 .25 .26 0 101
RUN 0 12 1.05 .113 .09 1
RUN 12 0 1.05 .113 .09 2
ELBOW 14 .75 1.55 .25 .26 0 101
RUN 0 16 1.05 .113 .09 3
RUN 16 17
RUN 17 0
ELBOW 19 .75 1.55 .25 .26 0 101
RUN 0 21 1.05 .113 .09 3
RUN 1 0
ELBOW 23 .75 1.55 .25 .26 0 101
RUN 0 25 1.05 .113 .09 1
```

```
RUN 25 0 1.05 .113 .09 2
ELBOW 27 .75 1.55 .25 .26 0 101
RUN 0 29 1.05 .113 .09 1
RUN 29 0 1.05 .113 .09 2
ELBOW 31 .75 1.55 .25 .26 0 101
RUN 0 33 1.05 .113 .09 1
RUN 33 0 1.05 .113 .09 2
ELBOW 35 .75 1.55 .25 .26 0 101
RUN 0 37 1.05 .113 .09 1
RUN 37 38 1.05 .113 .09 2
PLOT INPUT PROGRAM BOTH 1 LINE
BLOWER DRAIN LINE  3/4-PC-121SS.5N-SP
ISOMETRIC THIRD ZUP 12. 50.
FREQUENCY 4 10 1 1
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP
3DOF 4 7  10 16 19 27
END OF JOB
```

BLOWER DRAIN LINE

NUMB=	37	NBC=	38	NBRAN=	1	NNOR=	0	NTOT=	6	NSEC=	3
NCOORD=	46	NMAT=	1	NCYL=	0	NPRES=	1	NTEE=	0	JSTART=	1
NFLOAT=	0	NREF=	11	MAXJT=	808						

JOINT COORDINATES

JNT	X1	X2	X3
1	0.0	0.0	0.0
2	0.0	2.00000	0.0
4	0.21967	4.28033	0.0
6	15.50000	4.50000	0.0
7	39.50000	4.50000	0.0
8	64.00000	4.50000	0.0
10	78.78032	4.71967	0.0
12	79.00000	10.00000	0.0
14	79.21967	12.78033	0.0
16	82.00000	13.00000	0.0
17	84.50000	13.00000	0.0
19	104.28032	13.00000	0.21967
21	104.50000	13.00000	6.00000
23	0.21967	-13.78033	0.0
25	5.50000	-14.00000	0.0
27	10.78033	-14.21967	0.0
29	11.00000	-22.00000	0.0
31	10.78033	-30.78032	0.0
33	8.00000	-31.00000	0.0
35	4.21967	-31.00000	-0.21967
37	4.00000	-31.00000	-8.00000
38	4.00000	-31.00000	-16.00000
39	0.0	3.75000	0.0
40	0.75000	4.50000	0.0
41	78.25000	4.50000	0.0
42	79.00000	5.25000	0.0
43	79.00000	12.25000	0.0
44	79.75000	13.00000	0.0
45	103.75000	13.00000	0.0
46	104.50000	13.00000	0.75000
47	0.0	-13.25000	0.0
48	0.75000	-14.00000	0.0
49	10.25000	-14.00000	0.0
50	11.00000	-14.75000	0.0
51	11.00000	-30.25000.	0.0
52	10.25000	-31.00000	0.0
53	4.75000	-31.00000	0.0
54	4.00000	-31.00000	-0.75000
70	0.75000	3.75000	0.0
71	78.25000	5.25000	0.0
72	79.75000	12.25000	0.0
73	103.75000	13.00000	0.75000
74	0.75000	-13.25000	0.0
75	10.25000	-14.75000	0.0
76	10.25000	-30.25000	0.0
77	4.75000	-31.00000	-0.75000

BOUNDARY

NB	LAMORI	OMAGA 1	OMAGA 2	OMAGA 3	OMAGA 4	OMAGA 5	OMAGA 6	J1	J2	J3
2	0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0	0	0
21	0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0	0	0
38	0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0	0	0
6	0	0.0	1.00000	1.00000	0.0	0.0	0.0	0	0	0
8	0	0.0	1.00000	1.00000	0.0	0.0	0.0	0	0	0
12	0	1.00000	0.0	1.00000	0.0	0.0	0.0	0	0	0

MATERIALS

MAT 1 IDENTIFIER = '304S' NTEMP= 1

PT.	TEMP.	E	POISSON'S RATIO	COEF THERMAL EXPANSION	SM	M	N
1	0.0	0.27700E 08	0.30000E 00	0.0	0.0	0.0	0.0

STRESS AND FLEXIBILITY FACTORS

IPTYPE	SIF 1	SIF 2	FLEX FACTOR
101	2.1000	2.1000	1.0000
102	2.1000	2.1000	1.0000

PRESSURES

0.50000E 02

CROSS SECTIONS

NO.	IREC	BB 1	BB 2	BB 3	BB 4	BB 5	BB 6	WT/LENGTH
1	3	0.10500E 01	0.11300E 00	0.20000E 01	0.0	0.0	0.0	0.90000E-01
2	4	0.15500E 01	0.25000E 00	0.20000E 01	0.0	0.0	0.0	0.26000E 00
3	3	0.10500E 01	0.11300E 00	0.20000E 01	0.0	0.0	0.0	0.10000E-01

ELEMENTS

KBAR	JPN1	JPN2	JPN3	NTYP	IMAT	NDIV	ULOAD	JPRES	IPIP	KTEE	KSEC	JENDSP	IFLNG	ISYST	END CONDS. END1	END2	XSEC NO. 1	2	3	4	5	6	IPTYP	JLEG	NBRN	NSTIFF	WEIGHT	LENGTH
1	1	2	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.18	2.00
2	2	39	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.16	1.75
3	39	4	70	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
4	4	40	70	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
5	40	6	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	1	1	1	0	0.15	14.75
6	6	7	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	2.16	24.00
7	7	8	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	2.20	24.50
8	8	41	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	1.28	14.25
9	41	10	71	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
10	10	42	71	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
11	42	12	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.43	4.75
12	12	43	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.20	2.25
13	43	14	72	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
14	14	44	72	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
15	44	16	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	1	0	0.20	2.25
16	16	17	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0.22	2.50
17	17	45	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1.73	19.25
18	45	19	73	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57

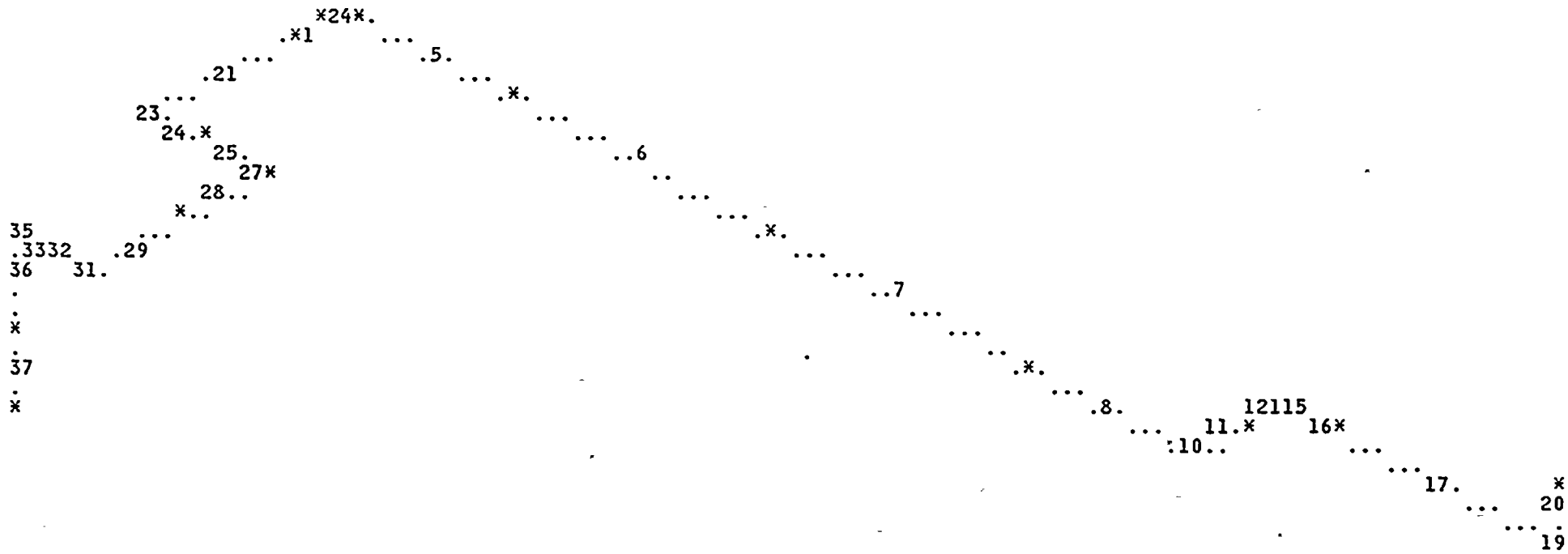
19	19	46	73	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
20	46	21	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	1	0	0.47	5.25
21	1	47	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1.19	13.25
22	47	23	74	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
23	23	48	74	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
24	48	25	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.43	4.75
25	25	49	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.43	4.75
26	49	27	75	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
27	27	50	75	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
28	50	29	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.65	7.25
29	29	51	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.74	8.25
30	51	31	76	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
31	31	52	76	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
32	52	33	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.20	2.25
33	33	53	1002	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.29	3.25
34	53	35	77	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
35	35	54	77	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	101	1	1	0	0.15	0.57
36	54	37	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0.65	7.25
37	37	38	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0.72	8.00

BRANCH WEIGHTS

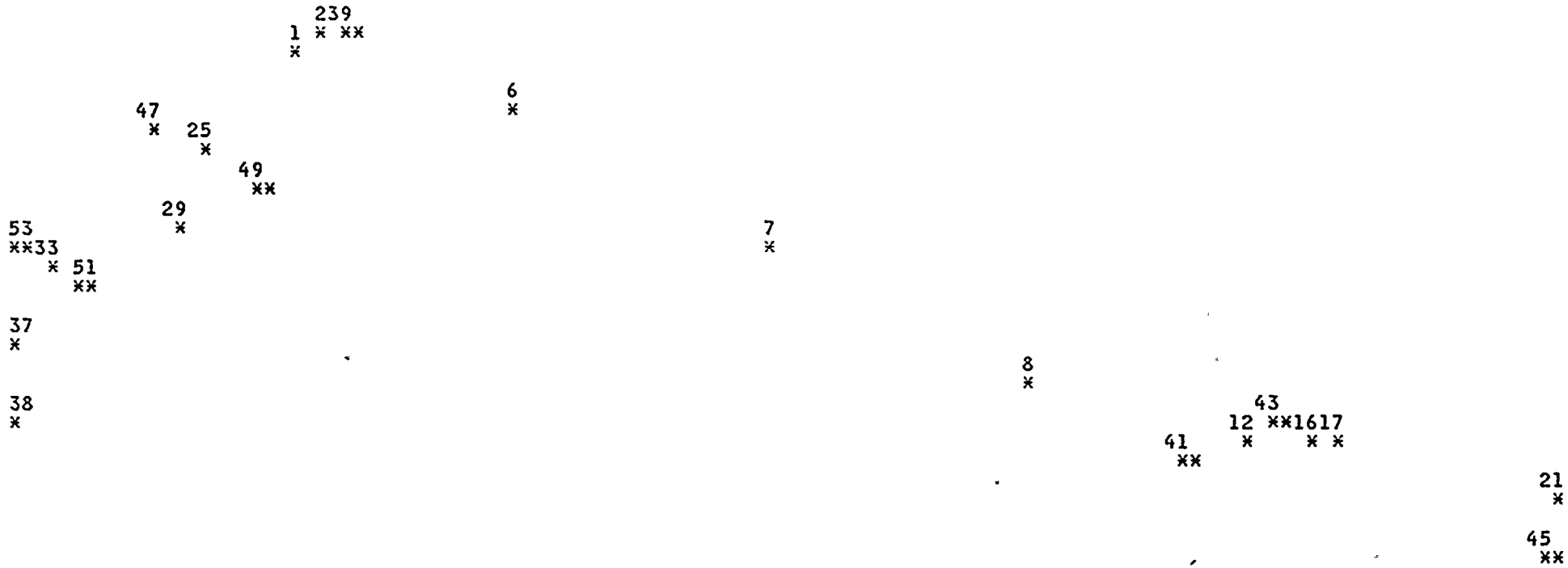
WEIGHT OF BRANCH # 1 IS 17.093

TOTAL SYSTEM WEIGHT IS 17.093

NO.	JOINT	X	Y	Z	XP	YP	ZP
1	1	0.0	0.0	0.0	0.0	0.0	0.0
2	2	0.0	2.0000000	0.0	1.4142132	0.81649709	-1.1546993
3	4	0.21966994	4.2803297	0.0	3.1819801	1.6577568	-2.3444204
4	6	15.500000	4.5000000	0.0	14.142138	-4.4907341	6.3508492
5	7	39.500000	4.5000000	0.0	31.112686	-14.288691	20.207230
6	8	64.000000	4.5000000	0.0	48.436813	-24.290771	34.352310
7	10	78.780319	4.7196693	0.0	59.043411	-30.235138	42.758881
8	12	79.000000	10.000000	0.0	62.932495	-28.169144	39.837143
9	14	79.219666	12.780330	0.0	65.053818	-27.123749	38.358734
10	16	82.000000	13.000000	0.0	67.175140	-28.169144	39.837128
11	17	84.500000	13.000000	0.0	68.942917	-29.189758	41.280502
12	19	104.28032	13.000000	0.21966994	82.929718	-37.085678	52.827484
13	21	104.50000	13.000000	6.0000000	83.085052	-32.455750	56.291595
14	23	0.21966994	-13.780330	0.0	-9.5888357	-5.7154789	8.0828981
15	25	5.5000000	-14.000000	0.0	-6.0104094	-7.9608450	11.258322
16	27	10.780330	-14.219669	0.0	-2.4319811	-10.206212	14.433746
17	29	11.000000	-22.000000	0.0	-7.7781763	-13.472200	19.052536
18	31	10.780330	-30.780319	0.0	-14.142123	-16.967072	23.995026
19	33	8.0000000	-31.000000	0.0	-16.263443	-15.921693	22.516632
20	35	4.2196693	-31.000000	-0.21966994	-18.936539	-14.557737	20.207230
21	37	4.0000000	-31.000000	-8.0000000	-19.091873	-20.820663	15.588428
22	38	4.0000000	-31.000000	-16.000000	-19.091873	-27.352646	10.969627
23	39	0.0	3.7500000	0.0	2.6516504	1.5309315	-2.1650620
24	40	0.75000000	4.5000000	0.0	3.7123108	1.5309315	-2.1650610
25	41	78.250000	4.5000000	0.0	58.513092	-30.108307	42.579544
26	42	79.000000	5.2500000	0.0	59.573746	-30.108322	42.579544
27	43	79.000000	12.250000	0.0	64.523483	-27.250580	38.538101
28	44	79.750000	13.000000	0.0	65.584152	-27.250580	38.538086
29	45	103.75000	13.000000	0.0	82.554718	-37.048538	52.394485
30	46	104.50000	13.000000	0.75000000	83.085052	-36.742355	53.260498
31	47	0.0	-13.250000	0.0	-9.3691664	-5.4092932	7.6498861
32	48	0.75000000	-14.000000	0.0	-9.3691664	-6.0216646	8.5159101
33	49	10.250000	-14.000000	0.0	-2.6516514	-9.9000263	14.000734
34	50	11.000000	-14.750000	0.0	-2.6516504	-10.512399	14.866758
35	51	11.000000	-30.250000	0.0	-13.611808	-16.840240	23.815674
36	52	10.250000	-31.000000	0.0	-14.672458	-16.840240	23.815674
37	53	4.7500000	-31.000000	0.0	-18.561539	-14.594885	20.640244
38	54	4.0000000	-31.000000	-0.75000000	-19.091873	-14.901071	19.774216
39	70	0.75000000	3.7500000	0.0	3.1819801	1.2247448	-1.7320490
40	71	78.250000	5.2500000	0.0	59.043427	-29.802124	42.146530
41	72	79.750000	12.250000	0.0	65.053818	-27.556763	38.971100
42	73	103.75000	13.000000	0.75000000	82.554718	-36.436157	52.827484
43	74	0.75000000	-13.250000	0.0	-8.8388357	-5.7154789	8.0828981
44	75	10.250000	-14.750000	0.0	-3.1819811	-10.206213	14.433746
45	76	10.250000	-30.250000	0.0	-14.142138	-16.534058	23.382660
46	77	4.7500000	-31.000000	-0.75000000	-18.561539	-15.207257	20.207230



PLOT INTERPRETATION ..
..... SIDE BELONGING TO ONE ELEMENT
+++++ SIDE BELONGING TO TWO OR MORE ELEMENTS
* NODE LOCATIONS
8.51474 = +---------+



PLOT INTERPRETATION ..
..... SIDE BELONGING TO ONE ELEMENT
+++++ SIDE BELONGING TO TWO OR MORE ELEMENTS
* NODE LOCATIONS
8.51474 = +---------+

**********SUMMARY OF FREQUENCY AND MODAL SHAPE ANALYSIS.**********

BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP

NUMBER OF MODE SHAPES FOR ENTIRE SYSTEM TO BE PRINTED = 4

NUMBER OF NATURAL FREQUENCIES TO BE COMPUTED = 10

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

COUPLING VALUE (USED TO DETERMINE INDEPENDECY OF MASTER DEGREES OF FREEDOM)= 0.1000E 01

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 18

JOINTS WITH 3 DEGREES OF FREEDOM.

TOTAL JOINT NO.= 6

JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.	JOINT NO.
4	7	10	16	19	27				

```
     6    15     0     0                                                  PD1
BLOWER DRAIN LINE
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0    23     1                                            P 1
BLOWER DRAIN LINE                                                         P 2
    37    38    18     0     6     3     8     1     0     0     0     0  P 3
     0     1     0     0     1     0     0                                P 4
     1    38     8     0     0     1     2                                P 5
     1     0.0          0.0          0.0          0                      P 7
     2     0.0          2.00000      0.0          0                      P 7
     4     0.21967      4.28033      0.0          0                      P 7
     6    15.50000      4.50000      0.0          0                      P 7
     7    39.50000      4.50000      0.0          0                      P 7
     8    64.00000      4.50000      0.0          0                      P 7
    10    78.78032      4.71967      0.0          0                      P 7
    12    79.00000     10.00000      0.0          0                      P 7
    14    79.21967     12.78033      0.0          0                      P 7
    16    82.00000     13.00000      0.0          0                      P 7
    17    84.50000     13.00000      0.0          0                      P 7
    19   104.28032     13.00000      0.21967      0                      P 7
    21   104.50000     13.00000      6.00000      0                      P 7
    23     0.21967    -13.78033      0.0          0                      P 7
    25     5.50000    -14.00000      0.0          0                      P 7
    27    10.78033    -14.21967      0.0          0                      P 7
    29    11.00000    -22.00000      0.0          0                      P 7
    31    10.78033    -30.78032      0.0          0                      P 7
    33     8.00000    -31.00000      0.0          0                      P 7
    35     4.21967    -31.00000     -0.21967      0                      P 7
    37     4.00000    -31.00000     -8.00000      0                      P 7
    38     4.00000    -31.00000    -16.00000      0                      P 7
    39     0.0          3.75000      0.0          0                      P 7
    40     0.75000      4.50000      0.0          0                      P 7
    41    78.25000      4.50000      0.0          0                      P 7
    42    79.00000      5.25000      0.0          0                      P 7
    43    79.00000     12.25000      0.0          0                      P 7
    44    79.75000     13.00000      0.0          0                      P 7
    45   103.75000     13.00000      0.0          0                      P 7
    46   104.50000     13.00000      0.75000      0                      P 7
    47     0.0        -13.25000      0.0          0                      P 7
    48     0.75000    -14.00000      0.0          0                      P 7
    49    10.25000    -14.00000      0.0          0                      P 7
    50    11.00000    -14.75000      0.0          0                      P 7
    51    11.00000    -30.25000      0.0          0                      P 7
    52    10.25000    -31.00000      0.0          0                      P 7
    53     4.75000    -31.00000      0.0          0                      P 7
    54     4.00000    -31.00000     -0.75000      0                      P 7
    70     0.75000      3.75000      0.0          0                      P 7
    71    78.25000      5.25000      0.0          0                      P 7
    72    79.75000     12.25000      0.0          0                      P 7
    73   103.75000     13.00000      0.75000      0                      P 7
    74     0.75000    -13.25000      0.0          0                      P 7
    75    10.25000    -14.75000      0.0          0                      P 7
    76    10.25000    -30.25000      0.0          0                      P 7
    77     4.75000    -31.00000     -0.75000      0                      P 7
  1  3     1.0500       0.1130      2.0000     0.0          0.0          0.0  P11D
  2  4     1.5500       0.2500      2.0000     0.0          0.0          0.0  P11D
  3  3     1.0500       0.1130      2.0000     0.0          0.0          0.0  P11D
   101     2.099999     2.099999     1.000000                              P 12.1
   102     2.099999     2.099999     1.000000                              P 12.1
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```
   0.090     0.260     0.010
 1  1 0.0          0.27700E 08 0.30000E 00 0.0              0.0  0.0  0.0  P14
   50.00000      0.0          0.0          0.0          0.0          0.0    P15
 2  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
21  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
38  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
 6  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0                P18
 8  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0                P18
12  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0                P18
  1   1   21001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1   1   0   0   1                                                   P21B
  2   2  391001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2   1   0   0   1                                                   P21B
  3  39   4  70   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
  4   4  40  70   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
  5  40   61002   1   1   1   3   3   1   1   0   0   0   0  0.0           P21
   1   1   1   0   0   1                                                   P21B
  6   6   71002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0   1   0   0   1                                                   P21B
  7   7   81002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0   1   0   0   1                                                   P21B
  8   8  411002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2   1   0   0   1                                                   P21B
  9  41  10  71   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 10  10  42  71   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 11  42  121001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1   1   0   0   1                                                   P21B
 12  12  431001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2   1   0   0   1                                                   P21B
 13  43  14  72   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 14  14  44  72   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 15  44  161002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   3   1   0   0   1                                                   P21B
 16  16  171002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0   1   0   0   1                                                   P21B
 17  17  451002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0   1   0   0   1                                                   P21B
 18  45  19  73   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 19  19  46  73   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 20  46  211001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   3   1   0   0   1                                                   P21B
 21   1  471001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0   1   0   0   1                                                   P21B
 22  47  23  74   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 23  23  48  74   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
   1  101   1   0   0   1                                                   P21B
 24  48  251002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1   1   0   0   1                                                   P21B
 25  25  491002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2   1   0   0   1                                                   P21B
 26  49  27  75   1   2   1   2   2   1   1   0   0   0   0  0.0           P21
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  1  101    1    0    0    1                                                P21B
 27  27  50  75   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  101    1    0    0    1                                                P21B
 28  50  291001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    1    1    0    0    1                                                P21B
 29  29  511001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    2    1    0    0    1                                                P21B
 30  51  31  76   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  101    1    0    0    1                                                P21B
 31  31  52  76   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  101    1    0    0    1                                                P21B
 32  52  331002   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    1    1    0    0    1                                                P21B
 33  33  531002   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    2    1    0    0    1                                                P21B
 34  53  35  77   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  101    1    0    0    1                                                P21B
 35  35  54  77   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  101    1    0    0    1                                                P21B
 36  54  371001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    1    1    0    0    1                                                P21B
 37  37  381001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    2    1    0    0    1                                                P21B
BLOWER DRAIN LINE  3/4-PC-121SS.5N-SP                                       P23
 3  3  0  0  3  1 0.0  0.0  0.0  0.0  0.0  0.0 12.0050.00      0.0    0     P24
    6    0 0.10000E 01 0.10000E 01                                          P25
  4   7  10  16  19  27   0   0   0   0   0   0   0   0   0   0   0   0    P26
    0    0                                                                  P28
    0    0                                                                  P30
    0                                                                       P68
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP                                        D1
    1   -1   10    0    1    0                                             D2
    4    0.00100    4                                                       D3
    0                                                                       PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.19 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                            3.2                              0.0                            3.2 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

BLOWER DRAIN LINE
BLOWER DRAIN LINE

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	37
TOTAL NUMBER OF STRUCTURAL JOINTS	38
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	8
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	18
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	6
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	3
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	38
TOTAL FICTIOUS JOINTS READ IN	8
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	2.000000	0.0
4	0.219670	4.280330	0.0
6	15.500000	4.500000	0.0
7	39.500000	4.500000	0.0
8	64.000000	4.500000	0.0
10	78.780319	4.719669	0.0
12	79.000000	10.000000	0.0
14	79.219666	12.780330	0.0
16	82.000000	13.000000	0.0
17	84.500000	13.000000	0.0
19	104.280319	13.000000	0.219670
21	104.500000	13.000000	6.000000
23	0.219670	-13.780330	0.0
25	5.500000	-14.000000	0.0
27	10.780330	-14.219669	0.0
29	11.000000	-22.000000	0.0
31	10.780330	-30.780319	0.0
33	8.000000	-31.000000	0.0
35	4.219669	-31.000000	-0.219670
37	4.000000	-31.000000	-8.000000
38	4.000000	-31.000000	-16.000000
39	0.0	3.750000	0.0
40	0.750000	4.500000	0.0
41	78.250000	4.500000	0.0
42	79.000000	5.250000	0.0
43	79.000000	12.250000	0.0
44	79.750000	13.000000	0.0
45	103.750000	13.000000	0.0
46	104.500000	13.000000	0.750000
47	0.0	-13.250000	0.0
48	0.750000	-14.000000	0.0
49	10.250000	-14.000000	0.0
50	11.000000	-14.750000	0.0
51	11.000000	-30.250000	0.0
52	10.250000	-31.000000	0.0
53	4.750000	-31.000000	0.0
54	4.000000	-31.000000	-0.750000
70	0.750000	3.750000	0.0
71	78.250000	5.250000	0.0
72	79.750000	12.250000	0.0
73	103.750000	13.000000	0.750000
74	0.750000	-13.250000	0.0
75	10.250000	-14.750000	0.0
76	10.250000	-30.250000	0.0
77	4.750000	-31.000000	-0.750000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
2	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
3	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	0.0	27700000.00	0.300000	0.0	0.0

PRESSURE DATA

TYPE	PRESSURE
1	50.00

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	2	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	21	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	38	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	6	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	8	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
6	12	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.32 ** LAST STEP "BEGP" TIME IS    0.19 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                            14.6                                 3.2                      11.4 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   38


 BAND-WIDTH =    18  BY D.O.F.          BAND-WIDTH =     3  BY JOINT


**** I-PIPLOT.1: DATA FOR   1 PLOTS ARE BEING PROCESSED


* CPU SECONDS ** THIS STEP "PIPL" TIME IS    0.56 ** LAST STEP "DA3D" TIME IS    0.32 ** DELTA TIME IS    0.24 *
* ELAPSED SECONDS                            28.0                                 14.6                     13.4 *

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.62 ** LAST STEP "PIPL" TIME IS    0.56 ** DELTA TIME IS    0.06 *
* ELAPSED SECONDS                            32.4                                 28.0                      4.4 *
```

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 18

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	4	1	2	4	2	3	4	3	4	7	1	5	7	2
6	7	3	7	27	1	8	27	2	9	27	3	10	10	1
11	10	2	12	10	3	13	16	1	14	16	2	15	16	3
16	19	1	17	19	2	18	19	3						

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.67 ** LAST STEP "JCSO" TIME IS    0.62 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                            33.8                                32.4                      1.4 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.49039E 08) OCCURS AT THE 103TH DOF
MINIMUM VALUE (0.17075E 04) OCCURS AT THE 69TH DOF
RATIO OF MAX/MIN= 0.28720E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    2.75 ** LAST STEP "INPT" TIME IS    0.67 ** DELTA TIME IS    2.08 *
* ELAPSED SECONDS                            71.1                                33.8                      37.3 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    3.89 ** LAST STEP "EQ3D" TIME IS    2.75 ** DELTA TIME IS    1.14 *
* ELAPSED SECONDS                           111.0                                71.1                      39.8 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
1	1	2	1001	1	1	1	1	1	1	1	1	2.00000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
2	2	39	1001	1	1	1	1	2	1	1	1	1.75000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
3	39	4	70	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
4	4	40	70	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707107-0.707107 0.0 0.0 0.0 1.000000 -0.707107-0.707107 0.0
5	40	6	1002	1	1	1	1	1	1	1	3	14.75000	0.01000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
6	6	7	1002	1	1	1	1	0	1	1	1	24.00000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
7	7	8	1002	1	1	1	1	0	1	1	1	24.50000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
8	8	41	1002	1	1	1	1	2	1	1	1	14.25000	0.09000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
9	41	10	71	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 1.000000 0.0 0.0 0.0 -1.000000 -1.000000 0.0 0.0
10	10	42	71	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	-0.707099 0.707114 0.0 0.0 0.0 -1.000000 -0.707114-0.707099 0.0
11	42	12	1001	1	1	1	1	1	1	1	1	4.75000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
12	12	43	1001	1	1	1	1	2	1	1	1	2.25000	0.09000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
13	43	14	72	1	2	1	1	101	1	1	2	0.78539	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
14	14	44	72	1	2	1	1	101	1	1	2	0.78541	0.26000	RAD=	0.7500	0.707110	-0.707104	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707104	-0.707110	0.0
15	44	16	1002	1	1	1	1	3	1	1	1	2.25000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
16	16	17	1002	1	1	1	1	0	1	1	1	2.50000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
17	17	45	1002	1	1	1	1	0	1	1	1	19.25000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
18	45	19	73	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-1.000000	0.0	0.0
19	19	46	73	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707100	0.0	0.707114
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707114	0.0	-0.707100
20	46	21	1001	1	1	1	1	3	1	1	1	5.25000	0.09000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
21	1	47	1001	1	1	1	1	0	1	1	1	13.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
22	47	23	74	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	1.000000	0.0	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	0.0	1.000000	0.0
23	23	48	74	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.707107	0.707107	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-0.707107	0.707107	0.0
24	48	25	1002	1	1	1	1	1	1	1	1	4.75000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
25	25	49	1002	1	1	1	1	2	1	1	1	4.75000	0.09000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
26	49	27	75	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
27	27	50	75	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707106	-0.707107	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707107	0.707106	0.0
28	50	29	1001	1	1	1	1	1	1	1	1	7.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
29	29	51	1001	1	1	1	1	2	1	1	1	8.25000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
30	51	31	76	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-1.000000	0.0	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.0	1.000000	0.0
31	31	52	76	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	-0.707114	0.707100	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.707100	0.707114	0.0
32	52	33	1002	1	1	1	1	1	1	1	1	2.25000	0.09000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
33	33	53	1002	1	1	1	1	2	1	1	1	3.25000	0.09000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
34	53	35	77	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.0	0.0	-1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	1.000000	0.0	0.0
35	35	54	77	1	2	1	1	101	1	1	2	0.78540	0.26000	RAD=	0.7500	0.707107	0.0	-0.707106
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.707106	0.0	0.707107
36	54	37	1001	1	1	1	1	1	1	1	1	7.25000	0.09000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
37	37	38	1001	1	1	1	1	2	1	1	1	8.00000	0.09000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0

```
   MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT   7 AND EQUALS 0.24500E 02 INCHES
   MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  31 AND EQUALS 0.58904E 00 INCHES
   MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  13 AND EQUALS 0.35225E 08
   MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT   7 AND EQUALS 0.82754E 03

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    4.10 ** LAST STEP "SELT" TIME IS    3.89 ** DELTA TIME IS    0.21 *
* ELAPSED SECONDS                           116.9                              111.0                        5.9 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS    6.16 ** LAST STEP "EDIT" TIME IS    4.10 ** DELTA TIME IS    2.06 *
* ELAPSED SECONDS                           244.7                              116.9                      127.8 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    6.23 ** LAST STEP "SLVR" TIME IS    6.16 ** DELTA TIME IS    0.07 *
```

* ELAPSED SECONDS	246.0	244.7	1.3 *

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
1	0.17760E-02	0.17760E-02	0.17760E-02	2	0.0	0.0	0.0	4	0.39636E-03	0.39636E-03	0.39636E-03
6	0.29859E-02	0.0	0.0	7	0.56483E-02	0.56483E-02	0.56483E-02	8	0.45128E-02	0.0	0.0
10	0.39636E-03	0.39636E-03	0.39636E-03	12	0.0	0.81522E-03	0.0	14	0.39636E-03	0.39636E-03	0.39636E-03
16	0.55318E-03	0.55318E-03	0.55318E-03	17	0.25330E-02	0.25330E-02	0.25330E-02	19	0.39636E-03	0.39636E-03	0.39636E-03
21	0.0	0.0	0.0	23	0.39636E-03	0.39636E-03	0.39636E-03	25	0.11064E-02	0.11064E-02	0.11064E-02
27	0.39636E-03	0.39636E-03	0.39636E-03	29	0.18051E-02	0.18051E-02	0.18051E-02	31	0.39636E-03	0.39636E-03	0.39636E-03
33	0.64053E-03	0.64053E-03	0.64053E-03	35	0.39636E-03	0.39636E-03	0.39636E-03	37	0.17760E-02	0.17760E-02	0.17760E-02
38	0.0	0.0	0.0	39	0.40198E-03	0.40198E-03	0.40198E-03	40	0.38904E-03	0.38904E-03	0.38904E-03
41	0.18577E-02	0.18577E-02	0.18577E-02	42	0.75136E-03	0.75136E-03	0.75136E-03	43	0.46021E-03	0.46021E-03	0.46021E-03
44	0.46022E-03	0.46022E-03	0.46022E-03	45	0.24400E-02	0.24400E-02	0.24400E-02	46	0.80959E-03	0.80959E-03	0.80959E-03
47	0.17413E-02	0.17413E-02	0.17413E-02	48	0.75136E-03	0.75136E-03	0.75136E-03	49	0.75136E-03	0.75136E-03	0.75136E-03
50	0.10425E-02	0.10425E-02	0.10425E-02	51	0.11590E-02	0.11590E-02	0.11590E-02	52	0.46021E-03	0.46021E-03	0.46021E-03
53	0.57667E-03	0.57667E-03	0.57667E-03	54	0.10425E-02	0.10425E-02	0.10425E-02				

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.91477E-08) OCCURS AT DOF 9
MINIMUM VALUE (0.85997E-14) OCCURS AT DOF 2
RATIO OF MAX/MIN = 0.10637E 07

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS    6.51 ** LAST STEP "UPDT" TIME IS    6.23 ** DELTA TIME IS    0.28 *
* ELAPSED SECONDS                           260.9                               246.0                        14.9 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.13506E-02) OCCURS AT DOF 9
MINIMUM VALUE(0.28181E-06) OCCURS AT DOF 2
RATIO OF CMAX/CMIN= 0.47927E 04

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS    6.84 ** LAST STEP "MASM" TIME IS    6.51 ** DELTA TIME IS    0.33 *
* ELAPSED SECONDS                           273.6                               260.9                        12.7 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    6.89 ** LAST STEP "INFM" TIME IS    6.84 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           273.9                               273.6                         0.3 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    6.91 ** LAST STEP "BEGP" TIME IS    6.89 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           274.2                               273.9                         0.3 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS    6.95 ** LAST STEP "SRTL" TIME IS    6.91 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           274.7                               274.2                         0.5 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS    6.95 ** LAST STEP "SQRT" TIME IS    6.95 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           274.7                               274.7                         0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS    7.00 ** LAST STEP "INYG" TIME IS    6.95 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           275.0                               274.7                         0.3 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS    7.29 ** LAST STEP "TQAD" TIME IS    7.00 ** DELTA TIME IS    0.29 *
* ELAPSED SECONDS                           279.6                               275.0                         4.6 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS    7.32 ** LAST STEP "JAMX" TIME IS    7.29 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           280.4                               279.6                         0.8 *
```

```
* CPU SECONDS ** THIS STEP "TRPL" TIME IS    7.37 ** LAST STEP "RENM" TIME IS    7.32 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           280.7                              280.4                          0.3 *
```

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99997E 00
AVERAGE  DIAGONAL TERM........ 0.99999E 00
LARGEST OFF-DIAGONAL TERM..... 0.76642E-05
AVERAGE OFF-DIAGONAL TERM..... 0.37205E-06
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS    7.38 ** LAST STEP "TRPL" TIME IS    7.37 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                           280.7                               280.7                       0.0 *
```

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N			
228	0.0	0.0	0.0	0.0
227	0.0	0.0	0.0	0.0
226	0.0	0.0	0.0	0.0
225	0.0	0.0	0.0	0.0
224	0.0	0.0	0.0	0.0
223	0.0	0.0	0.0	0.0
222	0.21828E-15	0.53195E-03	0.19630E-04	-0.47089E-03
221	0.12886E-15	0.13425E-03	0.52726E-04	-0.76562E-04
220	0.14153E-16	-0.12870E-03	0.26482E-03	0.13554E-03
219	0.67911E-16	-0.47283E-06	0.67980E-06	0.24132E-06
218	-0.52397E-16	-0.45487E-03	0.70080E-03	0.47803E-03
217	-0.32178E-15	-0.55444E-03	-0.92285E-04	0.31792E-03
216	0.22230E-15	0.54133E-03	0.20442E-04	-0.47918E-03
215	0.13071E-15	0.13296E-03	0.54563E-04	-0.75793E-04
214	0.16498E-16	-0.12818E-03	0.26993E-03	0.13514E-03
213	0.10088E-15	0.29195E-04	0.12483E-04	-0.16679E-04
212	-0.93552E-16	-0.64217E-03	0.83811E-03	0.65544E-03
211	-0.39390E-15	-0.62658E-03	-0.12044E-03	0.35907E-03
210	0.0	0.0	0.0	0.0
209	0.0	0.0	0.0	0.0
208	0.0	0.0	0.0	0.0
207	0.0	0.0	0.0	0.0
206	0.0	0.0	0.0	0.0
205	0.0	0.0	0.0	0.0
204	0.22560E-15	0.54901E-03	0.21202E-04	-0.48593E-03
203	0.13152E-15	0.13119E-03	0.56485E-04	-0.74749E-04
202	0.19421E-16	-0.12736E-03	0.27594E-03	0.13444E-03

201	0.16933E-15	0.99511E-04	0.41935E-04	-0.56751E-04
200	-0.20881E-15	-0.96033E-03	0.88673E-03	0.94187E-03
199	-0.42109E-15	-0.65613E-03	-0.13247E-03	0.37590E-03
198	0.15493E-03	0.25476E-14	-0.27597E-15	0.12829E-17
197	0.13093E-02	0.45554E-13	0.19046E-14	-0.18089E-14
196	-0.80392E-03	-0.18487E-13	0.75918E-15	0.28086E-14
195	-0.41176E-05	-0.45930E-15	-0.71322E-16	-0.60971E-16
194	0.35908E-02	0.69689E-13	-0.60488E-14	-0.15210E-13
193	0.57019E-02	0.18378E-12	0.52710E-14	-0.10988E-13
192	0.38917E-15	0.63994E-03	0.47892E-04	-0.48629E-03
191	-0.52645E-17	-0.70301E-04	0.29624E-03	0.50159E-04
190	0.56722E-15	-0.90011E-04	0.15096E-02	0.10486E-03
189	0.25202E-14	0.15658E-03	0.38948E-02	-0.23801E-05
188	-0.74488E-14	-0.16669E-01	0.12798E-03	0.14307E-01
187	-0.32864E-15	-0.68406E-03	-0.12557E-03	0.39156E-03
186	0.29533E-03	0.48563E-14	-0.52607E-15	0.24459E-17
185	0.19526E-02	0.85015E-13	0.63742E-14	0.93766E-15
184	-0.10941E-02	-0.40216E-13	-0.20732E-14	0.70691E-15
183	-0.78492E-05	-0.87553E-15	-0.13596E-15	-0.11623E-15
182	0.10756E-01	0.27925E-12	-0.35751E-14	-0.30977E-13
181	0.17880E-01	0.65828E-12	0.33497E-13	-0.16999E-13
180	0.35102E-15	0.46029E-03	0.47151E-04	-0.30644E-03
179	-0.74015E-16	-0.72722E-04	0.30681E-03	0.53314E-04
178	0.63836E-15	-0.85161E-04	0.16699E-02	0.10102E-03
177	0.24263E-14	-0.24601E-04	0.46507E-02	0.12828E-03
176	-0.83801E-14	-0.18063E-01	0.87557E-05	0.15316E-01
175	-0.31663E-15	-0.68769E-03	-0.12467E-03	0.39359E-03
174	0.29699E-03	0.48556E-14	-0.53473E-15	-0.26159E-17
173	0.19575E-02	0.85530E-13	0.64526E-14	0.10043E-14
172	-0.10949E-02	-0.40559E-13	-0.21392E-14	0.64336E-15

171	-0.43796E-03	-0.19646E-13	-0.15491E-14	-0.33213E-15
170	0.11403E-01	0.30172E-12	-0.25834E-14	-0.31346E-13
169	0.18918E-01	0.70351E-12	0.36895E-13	-0.16491E-13
168	0.20947E-15	0.28966E-03	0.45379E-04	-0.16389E-03
167	-0.90763E-16	-0.70099E-04	0.32044E-03	0.53749E-04
166	0.70239E-15	-0.80795E-04	0.18141E-02	0.97563E-04
165	0.21960E-14	-0.18736E-03	0.53508E-02	0.24966E-03
164	-0.91005E-14	-0.18897E-01	-0.95935E-04	0.15811E-01
163	-0.32800E-15	-0.69073E-03	-0.12382E-03	0.39505E-03
162	0.29809E-03	0.48536E-14	-0.54060E-15	-0.46382E-17
161	0.19618E-02	0.86023E-13	0.65299E-14	0.10714E-14
160	-0.10955E-02	-0.40967E-13	-0.22199E-14	0.56451E-15
159	-0.14780E-02	-0.65194E-13	-0.49991E-14	-0.88782E-15
158	0.11802E-01	0.31322E-12	-0.24006E-14	-0.31493E-13
157	0.19348E-01	0.72235E-12	0.38319E-13	-0.16266E-13
156	0.19819E-15	0.28294E-03	0.45241E-04	-0.15980E-03
155	-0.88454E-16	-0.69831E-04	0.32188E-03	0.53698E-04
154	0.70508E-15	-0.80598E-04	0.18201E-02	0.97419E-04
153	0.19915E-14	-0.20686E-03	0.51214E-02	0.25679E-03
152	-0.92113E-14	-0.19048E-01	-0.12009E-03	0.15895E-01
151	-0.28417E-15	-0.62866E-03	-0.11374E-03	0.36030E-03
150	0.28529E-03	0.63446E-14	-0.13530E-15	0.64461E-15
149	0.20749E-02	0.99264E-13	0.86211E-14	0.29024E-14
148	-0.11180E-02	-0.55294E-13	-0.50476E-14	-0.22141E-14
147	-0.80596E-02	-0.36873E-12	-0.29999E-13	-0.76699E-14
146	0.12787E-01	0.33099E-12	-0.38009E-14	-0.30852E-13
145	0.19352E-01	0.72237E-12	0.38301E-13	-0.16295E-13
144	0.18712E-15	0.27686E-03	0.44963E-04	-0.15652E-03
143	-0.84867E-16	-0.69477E-04	0.32360E-03	0.53621E-04
142	0.70664E-15	-0.80463E-04	0.18252E-02	0.97312E-04

141	0.15957E-14	-0.17957E-03	0.42253E-02	0.21700E-03
140	-0.92542E-14	-0.19110E-01	-0.13012E-03	0.15930E-01
139	-0.18538E-15	-0.48162E-03	-0.89489E-04	0.27748E-03
138	0.22736E-03	0.79338E-14	0.53933E-15	0.16142E-14
137	0.21245E-02	0.10524E-12	0.95735E-14	0.37465E-14
136	-0.11336E-02	-0.65213E-13	-0.70053E-14	-0.41378E-14
135	-0.12794E-01	-0.59996E-12	-0.50649E-13	-0.15304E-13
134	0.13382E-01	0.34685E-12	-0.34898E-14	-0.28500E-13
133	0.19354E-01	0.72237E-12	0.38288E-13	-0.16315E-13
132	0.68457E-16	0.17556E-03	0.27817E-04	-0.10181E-03
131	0.25633E-17	-0.60987E-04	0.35483E-03	0.51905E-04
130	0.67189E-15	-0.81012E-04	0.19257E-02	0.96408E-04
129	0.0	0.0	0.0	0.0
128	-0.92642E-14	-0.19108E-01	-0.13019E-03	0.15926E-01
127	0.0	0.0	0.0	0.0
126	0.22383E-03	0.80152E-14	0.57693E-15	0.16672E-14
125	0.21260E-02	0.10541E-12	0.95992E-14	0.37691E-14
124	-0.11340E-02	-0.65603E-13	-0.70830E-14	-0.42145E-14
123	-0.14171E-01	-0.67025E-12	-0.57292E-13	-0.18225E-13
122	0.13502E-01	0.35107E-12	-0.31991E-14	-0.27636E-13
121	0.19305E-01	0.72062E-12	0.38164E-13	-0.16678E-13
120	-0.16787E-15	-0.32884E-03	-0.33679E-05	0.45824E-03
119	0.18714E-15	-0.43066E-04	0.42076E-03	0.48283E-04
118	0.55698E-15	-0.82739E-04	0.19958E-02	0.94505E-04
117	-0.28514E-14	0.39345E-03	-0.94471E-02	-0.45571E-03
116	-0.92853E-14	-0.19106E-01	-0.13033E-03	0.15918E-01
115	0.18189E-18	0.39686E-05	0.34172E-04	0.35395E-03
114	0.22038E-03	0.81015E-14	0.61508E-15	0.17204E-14
113	0.21277E-02	0.10559E-12	0.96272E-14	0.37938E-14
112	-0.11342E-02	-0.65911E-13	-0.71454E-14	-0.42765E-14

111	-0.15240E-01	-0.72836E-12	-0.63185E-13	-0.21315E-13
110	0.13551E-01	0.35283E-12	-0.30705E-14	-0.27267E-13
109	0.19188E-01	0.71635E-12	0.37845E-13	-0.17582E-13
108	-0.17825E-15	-0.34733E-03	-0.34805E-05	0.48055E-03
107	0.19064E-15	-0.42710E-04	0.42201E-03	0.48205E-04
106	0.55634E-15	-0.82644E-04	0.19943E-02	0.94405E-04
105	-0.31043E-14	0.42794E-03	-0.10414E-01	-0.49523E-03
104	-0.92491E-14	-0.19032E-01	-0.12952E-03	0.15815E-01
103	-0.88300E-16	-0.17212E-03	0.32167E-04	0.59890E-03
102	0.28048E-03	0.16647E-13	0.20778E-14	0.33850E-14
101	0.22713E-02	0.12370E-12	0.12556E-13	0.64407E-14
100	-0.99224E-03	-0.73149E-13	-0.94466E-14	-0.69492E-14
99	-0.24250E-01	-0.13286E-11	-0.13576E-12	-0.71151E-13
98	0.13558E-01	0.35275E-12	-0.31290E-14	-0.27344E-13
97	0.17629E-01	0.61597E-12	0.24177E-13	-0.42733E-13
96	-0.18986E-15	-0.36664E-03	-0.35201E-05	0.50351E-03
95	0.19340E-15	-0.42418E-04	0.42334E-03	0.48133E-04
94	0.55578E-15	-0.82522E-04	0.19921E-02	0.94286E-04
93	-0.31241E-14	0.42354E-03	-0.10628E-01	-0.49039E-03
92	-0.91511E-14	-0.18842E-01	-0.12761E-03	0.15552E-01
91	-0.12744E-15	-0.24906E-03	0.31323E-04	0.70548E-03
90	0.88539E-03	0.26010E-13	0.57461E-15	0.39003E-15
89	0.23975E-02	0.13962E-12	0.15131E-13	0.87667E-14
88	-0.60773E-03	-0.50537E-13	-0.69699E-14	-0.54519E-14
87	-0.30216E-01	-0.17955E-11	-0.19815E-12	-0.11857E-12
86	0.13565E-01	0.35268E-12	-0.31804E-14	-0.27412E-13
85	0.13756E-01	0.46252E-12	0.12778E-13	-0.59270E-13
84	-0.68431E-15	-0.18094E-02	-0.18016E-04	0.57460E-03
83	0.76749E-16	-0.23995E-04	0.12843E-02	0.11387E-04
82	0.43662E-15	-0.67547E-04	0.16250E-02	0.77373E-04

81	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0
79	-0.75994E-16	-0.19907E-03	0.28029E-04	0.63724E-03
78	0.89733E-03	0.26147E-13	0.53502E-15	0.31891E-15
77	0.23985E-02	0.13979E-12	0.15158E-13	0.87928E-14
76	-0.60054E-03	-0.50025E-13	-0.69052E-14	-0.54055E-14
75	-0.30010E-01	-0.17915E-11	-0.19851E-12	-0.11952E-12
74	0.13369E-01	0.34694E-12	-0.33047E-14	-0.27493E-13
73	0.13284E-01	0.44869E-12	0.12477E-13	-0.59469E-13
72	0.16018E-15	0.32394E-03	0.18003E-05	-0.23627E-03
71	-0.33757E-16	0.41815E-05	-0.16563E-03	-0.46625E-05
70	0.23176E-15	-0.41803E-04	0.99396E-03	0.48295E-04
69	-0.33128E-14	-0.37182E-03	0.30256E-01	-0.30399E-03
68	0.49698E-14	0.27606E-01	0.45814E-03	0.14756E-01
67	0.12450E-16	-0.11314E-03	0.22364E-04	0.51991E-03
66	0.90916E-03	0.26278E-13	0.49451E-15	0.24671E-15
65	0.23991E-02	0.13990E-12	0.15180E-13	0.88137E-14
64	-0.59207E-03	-0.49414E-13	-0.68275E-14	-0.53493E-14
63	-0.28868E-01	-0.17282E-11	-0.19196E-12	-0.11603E-12
62	0.12888E-01	0.33302E-12	-0.35714E-14	-0.27636E-13
61	0.13086E-01	0.44292E-12	0.12363E-13	-0.59530E-13
60	0.55711E-16	0.61801E-03	0.12768E-04	0.45495E-03
59	0.76294E-16	0.86810E-05	-0.74910E-03	0.89948E-05
58	0.31084E-16	-0.16583E-04	0.37578E-03	0.19810E-04
57	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0
55	-0.13155E-15	-0.28918E-04	0.16725E-04	0.40189E-03
54	0.12953E-02	0.32168E-13	-0.58819E-15	-0.26788E-14
53	0.23212E-02	0.13846E-12	0.15329E-13	0.92000E-14
52	-0.16035E-03	-0.17908E-13	-0.27845E-14	-0.24019E-14

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51  -0.17534E-01-0.10586E-11-0.11846E-12-0.72523E-13
50   0.74785E-02 0.19390E-12-0.25107E-14-0.21335E-13
49   0.13082E-01 0.44270E-12 0.12342E-13-0.59494E-13
48   0.86974E-16-0.54741E-04-0.61518E-05-0.16301E-03
47  -0.11875E-16-0.18875E-05 0.15640E-03-0.17288E-05
46  -0.92251E-16-0.10838E-05-0.41465E-05 0.23033E-05
45  -0.20894E-15 0.17269E-06-0.15313E-03 0.50302E-05
44   0.10616E-15-0.40647E-04-0.47799E-05-0.12623E-03
43  -0.22005E-15 0.22842E-04 0.13258E-04 0.32936E-03
42   0.13446E-02 0.37462E-13-0.52003E-16-0.45911E-14
41   0.20040E-02 0.12065E-12 0.13465E-13 0.81844E-14
40   0.27138E-03 0.13598E-13 0.12585E-14 0.54546E-15
39  -0.71378E-02-0.43477E-12-0.49033E-13-0.30510E-13
38   0.10345E-02 0.28222E-13-0.15210E-15-0.35441E-14
37   0.13079E-01 0.44248E-12 0.12320E-13-0.59459E-13
36   0.90708E-16-0.48290E-04-0.61424E-05-0.16129E-03
35  -0.10599E-16-0.18112E-05 0.15050E-03-0.16736E-05
34  -0.92931E-16-0.98083E-06-0.69478E-05 0.21967E-05
33  -0.19483E-15-0.60770E-06-0.68566E-04 0.36173E-05
32   0.61100E-16-0.12715E-04-0.14419E-05-0.38189E-04
31  -0.20258E-15 0.12512E-04 0.11823E-04 0.29190E-03
30   0.13417E-02 0.37561E-13-0.22707E-16-0.46182E-14
29   0.19936E-02 0.12002E-12 0.13395E-13 0.81411E-14
28   0.28067E-03 0.14264E-13 0.13432E-14 0.60647E-15
27  -0.60153E-02-0.36777E-12-0.41610E-13-0.26044E-13
26   0.32054E-03 0.83153E-14-0.12608E-15-0.10962E-14
25   0.12784E-01 0.43422E-12 0.12328E-13-0.58442E-13
24   0.91812E-16-0.42481E-04-0.60452E-05-0.15758E-03
23  -0.97021E-17-0.17144E-05 0.14288E-03-0.15989E-05
22  -0.92499E-16-0.89948E-06-0.88265E-05 0.21008E-05
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21	-0.14309E-15	-0.52259E-06	-0.30057E-04	0.20966E-05
20	0.33280E-16	-0.29045E-05	-0.31246E-07	-0.14396E-05
19	-0.14483E-15	-0.88501E-05	0.83824E-05	0.20286E-03
18	0.13379E-02	0.37643E-13	0.78023E-17	-0.46410E-14
17	0.19809E-02	0.11925E-12	0.13308E-13	0.80878E-14
16	0.28827E-03	0.14810E-13	0.14124E-14	0.65634E-15
15	-0.54261E-02	-0.33365E-12	-0.37931E-13	-0.23916E-13
14	0.25348E-04	0.44873E-16	-0.12183E-15	-0.76257E-16
13	0.12072E-01	0.41424E-12	0.12330E-13	-0.55979E-13
12	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0
6	0.25688E-03	0.10474E-13	0.53516E-15	-0.15050E-14
5	0.25979E-03	0.15639E-13	0.17453E-14	0.10607E-14
4	0.17832E-03	0.11551E-13	0.13676E-14	0.90932E-15
3	-0.19768E-03	-0.12874E-13	-0.15304E-14	-0.10227E-14
2	0.33243E-05	0.58850E-17	-0.15978E-16	-0.10001E-16
1	0.26809E-03	0.11237E-13	0.60872E-15	-0.16284E-14

BLOWER DRAIN LINE
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODE NUMBER 1 NAT. FREQUENCY 0.337750E 03 RAD/SEC ; 0.537547E 02 HERTZ PERIOD 0.186030E-01 SEC
NORMALIZING FACTOR 0.300104E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	-0.000000000	4	2	2	0.000000000	4	3	3	-0.000000000
7	4	1	0.000000000	7	5	2	0.000000000	7	6	3	-0.000000000
10	10	1	-0.000000000	10	11	2	-0.000000000	10	12	3	-0.000000000
16	13	1	-0.000000000	16	14	2	-0.000000000	16	15	3	0.000000000
19	16	1	-0.000000000	19	17	2	-0.000000000	19	18	3	0.000000000
27	7	1	0.442659080	27	8	2	0.445485950	27	9	3	-1.000000000

MODE NUMBER 2 NAT. FREQUENCY 0.376681E 03 RAD/SEC ; 0.599507E 02 HERTZ PERIOD 0.166804E-01 SEC
NORMALIZING FACTOR 0.276058E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.000453254	4	2	2	-0.000460598	4	3	3	-0.000022013
7	4	1	-0.004098315	7	5	2	1.000000000	7	6	3	-0.013468947
10	10	1	-0.006235022	10	11	2	-0.689419687	10	12	3	0.015501738
16	13	1	-0.024911057	16	14	2	-0.654322982	16	15	3	-0.000891164
19	16	1	-0.022697542	19	17	2	-0.023261953	19	18	3	0.001057563
27	7	1	0.000000000	27	8	2	0.000000000	27	9	3	-0.000000000

MODE NUMBER 3 NAT. FREQUENCY 0.423465E 03 RAD/SEC ; 0.673966E 02 HERTZ PERIOD 0.148375E-01 SEC
NORMALIZING FACTOR 0.302555E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.000390782	4	2	2	-0.000047659	4	3	3	-0.002266222
7	4	1	0.000739184	7	5	2	0.015142236	7	6	3	1.000000000
10	10	1	0.001063166	10	11	2	-0.004280839	10	12	3	-0.344195008
16	13	1	-0.004120629	16	14	2	0.000289391	16	15	3	0.153714478
19	16	1	-0.003980916	19	17	2	0.027701065	19	18	3	0.000412574
27	7	1	0.000000000	27	8	2	-0.000000000	27	9	3	-0.000000000

MODE NUMBER 4 NAT. FREQUENCY 0.562047E 03 RAD/SEC ; 0.894525E 02 HERTZ PERIOD 0.111791E-01 SEC
NORMALIZING FACTOR 0.158146E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.018457748	4	2	2	-0.002414774	4	3	3	0.000228729
7	4	1	0.032875180	7	5	2	0.933034897	7	6	3	-0.019221887
10	10	1	0.037870236	10	11	2	1.000000000	10	12	3	-0.031314865
16	13	1	0.024887551	16	14	2	0.968455970	16	15	3	0.008111589
19	16	1	0.022704620	19	17	2	0.041445043	19	18	3	-0.001054637
27	7	1	-0.000000000	27	8	2	-0.000000000	27	9	3	-0.000000000

MODE NUMBER 5 NAT. FREQUENCY 0.588638E 03 RAD/SEC ; 0.936846E 02 HERTZ PERIOD 0.106741E-01 SEC
NORMALIZING FACTOR 0.201835E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.000000000	4	2	2	0.000000000	4	3	3	-0.000000000
7	4	1	0.000000000	7	5	2	0.000000000	7	6	3	0.000000000
10	10	1	0.000000000	10	11	2	0.000000000	10	12	3	-0.000000000
16	13	1	0.000000000	16	14	2	0.000000000	16	15	3	0.000000000
19	16	1	0.000000000	19	17	2	0.000000000	19	18	3	0.000000000
27	7	1	0.671275139	27	8	2	0.197186947	27	9	3	1.000000000

MODE NUMBER 6 NAT. FREQUENCY 0.743878E 03 RAD/SEC ; 0.118392E 03 HERTZ PERIOD 0.844653E-02 SEC
NORMALIZING FACTOR 0.113767E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.000000000	4	2	2	0.000000000	4	3	3	0.000000000
7	4	1	0.000000000	7	5	2	0.000000000	7	6	3	-0.000000000
10	10	1	0.000000000	10	11	2	-0.000000000	10	12	3	-0.000000001
16	13	1	-0.000000000	16	14	2	0.000000000	16	15	3	0.000000000
19	16	1	-0.000000000	19	17	2	0.000000000	19	18	3	0.000000000
27	7	1	0.884059608	27	8	2	-1.000000000	27	9	3	-0.573954821

MODE NUMBER 7 NAT. FREQUENCY 0.749036E 03 RAD/SEC ; 0.119213E 03 HERTZ PERIOD 0.838836E-02 SEC
NORMALIZING FACTOR 0.210975E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.000759556	4	2	2	-0.000075462	4	3	3	0.005853143
7	4	1	0.001642053	7	5	2	-0.006903693	7	6	3	-0.226743042
10	10	1	0.002609119	10	11	2	-0.022861101	10	12	3	-1.000000000
16	13	1	-0.013263546	16	14	2	-0.007839106	16	15	3	0.453869760
19	16	1	-0.012768012	19	17	2	0.091130733	19	18	3	0.001233284
27	7	1	-0.000000000	27	8	2	0.000000000	27	9	3	0.000000000

MODE NUMBER 8 NAT. FREQUENCY 0.202338E 04 RAD/SEC ; 0.322031E 03 HERTZ PERIOD 0.310528E-02 SEC
NORMALIZING FACTOR 0.396591E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	-0.088435709	4	2	2	0.009261213	4	3	3	0.004371740
7	4	1	-0.180521190	7	5	2	0.017713334	7	6	3	-0.004577972
10	10	1	-0.237701178	10	11	2	0.379927516	10	12	3	-0.723897696
16	13	1	0.598081350	16	14	2	-0.289143741	16	15	3	-0.882176399
19	16	1	0.572182536	19	17	2	-1.000000000	19	18	3	-0.036860269
27	7	1	0.000000000	27	8	2	0.000000000	27	9	3	0.000000000

BLOWER DRAIN LINE
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODE NUMBER 9 NAT. FREQUENCY 0.222109E 04 RAD/SEC ; 0.353497E 03 HERTZ PERIOD 0.282888E-02 SEC
NORMALIZING FACTOR 0.591498E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	-0.011628825	4	2	2	0.001224651	4	3	3	0.001556812
7	4	1	-0.023507074	7	5	2	-0.000229558	7	6	3	0.001608393
10	10	1	-0.029540129	10	11	2	-0.050069328	10	12	3	-0.250399172
16	13	1	0.042553879	16	14	2	-0.034634415	16	15	3	-0.583221316
19	16	1	0.046569169	19	17	2	1.000000000	19	18	3	-0.009465497
27	7	1	0.000000000	27	8	2	0.000000000	27	9	3	0.000000000

MODE NUMBER 10 NAT. FREQUENCY 0.251368E 04 RAD/SEC ; 0.400065E 03 HERTZ PERIOD 0.249959E-02 SEC
NORMALIZING FACTOR 0.250616E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
4	1	1	0.291270733	4	2	2	-0.030552499	4	3	3	0.004159048
7	4	1	0.584075034	7	5	2	-0.029436842	7	6	3	-0.002371913
10	10	1	0.703845203	10	11	2	-0.523973286	10	12	3	-0.619609892
16	13	1	-0.958250403	16	14	2	0.506151795	16	15	3	-1.000000000
19	16	1	-0.909072757	19	17	2	-0.862894893	19	18	3	0.028836261
27	7	1	0.000000000	27	8	2	0.000000000	27	9	3	0.000000000

BLOWER DRAIN LINE
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODE NO.	FREQUENCY (RAD/SEC)
11	0.31185276E 04
12	0.59138398E 04
13	0.10026301E 05
14	0.13788656E 05
15	0.16746848E 05
16	0.17254461E 05
17	0.18788773E 05
18	0.58030246E 05

MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	0.210739E-03	0.127150E-03	-0.181177E-03
2	-0.734144E-05	0.320319E-05	-0.462336E-06
3	-0.563398E-06	0.533338E-05	0.158806E-03
4	0.121304E-04	0.211945E-03	-0.292588E-05
5	0.120091E-03	0.473187E-04	0.984935E-04
6	0.482579E-04	-0.970513E-04	-0.277118E-04
7	-0.153069E-05	0.397899E-05	-0.500366E-04
8	0.572421E-05	-0.147632E-04	-0.256607E-04
9	-0.301407E-06	0.204046E-04	-0.198878E-04
10	0.656279E-05	-0.728635E-05	-0.142659E-04
11	-0.450290E-04	0.159678E-06	-0.205589E-05
12	0.112821E-04	-0.414707E-06	0.453318E-07
13	0.110394E-05	-0.108537E-06	0.135212E-07
14	0.435514E-08	0.112144E-08	0.247026E-05
15	0.164148E-06	0.145830E-07	-0.149532E-06
16	0.104939E-05	-0.185821E-06	-0.335231E-07
17	0.427737E-06	0.103745E-07	0.280858E-05
18	0.111193E-06	0.573216E-06	-0.112640E-10

BLOWER DRAIN LINE
BLOWER DRAIN LINE 3/4-PC-121SS.5N-SP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.506622E-02	(12.18%)	0.184426E-02	(5.28%)	0.374455E-02	(10.98%)	0.537547E 02
2	0.764735E-05	(12.20%)	0.145584E-05	(5.29%)	0.303294E-07	(10.98%)	0.599507E 02
3	0.569202E-07	(12.20%)	0.510082E-05	(5.30%)	0.452239E-02	(24.24%)	0.673966E 02
4	0.464828E-04	(12.31%)	0.141902E-01	(45.94%)	0.270432E-05	(24.25%)	0.894525E 02
5	0.499709E-02	(24.32%)	0.775819E-03	(48.16%)	0.336133E-02	(34.10%)	0.936846E 02
6	0.128867E-02	(27.42%)	0.521202E-02	(63.08%)	0.424945E-03	(35.35%)	0.118392E 03
7	0.131456E-05	(27.42%)	0.888281E-05	(63.11%)	0.140469E-02	(39.47%)	0.119213E 03
8	0.134149E-03	(27.74%)	0.892314E-03	(65.67%)	0.269585E-02	(47.37%)	0.322031E 03
9	0.448164E-06	(27.74%)	0.205394E-02	(71.55%)	0.195121E-02	(53.09%)	0.353497E 03
10	0.272144E-03	(28.40%)	0.335460E-03	(72.51%)	0.128594E-02	(56.87%)	0.400065E 03
11	0.197189E-01	(75.80%)	0.247964E-06	(72.51%)	0.411054E-04	(56.99%)	0.496329E 03
12	0.445166E-02	(86.50%)	0.601482E-05	(72.53%)	0.718694E-07	(56.99%)	0.941217E 03
13	0.122510E-03	(86.79%)	0.118423E-05	(72.53%)	0.183785E-07	(56.99%)	0.159574E 04
14	0.360618E-08	(86.79%)	0.239110E-09	(72.53%)	0.116019E-02	(60.39%)	0.219453E 04
15	0.755680E-05	(86.81%)	0.596432E-07	(72.53%)	0.627097E-05	(60.41%)	0.266534E 04
16	0.327849E-03	(87.60%)	0.102800E-04	(72.56%)	0.334573E-06	(60.41%)	0.274613E 04
17	0.645878E-04	(87.75%)	0.379954E-07	(72.56%)	0.278464E-02	(68.57%)	0.299033E 04
18	0.416355E-04	(87.85%)	0.110648E-02	(75.73%)	0.427262E-12	(68.57%)	0.923580E 04
SUM OF 18 MODES	0.365489E-01	(87.85%)	0.264438E-01	(75.73%)	0.233862E-01	(68.57%)	
TOTAL LUMPED MASS	0.416030E-01		0.349195E-01		0.341043E-01		

ACCUM=ACCUMULATED PERCENT

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* CPU SECONDS ** THIS STEP "FRQM" TIME IS    8.63 ** LAST STEP "ORTH" TIME IS    7.38 ** DELTA TIME IS    1.25 *
* ELAPSED SECONDS                            378.2                                280.7                         97.5 *
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**************** P L O T   D A T A ****************

  IAUX = 0 ;   IREAD = 0 ;   IOCT =   3 ;   IUP =     3 ;   ISIZ =     0 ;   ISCAL =     0 ;   ITYPE =   3 ;   INUM =   1 ;
   AVIEW  =0.0        ;0.0        ;0.0        ;   BVIEW  =0.0        ;0.0        ;0.0        ;
   XPGVW =0.1200E 02 ;   YPGVW =0.5000E 02 ;   SCALFC =0.0

FIG.  1          BLOWER DRAIN LINE  3/4-PC-121SS.5N-SP                                          P23

SCALE FACTOR =  0.87504463E 01

PLOT   X,Y,Z-MIN, X,Y,Z-MAX = -0.21920303E 02 -0.42661972E 02 -0.92376022E 01      0.83085052E 02  0.53072309E 01  0.60333054E 02
GLOBAL X,Y,Z-MIN, X,Y,Z-MAX =  0.0            -0.31000000E 02 -0.16000000E 02      0.10450000E 03  0.13000000E 02  0.60000000E 01
X-Y PAGE LIMITS =                12.000            50.000
AVECTOR, BVECTOR =  0.10000000E 01 -0.10000000E 01  0.10000000E 01       0.0             0.0             0.10000000E 01

       TRANSFORMATION MATRIX

 0.70710695  0.70710695  0.0
-0.40824854  0.40824854  0.81649673
 0.57734990 -0.57734990  0.57735014
```

NODE	TRANSFORMED COORDINATES			
1	2.505049	4.875404	1.055672	
2	2.666663	4.968712	0.923713	BOUNDARY JOINT
4	2.868685	5.064851	0.787752	
6	4.121210	4.362203	1.781446	BOUNDARY JOINT
7	6.060602	3.242494	3.364950	
8	8.040401	2.099458	4.981448	BOUNDARY JOINT
10	9.252522	1.420136	5.942150	
12	9.696966	1.656238	5.608254	BOUNDARY JOINT
14	9.939390	1.775705	5.439301	
16	10.181815	1.656238	5.608253	
17	10.383836	1.539602	5.773201	
19	11.982246	0.637258	7.092789	
21	11.999997	1.166366	7.488667	BOUNDARY JOINT
23	1.409238	4.222239	1.979383	
25	1.818180	3.965639	2.342270	
27	2.227121	3.709038	2.705157	
29	1.616159	3.335801	3.232992	
31	0.888889	2.936409	3.797819	
33	0.646465	3.055874	3.628868	
35	0.340984	3.211747	3.364950	
37	0.323233	2.496021	2.837113	
38	0.323233	1.749547	2.309279	BOUNDARY JOINT
39	2.808078	5.050359	0.808249	
40	2.929291	5.050359	0.808249	
41	9.191917	1.434630	5.921656	
42	9.313128	1.434628	5.921656	
43	9.878784	1.761211	5.459800	
44	9.999997	1.761211	5.459798	
45	11.939391	0.641502	7.043305	
46	11.999997	0.676493	7.142273	
47	1.434341	4.257230	1.929898	
48	1.434341	4.187248	2.028369	
49	2.202018	3.744029	2.655672	
50	2.202018	3.674047	2.754642	

51	0.949494	2.950904	3.777323	
52	0.828283	2.950904	3.777323	
53	0.383839	3.207501	3.414434	
54	0.323233	3.172511	3.315465	
70	2.868685	5.015367	0.857734	AUXILIARY JOINT
71	9.252523	1.469622	5.872170	AUXILIARY JOINT
72	9.939390	1.726221	5.509283	AUXILIARY JOINT
73	11.939391	0.711485	7.092789	AUXILIARY JOINT
74	1.494947	4.222239	1.979383	AUXILIARY JOINT
75	2.141411	3.709038	2.705157	AUXILIARY JOINT
76	0.888888	2.985894	3.727838	AUXILIARY JOINT
77	0.383839	3.137521	3.364950	AUXILIARY JOINT

```
:************** P L O T   D A T A **************

 IAUX = 0 ;   IREAD = 0 ;   IOCT =   3 ;   IUP =     3 ;   ISIZ =     0 ;   ISCAL =     0 ;   ITYPE =   3 ;    INUM =   1 ;
  AVIEW  =0.1000E 01 ;-.1000E 01 ;0.1000E 01 ;    BVIEW  =0.0         ;0.0         ;0.1000E 01 ;
  XPGVW =0.1200E 02 ;    YPGVW =0.5000E 02 ;   SCALFC =0.8750E 01

FIG.  1          BLOWER DRAIN LINE  3/4-PC-121SS.5N-SP                                    P23

SCALE FACTOR =  0.87504463E 01

PLOT   X,Y,Z-MIN, X,Y,Z-MAX = -0.21920303E 02 -0.42661972E 02 -0.92376022E 01       0.83085052E 02  0.53072309E 01  0.60333054E 02
GLOBAL X,Y,Z-MIN, X,Y,Z-MAX =  0.0            -0.31000000E 02 -0.16000000E 02       0.10450000E 03  0.13000000E 02  0.60000000E 01
X-Y PAGE LIMITS =              12.000              50.000
AVECTOR, BVECTOR =  0.10000000E 01 -0.10000000E 01  0.10000000E 01       0.0              0.0              0.10000000E 01

       TRANSFORMATION MATRIX

 0.70710695  0.70710695  0.0
-0.40824854  0.40824854  0.81649673
 0.57734990 -0.57734990  0.57735014
```

NODE	TRANSFORMED COORDINATES			
1	2.511470	4.866387	1.056968	
2	2.666663	4.968712	0.923713	BOUNDARY JOINT
4	2.868685	5.064851	0.787752	
6	4.121210	4.362203	1.781446	BOUNDARY JOINT
7	6.060602	3.242494	3.364950	
8	8.040401	2.099458	4.981448	BOUNDARY JOINT
10	9.252522	1.420136	5.942150	
12	9.696966	1.656238	5.608254	BOUNDARY JOINT
14	9.939390	1.775705	5.439301	
16	10.181815	1.656238	5.608253	
17	10.383836	1.539602	5.773201	
19	11.982246	0.637258	7.092789	
21	11.999997	1.166366	7.488667	BOUNDARY JOINT
23	1.719275	3.887660	2.103939	
25	2.304639	3.410072	2.111811	
27	2.857730	2.890328	2.123782	
29	2.354032	2.617702	2.843161	
31	1.665092	2.470001	3.636165	
33	1.406865	2.746022	3.599984	
35	1.058341	3.097129	3.501662	
37	0.543091	2.467072	2.877817	
38	0.323233	1.749547	2.309279	BOUNDARY JOINT
39	2.808078	5.050359	0.808249	
40	2.929291	5.050359	0.808249	
41	9.191917	1.434630	5.921656	
42	9.313128	1.434628	5.921656	
43	9.878784	1.761211	5.459800	
44	9.999997	1.761211	5.459798	
45	11.939391	0.641502	7.043305	
46	11.999997	0.676493	7.142273	
47	1.720560	3.944437	2.057796	
48	1.768265	3.827720	2.123658	
49	2.816551	2.952664	2.101809	
50	2.848408	2.845949	2.174618	

51	1.724086	2.457552	3.591809	
52	1.602810	2.519789	3.645535	
53	1.120837	3.064039	3.531665	
54	1.000741	3.074990	3.452925	
70	2.868685	5.015367	0.857734	AUXILIARY JOINT
71	9.252523	1.469622	5.872170	AUXILIARY JOINT
72	9.939390	1.726221	5.509283	AUXILIARY JOINT
73	11.939391	0.711485	7.092789	AUXILIARY JOINT
74	1.494947	4.222239	1.979383	AUXILIARY JOINT
75	2.141411	3.709038	2.705157	AUXILIARY JOINT
76	0.888888	2.985894	3.727838	AUXILIARY JOINT
77	0.383839	3.137521	3.364950	AUXILIARY JOINT

0.220000E 02

****
****

COMPLETION OF P5C001 (SAP4 STRUCTURAL PLOTTER)

****
****

1-1/2"-PC-120-SS.5N-SP
3/4"-CPG-118-SS.5N-SP
3/4"-PC-114-SS.5N-SP
1-1/2"-PC-111-SS.5N-SP
1"-PC-116-SS.5N-SP

GROUP 7D

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS OUTLET AND BALANCE LINES
GEOMETRY
WPPSS OUTLET AND BALANCE LINES
COORDINATE INCHES
2 0 5 0
3 2 5 0
4 6.5 5 0
5 4.5 5 2
6 9 5 0
7 37.5 5 0
8 66 5 0
10 70.75 5 0
11 74.63 9.75 0
13 78.5 13.38 0
15 91.5 13.38 0
16 93.5 11.38 0
17 93.5 8.75 0
18 90.5 6.75 0
20 80.62 6.75 0
22 80.62 1.75 0
23 80.62 0 0
24 96.5 6.75 0
25 97.75 6.75 0
26 106.5 6.75 0
28 106.5 .75 0
29 106.5 0 0
30 93.5 15.38 0
32 93.5 18 0
34 69.81 18 0
35 64.81 18 0
37 34.31 18 0
39 34.31 18 6
40 67.81 18 30
51 4.5 9 4
53 4.5 30 4
54 4.5 54 4
55 4.5 78 3
57 4.5 92.75 4
60 31 92.75 4
62 31 92.75 20.5
64 31 92.75 38
67 31 113 38
69 31 113 36
71 -22 5 0
73 -22 11.5 0
75 -22 18.75 0
77 -22 18.75 -12
78 4.5 35 4
79 4.5 38 4
341 65.81 18 0
342 67.81 18 .5
343 67.81 18 16.5
BOUNDARY
6 YZSTOP
77 ANCHOR
8 YZSTOP
22 ANCHOR
28 ANCHOR
```

```
35 YZSTOP
39 ANCHOR
40 SPECIAL 1 1 1 0 0 0
53 ZXSTOP
55 ZXSTOP
62 ANCHOR
69 ANCHOR
MATERIAL 1.5
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL .75
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL 4.0
70 28300000 .3 .0000091
75 28300000 .3 .0000091
SIF
100 1 1 1
101 2.1 2.1 1
BRANCH 1 1.5 25 1
RUN 2 3 1.9 .145 .23 2
TEE RUN 1 3 WELDED 101
FULL 2.5 .30 .42
TEE RUN 1 4 WELDED 101
FULL
TEE BRANCH 1 5 WELDED 101
REDUCED 2.5 .30 .42 1.05 .113 .092
RUN 4 6 1.9 .145 .23 1
RUN 6 7 1.9 .145 .23 0
RUN 7 8
RUN 8 0  1.9 .145 .23 2
ELBOW 10 1.5 2.4 .25 .42 0 101
RUN 0 11 1.9 .145 .23 1
RUN 11 0 1.9 .145 .23 2
ELBOW 13 1.5 2.5 .30 .42 0 101
RUN 0 15
TEE RUN 2 15 WELDED 101
FULL 2.5 .30 .42
TEE RUN 2 16 WELDED 101
FULL
TEE BRANCH 2 30 WELDED 101
FULL
RUN 30 0
ELBOW 32 1.5 2.4 .25 .42 0 101
RUN 0 34 1.05 .113 .09 3
TEE RUN 3 34 WELDED 101
FULL 1.55 .25 .26
TEE RUN 3 341 WELDED 101
FULL
TEE BRANCH 3 342 WELDED 101
REDUCED 1.55 .25 .42 4.5 .24 .9
RUN 341 35 1.05 .113 .09 1
RUN 35 0 1.05 .113 .09 2
ELBOW 37 .75 1.55 .25 .26 0 101
RUN 0 39 1.05 .113 .09 1
RUN 16 17
TEE BRANCH 4 17 WELDED 101
FULL  2.5 .30 .42
TEE RUN 4 18 WELDED 101
FULL
```

```
TEE RUN 4 24 WELDED 101
FULL
RUN 18 0 1.9 .145 .23 3
ELBOW 20 1.5 2.4 .25 .42 0 101
RUN 0 22 1.9 .145 .23 1
RUN 22 23 1.9 .145 .23 0
REDUCER 24 25 2.5 .4 2.25 .4 1 101
RUN 25 0  1.31 .133 .14 0
ELBOW 26 1.0 1.84 .25 .44 0 101
RUN 0 28 1.31 .133 .14 0
RUN 28 29 1.31 .133 .14 0
RUN 2 0  1.9 .145 .23 2
ELBOW 71 1.5 2.5 .30 .42 0 101
RUN 0 73 1.9 .145 .23 1
RUN 73 0 1.9 .145 .23 2
ELBOW 75 1.5 2.5 .30 .42 0 101
RUN 0 77 1.9 .145 .23 3
BRANCH 2 .75 25 2
RUN 5 0 1.05 .113 .094 2
ELBOW 51 .75 1.55 .25 .3 0 101
RUN 0 53 1.05 .113 .094 1
RUN 53 78 1.05 .113 .094 2
VALVE 78 79 1.5 .25 4 3
RUN 79 54 1.05 .113 .094 1
RUN 54 55 1.05 .113 .094 0
RUN 55 0  1.05 .113 .094 2
ELBOW 57 .75 1.55 .25 .3 0 101
RUN 0 0 1.05 .113 .094 3
ELBOW 60 .75 1.55 .25 .3 0 101
RUN 0 62 1.05 .113 .094 1
RUN 62 0 1.05 .113 .094 2
ELBOW 64 .75 1.55 .25 .3 0 101
RUN 0 0  1.05 .113 .094 3
ELBOW 67 .75 1.55 .25 .3  0 101
RUN 0 69
BRANCH 3 4.0 0 3
RUN 342 343 4.5 .24 .9 1
RUN 343 40 4.5 .24 .9 2
LOAD 1
UPSET THERMAL
THERMAL 1 175 0 0 0 70
THERMAL 2 175 0 0 0 70
THERMAL 3 75 0 0 0 70
MOVEMENT 69 0 0 .032
END OF JOB
```

```
     1    31     0     0                                                    PD1
WPPSS OUTLET AND BALANCE LINES
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                              P 1
WPPSS OUTLET AND BALANCE LINES                                              P 2
    78    79     1     0    12    18    13     3     0     3     1     0   P 3
     0     2     1     2     1     0     0                                  P 4
     1    79    13     0     0   344     2                                  P 5
     2     0.0          5.00000     0.0          0                         P 7
     3     2.00000      5.00000     0.0          0                         P 7
     4     6.50000      5.00000     0.0          0                         P 7
     5     4.50000      5.00000     2.00000      0                         P 7
     6     9.00000      5.00000     0.0          0                         P 7
     7    37.50000      5.00000     0.0          0                         P 7
     8    66.00000      5.00000     0.0          0                         P 7
    10    70.68130      5.14475     0.0          0                         P 7
    11    74.62999      9.75000     0.0          0                         P 7
    13    78.54158     13.27482     0.0          0                         P 7
    15    91.50000     13.38000     0.0          0                         P 7
    16    93.50000     11.38000     0.0          0                         P 7
    17    93.50000      8.75000     0.0          0                         P 7
    18    90.50000      6.75000     0.0          0                         P 7
    20    81.05933      6.31066     0.0          0                         P 7
    22    80.62000      1.75000     0.0          0                         P 7
    23    80.62000      0.0         0.0          0                         P 7
    24    96.50000      6.75000     0.0          0                         P 7
    25    97.75000      6.75000     0.0          0                         P 7
    26   106.20709      6.45711     0.0          0                         P 7
    28   106.50000      0.75000     0.0          0                         P 7
    29   106.50000      0.0         0.0          0                         P 7
    30    93.50000     15.38000     0.0          0                         P 7
    32    93.06065     17.56065     0.0          0                         P 7
    34    69.81000     18.00000     0.0          0                         P 7
    35    64.81000     18.00000     0.0          0                         P 7
    37    34.52966     18.00000     0.21967      0                         P 7
    39    34.31000     18.00000     6.00000      0                         P 7
    40    67.81000     18.00000    30.00000      0                         P 7
    51     4.50000      9.00473     3.97994      0                         P 7
    53     4.50000     30.00000     4.00000      0                         P 7
    54     4.50000     54.00000     4.00000      0                         P 7
    55     4.50000     78.00000     3.00000      0                         P 7
    57     4.71967     92.53081     3.98514      0                         P 7
    60    30.78032     92.75000     4.21967      0                         P 7
    62    31.00000     92.75000    20.50000      0                         P 7
    64    31.00000     92.96967    37.78032      0                         P 7
    67    31.00000    112.78032    37.78032      0                         P 7
    69    31.00000    113.00000    36.00000      0                         P 7
    71   -21.56065      5.43934     0.0          0                         P 7
    73   -22.00000     11.50000     0.0          0                         P 7
    75   -22.00000     18.31065    -0.43934      0                         P 7
    77   -22.00000     18.75000   -12.00000      0                         P 7
    78     4.50000     35.00000     4.00000      0                         P 7
    79     4.50000     38.00000     4.00000      0                         P 7
   341    65.81000     18.00000     0.0          0                         P 7
   342    67.81000     18.00000     0.50000      0                         P 7
   343    67.81000     18.00000    16.50000      0                         P 7
   344     4.25000      5.00000     0.0          0                         P 7
   345    70.03844      5.00000     0.0          0                         P 7
   346    71.20013      5.55108     0.0          0                         P 7
```

347	78.06720	12.97404	0.0	0			P 7
348	79.09338	13.38000	0.0	0			P 7
349	92.50000	12.38000	0.0	0			P 7
350	93.50000	16.50000	0.0	0			P 7
351	92.00000	18.00000	0.0	0			P 7
352	67.81000	18.00000	0.0	0			P 7
353	35.06000	18.00000	0.0	0			P 7
354	34.31000	18.00000	0.75000	0			P 7
355	93.50000	6.75000	0.0	0			P 7
356	82.12000	6.75000	0.0	0			P 7
357	80.62000	5.25000	0.0	0			P 7
358	105.50000	6.75000	0.0	0			P 7
359	106.50000	5.75000	0.0	0			P 7
360	-20.50000	5.00000	0.0	0			P 7
361	-22.00000	6.50000	0.0	0			P 7
362	-22.00000	17.25000	0.0	0			P 7
363	-22.00000	18.75000	-1.50000	0			P 7
364	4.50000	8.84164	3.92082	0			P 7
365	4.50000	9.17705	4.00000	0			P 7
366	4.50000	36.50000	4.00000	0			P 7
367	4.50000	92.00171	3.94927	0			P 7
368	5.25000	92.75000	4.00000	0			P 7
369	30.25000	92.75000	4.00000	0			P 7
370	31.00000	92.75000	4.75000	0			P 7
371	31.00000	92.75000	37.25000	0			P 7
372	31.00000	93.50000	38.00000	0			P 7
373	31.00000	112.25000	38.00000	0			P 7
374	31.00000	113.00000	37.25000	0			P 7
390	70.03842	6.50000	0.0	0			P 7
391	79.09338	11.88000	0.0	0			P 7
392	92.00000	16.50000	0.0	0			P 7
393	35.06000	18.00000	0.75000	0			P 7
394	82.12000	5.25000	0.0	0			P 7
395	105.50000	5.75000	0.0	0			P 7
396	-20.50000	6.50000	0.0	0			P 7
397	-22.00000	17.25000	-1.50000	0			P 7
398	4.50000	9.17705	3.25000	0			P 7
399	5.25000	92.00171	3.94927	0			P 7
400	30.25000	92.75000	4.75000	0			P 7
401	31.00000	93.50000	37.25000	0			P 7
402	31.00000	112.25000	37.25000	0			P 7
1 3	1.9000	0.1450	2.0000	0.0	0.0	0.0	P11D
2 3	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
3 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
4 4	2.4000	0.2500	2.0000	0.0	0.0	0.0	P11D
5 4	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
6 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
7 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
8 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
9 3	4.5000	0.2400	2.0000	0.0	0.0	0.0	P11D
10 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
11 3	2.5000	0.4000	2.0000	0.0	0.0	0.0	P11D
12 3	2.2500	0.4000	2.0000	0.0	0.0	0.0	P11D
13 3	1.3100	0.1330	2.0000	0.0	0.0	0.0	P11D
14 4	1.8400	0.2500	2.0000	0.0	0.0	0.0	P11D
15 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
16 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
17 3	1.5000	0.2500	2.0000	0.0	0.0	0.0	P11D
18 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
1 5	2.5000	0.3000	2.5000	0.3000	0.0	0.0	P12

```
 2  5     1.5500     0.2500     1.5500     0.2500     0.0        0.0     P12
  100    1.000000   1.000000   1.000000                                 P 12.1
  101    2.099999   2.099999   1.000000                                 P 12.1
 1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
 2  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
 3  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14
      0.75000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14A
   25.00000     0.0         0.0         0.0         0.0         0.0      P15
   0.0                                                                   P16A
   1                                                                     P16B
   1   175.00000     0.0         0.0         0.0         70.00000       P16C
   2   175.00000     0.0         0.0         0.0         70.00000       P16C
   3    75.00000     0.0         0.0         0.0         70.00000       P16C
 6  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0           P18
77  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
 8  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0           P18
22  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
28  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
35  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0           P18
39  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
40  0 0.100E 01 0.100E 01 0.100E 01 0.0        0.0        0.0           P18
53  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0           P18
55  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0           P18
62  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
69  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
   1                                                                     P20
   1 0.0        0.0        0.320E-01 0.0        0.0        0.0           P20A
  1   2   31002   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    2    1    0    0    1                                           P21B
  2   3 344   5   1   1   1   2   2   2   1   0   0   0   0   0.0        P21
   1  101    1    1    1    1                                           P21B
  3   4 344   5   1   1   1   2   2   2   1   0   0   0   0   0.0        P21
   1  101    1    1    1    1                                           P21B
  4   5 344   3   1   3   2   2   3   2   1   0   0   0   0   0.0        P21
   1  101    1    2    1    1                                           P21B
  5   4   61002   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    1    1    0    0    1                                           P21B
  6   6   71002   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    0    1    0    0    1                                           P21B
  7   7   81002   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    0    1    0    0    1                                           P21B
  8   8 3451002   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    2    1    0    0    1                                           P21B
  9 345  10 390   1   2   1   4   4   1   1   0   0   0   0   0.0        P21
   1  101    1    0    0    1                                           P21B
 10  10 346 390   1   2   1   4   4   1   1   0   0   0   0   0.0        P21
   1  101    1    0    0    1                                           P21B
 11 346  111001   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    1    1    0    0    1                                           P21B
 12  11 3471001   1   1   1   1   1   1   1   0   0   0   0   0.0        P21
   1    2    1    0    0    1                                           P21B
 13 347  13 391   1   2   1   5   5   1   1   0   0   0   0   0.0        P21
   1  101    1    0    0    1                                           P21B
 14  13 348 391   1   2   1   5   5   1   1   0   0   0   0   0.0        P21
   1  101    1    0    0    1                                           P21B
 15 348  151002   1   1   1   2   2   1   1   0   0   0   0   0.0        P21
   1    0    1    0    0    1                                           P21B
 16  15 349  30   1   1   1   2   2   2   1   0   0   0   0   0.0        P21
```

```
  1  101     1    1    1    1                                                  P21B
 17  16 349  30    1    1    1    2    2    2    1    0    0    0    0  0.0     P21
  1  101     1    1    1    1                                                  P21B
 18  30 349  15    1    1    1    2    2    2    1    0    0    0    0  0.0     P21
  1  101     1    2    1    1                                                  P21B
 19  30 3501001    1    1    1    2    2    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 20 350  32 392    1    2    1    4    4    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 21  32 351 392    1    2    1    4    4    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 22 351  341002    1    1    1    6    6    1    1    0    0    0    0  0.0     P21
  1    3     1    0    0    1                                                  P21B
 23  34 352 342    1    1    1    7    7    2    1    0    0    0    0  0.0     P21
  1  101     1    1    2    1                                                  P21B
 24 341 352 342    1    1    1    7    7    2    1    0    0    0    0  0.0     P21
  1  101     1    1    2    1                                                  P21B
 25 342 352  34    1    3    2    8    9    2    1    0    0    0    0  0.0     P21
  1  101     1    2    2    1                                                  P21B
 26 341  351002    1    1    1    6    6    1    1    0    0    0    0  0.0     P21
  1    1     1    0    0    1                                                  P21B
 27  35 3531002    1    1    1    6    6    1    1    0    0    0    0  0.0     P21
  1    2     1    0    0    1                                                  P21B
 28 353  37 393    1    2    1   10   10    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 29  37 354 393    1    2    1   10   10    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 30 354  391001    1    1    1    6    6    1    1    0    0    0    0  0.0     P21
  1    1     1    0    0    1                                                  P21B
 31  16  171001    1    1    1    6    6    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 32  17 355  18    1    1    1    2    2    2    1    0    0    0    0  0.0     P21
  1  101     1    2    1    1                                                  P21B
 33  18 355  17    1    1    1    2    2    2    1    0    0    0    0  0.0     P21
  1  101     1    1    1    1                                                  P21B
 34  24 355  17    1    1    1    2    2    2    1    0    0    0    0  0.0     P21
  1  101     1    1    1    1                                                  P21B
 35  18 3561002    1    1    1    1    1    1    1    0    0    0    0  0.0     P21
  1    3     1    0    0    1                                                  P21B
 36 356  20 394    1    2    1    4    4    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 37  20 357 394    1    2    1    4    4    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 38 357  221001    1    1    1    1    1    1    1    0    0    0    0  0.0     P21
  1    1     1    0    0    1                                                  P21B
 39  22  231001    1    1    1    1    1    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 40  24  251002    1    3    2   11   12    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 41  25 3581002    1    1    1   13   13    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 42 358  26 395    1    2    1   14   14    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 43  26 359 395    1    2    1   14   14    1    1    0    0    0    0  0.0     P21
  1  101     1    0    0    1                                                  P21B
 44 359  281001    1    1    1   13   13    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 45  28  291001    1    1    1   13   13    1    1    0    0    0    0  0.0     P21
  1    0     1    0    0    1                                                  P21B
 46   2 3601002    1    1    1    1    1    1    1    0    0    0    0  0.0     P21
```

1	2	1	0	0	1										P21B
47	360	71 396	1	2	1	5	5	1	1	0	0	0	0	0.0	P21
1	101	1	0	0	1										P21B
48	71	361 396	1	2	1	5	5	1	1	0	0	0	0	0.0	P21
1	101	1	0	0	1										P21B
49	361	731001	1	1	1	1	1	1	1	0	0	0	0	0.0	P21
1	1	1	0	0	1										P21B
50	73	3621001	1	1	1	1	1	1	1	0	0	0	0	0.0	P21
1	2	1	0	0	1										P21B
51	362	75 397	1	2	1	5	5	1	1	0	0	0	0	0.0	P21
1	101	1	0	0	1										P21B
52	75	363 397	1	2	1	5	5	1	1	0	0	0	0	0.0	P21
1	101	1	0	0	1										P21B
53	363	771001	1	1	1	1	1	1	1	0	0	0	0	0.0	P21
1	3	1	0	0	1										P21B
54	5	3641001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	2	2	0	0	2										P21B
55	364	51 398	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
56	51	365 398	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
57	365	531001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	1	2	0	0	2										P21B
58	53	781001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	2	2	0	0	2										P21B
59	78	3661001	2	1	1	17	17	1	1	0	0	0	0	0.0	P21
1	3	2	0	0	2										P21B
60	366	791001	2	1	1	17	17	1	1	0	0	0	0	0.0	P21
1	3	2	0	0	2										P21B
61	79	541001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	1	2	0	0	2										P21B
62	54	551001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	0	2	0	0	2										P21B
63	55	3671001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	2	2	0	0	2										P21B
64	367	57 399	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
65	57	368 399	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
66	368	3691002	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	3	2	0	0	2										P21B
67	369	60 400	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
68	60	370 400	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
69	370	621001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	1	2	0	0	2										P21B
70	62	3711001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	2	2	0	0	2										P21B
71	371	64 401	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
72	64	372 401	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
73	372	3731001	2	1	1	15	15	1	1	0	0	0	0	0.0	P21
1	3	2	0	0	2										P21B
74	373	67 402	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
75	67	374 402	2	2	1	16	16	1	1	0	0	0	0	0.0	P21
1	101	2	0	0	2										P21B
76	374	691001	2	1	1	18	18	1	1	0	0	0	0	0.0	P21

```
    1     0     2     0     0     2                                                  P21B
   77 342 3431001    3    1    1    9    9    1    1    0    0    0    0  0.0         P21
    2     1     3     0     0     3                                                  P21B
   78 343  401001    3    1    1    9    9    1    1    0    0    0    0  0.0         P21
    2     2     3     0     0     3                                                  P21B
    0                                                                                P22
     1
   69 1                                                                              P37
     1  1     0  0     0  0     0  0     0  0     0  0     0  0     0  0            P38
999999                                                                              P41
UPSET THERMAL                                                                       P41
     0                                                                              P68
     0                                                                              PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.35 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.35 *
* ELAPSED SECONDS                            7.6                                  0.0                      7.6 *
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THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	78
TOTAL NUMBER OF STRUCTURAL JOINTS	79
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	13
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	1
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	12
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	1
TOTAL NUMBER OF CROSS-SECTION TYPES	18
TOTAL NUMBER OF MATERIALS	3
TOTAL NUMBER OF PIPE PRESSURES	2
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	79
TOTAL FICTIOUS JOINTS READ IN	13
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
2	0.0	5.000000	0.0
3	2.000000	5.000000	0.0
4	6.500000	5.000000	0.0
5	4.500000	5.000000	2.000000
6	9.000000	5.000000	0.0
7	37.500000	5.000000	0.0
8	66.000000	5.000000	0.0
10	70.681290	5.144750	0.0
11	74.629990	9.750000	0.0
13	78.541565	13.274819	0.0
15	91.500000	13.379999	0.0
16	93.500000	11.379999	0.0
17	93.500000	8.750000	0.0
18	90.500000	6.750000	0.0
20	81.059326	6.310659	0.0
22	80.619995	1.750000	0.0
23	80.619995	0.0	0.0
24	96.500000	6.750000	0.0
25	97.750000	6.750000	0.0
26	106.207077	6.457109	0.0
28	106.500000	0.750000	0.0
29	106.500000	0.0	0.0
30	93.500000	15.379999	0.0
32	93.060638	17.560638	0.0
34	69.809998	18.000000	0.0
35	64.809998	18.000000	0.0
37	34.529648	18.000000	0.219670
39	34.309998	18.000000	6.000000
40	67.809998	18.000000	30.000000
51	4.500000	9.004729	3.979939
53	4.500000	30.000000	4.000000
54	4.500000	54.000000	4.000000
55	4.500000	78.000000	3.000000
57	4.719669	92.530807	3.985140
60	30.780319	92.750000	4.219669
62	31.000000	92.750000	20.500000
64	31.000000	92.969666	37.780319
67	31.000000	112.780319	37.780319
69	31.000000	113.000000	36.000000
71	-21.560638	5.439340	0.0
73	-22.000000	11.500000	0.0
75	-22.000000	18.310638	-0.439340
77	-22.000000	18.750000	-12.000000
78	4.500000	35.000000	4.000000
79	4.500000	38.000000	4.000000
341	65.809998	18.000000	0.0
342	67.809998	18.000000	0.500000
343	67.809998	18.000000	16.500000
344	4.250000	5.000000	0.0
345	70.038437	5.000000	0.0
346	71.200119	5.551080	0.0
347	78.067200	12.974039	0.0
348	79.093369	13.379999	0.0
349	92.500000	12.379999	0.0
350	93.500000	16.500000	0.0
351	92.000000	18.000000	0.0

352	67.809998	18.000000	0.0
353	35.059998	18.000000	0.0
354	34.309998	18.000000	0.750000
355	93.500000	6.750000	0.0
356	82.119995	6.750000	0.0
357	80.619995	5.250000	0.0
358	105.500000	6.750000	0.0
359	106.500000	5.750000	0.0
360	-20.500000	5.000000	0.0
361	-22.000000	6.500000	0.0
362	-22.000000	17.250000	0.0
363	-22.000000	18.750000	-1.500000
364	4.500000	8.841640	3.920819
365	4.500000	9.177050	4.000000
366	4.500000	36.500000	4.000000
367	4.500000	92.001709	3.949269
368	5.250000	92.750000	4.000000
369	30.250000	92.750000	4.000000
370	31.000000	92.750000	4.750000
371	31.000000	92.750000	37.250000
372	31.000000	93.500000	38.000000
373	31.000000	112.250000	38.000000
374	31.000000	113.000000	37.250000
390	70.038406	6.500000	0.0
391	79.093369	11.879999	0.0
392	92.000000	16.500000	0.0
393	35.059998	18.000000	0.750000
394	82.119995	5.250000	0.0
395	105.500000	5.750000	0.0
396	-20.500000	6.500000	0.0
397	-22.000000	17.250000	-1.500000
398	4.500000	9.177050	3.250000
399	5.250000	92.001709	3.949269
400	30.250000	92.750000	4.750000
401	31.000000	93.500000	37.250000
402	31.000000	112.250000	37.250000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	S	2.500	0.300	.2073E 01	.1278E 01	.2556E 01	.1278E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
3	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
4	C	2.400	0.250	.1689E 01	.9889E 00	.9889E 00	.1978E 01	2.0	2.0	1.20	0.0	0.0	1.20	-1.20	0.0	0.0	-1.20
5	C	2.500	0.300	.2073E 01	.1278E 01	.1278E 01	.2556E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
6	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
7	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
8	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
9	S	4.500	0.240	.3212E 01	.7309E 01	.1462E 02	.7309E 01	2.0	2.0	2.25	0.0	0.0	2.25	-2.25	0.0	0.0	-2.25
10	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
11	S	2.500	0.400	.2639E 01	.1507E 01	.3015E 01	.1507E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
12	S	2.250	0.400	.2325E 01	.1041E 01	.2082E 01	.1041E 01	2.0	2.0	1.13	0.0	0.0	1.13	-1.13	0.0	0.0	-1.13
13	S	1.310	0.133	.4918E 00	.8625E-01	.1725E 00	.8625E-01	2.0	2.0	0.65	0.0	0.0	0.65	-0.65	0.0	0.0	-0.65
14	C	1.840	0.250	.1249E 01	.4044E 00	.4044E 00	.8088E 00	2.0	2.0	0.92	0.0	0.0	0.92	-0.92	0.0	0.0	-0.92
15	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
16	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
17	S	1.500	0.250	.9817E 00	.1994E 00	.3988E 00	.1994E 00	2.0	2.0	0.75	0.0	0.0	0.75	-0.75	0.0	0.0	-0.75
18	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2500000E 01	.3000000E 00	.2500000E 01	.3000000E 00	.0
2	.1549999E 01	.2500000E 00	.1549999E 01	.2500000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	175.00	27774992.00	0.300000	0.000009300	18800.00
2	70.00	28300000.00	0.300000	0.000009100	18800.00
2-A	175.00	27774992.00	0.300000	0.000009300	18800.00
3	70.00	28300000.00	0.300000	0.000009100	0.0
3-A	75.00	28300000.00	0.300000	0.000009100	0.0

PRESSURE DATA

TYPE	PRESSURE
1	25.00
2	0.0

THERMAL DATA

THERMAL LOAD 1	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
	1	175.000	0.0	0.0	0.0	70.000
	2	175.000	0.0	0.0	0.0	70.000
	3	75.000	0.0	0.0	0.0	70.000

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	6	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
2	77	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	8	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
4	22	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
5	28	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
6	35	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
7	39	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
8	40	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
9	53	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
10	55	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
11	62	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
12	69	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01

JOINT DISPLACEMENT DATA

TYPE	X1	X2	X3	THETA 1	THETA 2	THETA 3
1	0.0	0.0	0.320000E-01	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.54 ** LAST STEP "BEGP" TIME IS    0.35 ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                            13.6                                 7.6                      6.0 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   79


 BAND-WIDTH =    36  BY D.O.F.          BAND-WIDTH =     6  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.91 ** LAST STEP "DA3D" TIME IS    0.54 ** DELTA TIME IS    0.37 *
* ELAPSED SECONDS                            38.3                                 13.6                     24.7 *
```

THE FOLLOWING JOINTS HAVE NON-ZERO DISPLACEMENT SPECIFIED

JOINT	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE
78	1	1								

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.91 ** LAST STEP "JCSO" TIME IS    0.91 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                            38.4                                 38.3                      0.1 *

    CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

    MAXIMUM VALUE ( 0.30353E 09) OCCURS AT THE  56TH DOF
    MINIMUM VALUE ( 0.38141E 04) OCCURS AT THE 163TH DOF
    RATIO OF MAX/MIN= 0.79582E 05

* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    4.43 ** LAST STEP "INPT" TIME IS    0.91 ** DELTA TIME IS    3.52 *
* ELAPSED SECONDS                            93.8                                 38.4                     55.3 *
```

```
* CPU SECONDS ** THIS STEP "SELT" TIME IS    6.58 ** LAST STEP "EQ3D" TIME IS    4.43 ** DELTA TIME IS    2.15 *
* ELAPSED SECONDS                          176.7                                93.8                          82.9 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	2	3	1002	1	1	1	1	2	1	1	1	2.00000	0.0			0.0	-1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
2	3	344	5	1	1	2	1	101	1	1	2	2.25000	0.0			0.0	0.0	1.000000
																-1.000000	0.0	0.0
																0.0	-1.000000	0.0
3	4	344	5	1	1	2	1	101	1	1	2	2.25000	0.0			0.0	0.0	1.000000
																1.000000	0.0	0.0
																0.0	1.000000	0.0
4	5	344	3	1	3	2	1	101	1	1	2	0.0	0.0			-0.992278	0.0	0.124035
											3	2.01556				0.124035	0.0	0.992278
																0.0	1.000000	0.0
5	4	6	1002	1	1	1	1	1	1	1	1	2.50000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
6	6	7	1002	1	1	1	1	0	1	1	1	28.50000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	7	8	1002	1	1	1	1	0	1	1	1	28.50000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
8	8	345	1002	1	1	1	1	2	1	1	1	4.03844	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
9	345	10	390	1	2	1	1	101	1	1	4	0.44291	0.0	RAD=	1.5000	-0.000020	1.000000	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	-0.000020	0.0
10	10	346	390	1	2	1	1	101	1	1	4	0.44294	0.0	RAD=	1.5000	-0.428589	0.903500	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-0.903500	-0.428589	0.0
11	346	11	1001	1	1	1	1	1	1	1	1	5.42171	0.0			0.774464	-0.632618	0.0
																-0.632618	-0.774464	0.0
																0.0	0.0	-1.000000
12	11	347	1001	1	1	1	1	2	1	1	1	4.71263	0.0			0.684128	-0.729362	0.0
																-0.729362	-0.684128	0.0
																0.0	0.0	-1.000000
13	347	13	391	1	2	1	1	101	1	1	5	0.37665	0.0	RAD=	1.5000	0.684121	-0.729369	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.729369	-0.684121	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	13	348	391	1	2	1	1	101	1	1	5	0.37672	0.0	RAD=	1.5000	0.367868 -0.929878 0.0
														FLX=	1.0000	0.0 0.0 1.000000
														ECC=	0.0	-0.929878 -0.367868 0.0
15	348	15	1002	1	1	1	1	0	1	1	2	12.40663	0.0			0.0 1.000000 0.0
																-1.000000 0.0 0.0
																0.0 0.0 1.000000
16	15	349	30	1	1	2	1	101	1	1	2	1.41421	0.0			0.707107 0.707107 0.0
																-0.707107 0.707107 0.0
																0.0 0.0 1.000000
17	16	349	30	1	1	2	1	101	1	1	2	1.41421	0.0			0.707107 0.707107 0.0
																0.707107 -0.707107 0.0
																0.0 0.0 -1.000000
18	30	349	15	1	1	2	1	101	1.	1	2	3.16228	0.0			-0.948683 0.316228 0.0
																0.316228 0.948683 0.0
																0.0 0.0 -1.000000
19	30	350	1001	1	1	1	1	0	1	1	2	1.12000	0.0			1.000000 0.0 0.0
																0.0 -1.000000 0.0
																0.0 0.0 -1.000000
20	350	32	392	1	2	1	1	101	1	1	4	0.78542	0.0	RAD=	1.5000	-1.000000 0.0 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.0 -1.000000 0.0
21	32	351	392	1	2	1	1	101	1	1	4	0.78538	0.0	RAD=	1.5000	-0.707107 -0.707107 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.707107 -0.707107 0.0
22	351	34	1002	1	1	1	1	3	1	1	6	22.19000	0.0			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000
23	34	352	342	1	1	2	1	101	1	1	7	2.00000	0.0			0.0 0.0 1.000000
																1.000000 0.0 0.0
																0.0 1.000000 0.0
24	341	352	342	1	1	2	1	101	1	1	7	2.00000	0.0			0.0 0.0 1.000000
																-1.000000 0.0 0.0
																0.0 -1.000000 0.0
25	342	352	34	1	3	2	1	101	1	1	8	0.0	0.0			1.000000 0.0 0.0
											9	0.50000				0.0 0.0 1.000000
																0.0 -1.000000 0.0
26	341	35	1002	1	1	1	1	1	1	1	6	1.00000	0.0			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
27	35	353	1002	1	1	1	1	2	1	1	6	29.75000	0.0			0.0	-1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
28	353	37	393	1	2	1	1	101	1	1	10	0.78540	0.0	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	1.000000	0.0	0.0
29	37	354	393	1	2	1	1	101	1	1	10	0.78540	0.0	RAD=	0.7500	0.707120	0.0	0.707094
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	0.707094	0.0	-0.707120
30	354	39	1001	1	1	1	1	1	1	1	6	5.25000	0.0			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
31	16	17	1001	1	1	1	1	0	1	1	6	2.63000	0.0			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
32	17	355	18	1	1	2	1	101	1	1	2	2.00000	0.0			-1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	-1.000000
33	18	355	17	1	1	2	1	101	1	1	2	3.00000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
34	24	355	17	1	1	2	1	101	1	1	2	3.00000	0.0			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
35	18	356	1002	1	1	1	1	3	1	1	1	8.38000	0.0			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
36	356	20	394	1	2	1	1	101	1	1	4	0.78540	0.0	RAD=	1.5000	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	1.000000	0.0	0.0
37	20	357	394	1	2	1	1	101	1	1	4	0.78540	0.0	RAD=	1.5000	0.707110	-0.707104	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	0.707104	0.707110	0.0
38	357	22	1001	1	1	1	1	1	1	1	1	3.50000	0.0			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
39	22	23	1001	1	1	1	1	0	1	1	1	1.75000	0.0			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
40	24	25	1002	1	3	1	1	101	1	1	11	0.0	0.0			0.0	1.000000	0.0
											12	1.25000				-1.000000	0.0	0.0
																0.0	0.0	1.000000
41	25	358	1002	1	1	1	1	0	1	1	13	7.75000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
42	358	26	395	1	2	1	1	101	1	1	14	0.78539	0.0	RAD=	1.0000	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0
43	26	359	395	1	2	1	1	101	1	1	14	0.78540	0.0	RAD=	1.0000	-0.707091	-0.707123	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707123	0.707091	0.0
44	359	28	1001	1	1	1	1	0	1	1	13	5.00000	0.0			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
45	28	29	1001	1	1	1	1	0	1	1	13	0.75000	0.0			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
46	2	360	1002	1	1	1	1	2	1	1	1	20.50000	0.0			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
47	360	71	396	1	2	1	1	101	1	1	5	0.78540	0.0	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	1.000000	0.0	0.0
48	71	361	396	1	2	1	1	101	1	1	5	0.78540	0.0	RAD=	1.5000	0.707099	0.707114	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.707114	-0.707099	0.0
49	361	73	1001	1	1	1	1	1	1	1	1	5.00000	0.0			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
50	73	362	1001	1	1	1	1	2	1	1	1	5.75000	0.0			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
51	362	75	397	1	2	1	1	101	1	1	5	0.78540	0.0	RAD=	1.5000	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
52	75	363	397	1	2	1	1	101	1	1	5	0.78540	0.0	RAD=	1.5000	0.0	-0.707100	-0.707114
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707114	0.707100

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
53	363	77	1001	1	1	1	1	3	1	1	1	10.50000	0.0			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
54	5	364	1001	2	1	1	1	2	2	2	15	4.29508	0.0			1.000000 0.0 0.0 0.0 -0.894427-0.447213 0.0 0.447213-0.894427
55	364	51	398	2	2	1	1	101	2	2	16	0.23179	0.0	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.447214-0.894427 1.000000 0.0 0.0 0.0 -0.894427-0.447214
56	51	365	398	2	2	1	1	101	2	2	16	0.23185	0.0	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.229759-0.973247 1.000000 0.0 0.0 0.0 -0.973247-0.229759
57	365	53	1001	2	1	1	1	1	2	2	15	20.82294	0.0			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
58	53	78	1001	2	1	1	1	2	2	2	15	5.00000	0.0			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
59	78	366	1001	2	1	1	1	3	2	2	17	1.50000	0.0			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
60	366	79	1001	2	1	1	1	3	2	2	17	1.50000	0.0			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
61	79	54	1001	2	1	1	1	1	2	2	15	16.00000	0.0			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
62	54	55	1001	2	1	1	1	0	2	2	15	24.02081	0.0			1.000000 0.0 0.0 0.0 -0.999133 0.041631 0.0 -0.041631-0.999133
63	55	367	1001	2	1	1	1	2	2	2	15	14.03385	0.0			1.000000 0.0 0.0 0.0 -0.997710-0.067641 0.0 0.067641-0.997710
64	367	57	399	2	2	1	1	101	2	2	16	0.78540	0.0	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 -0.067640 0.997710 0.0 -0.997710-0.067640
65	57	368	399	2	2	1	1	101	2	2	16	0.78539	0.0	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707119-0.705476-0.047828 0.000000-0.067640 0.997710 -0.707095-0.705499-0.047829

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
66	368	369	1002	2	1	1	1	3	2	2	15	25.00000	0.0			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
67	369	60	400	2	2	1	1	101	2	2	16	0.78540	0.0	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-1.000000	0.0	0.0
68	60	370	400	2	2	1	1	101	2	2	16	0.78540	0.0	RAD=	0.7500	-0.707099	0.0	0.707114
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707114	0.0	-0.707099
69	370	62	1001	2	1	1	1	1	2	2	15	15.75000	0.0			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
70	62	371	1001	2	1	1	1	2	2	2	15	16.75000	0.0			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
71	371	64	401	2	2	1	1	101	2	2	16	0.78539	0.0	RAD=	0.7500	0.0	1.000000	0.0
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.0	-1.000000
72	64	372	401	2	2	1	1	101	2	2	16	0.78541	0.0	RAD=	0.7500	0.0	0.707117	-0.707097
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707097	-0.707117
73	372	373	1001	2	1	1	1	3	2	2	15	18.75000	0.0			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
74	373	67	402	2	2	1	1	101	2	2	16	0.78542	0.0	RAD=	0.7500	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
75	67	374	402	2	2	1	1	101	2	2	16	0.78538	0.0	RAD=	0.7500	0.0	-0.707107	-0.707107
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707107	0.707107
76	374	69	1001	2	1	1	1	0	2	2	18	1.25000	0.0			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
77	342	343	1001	3	1	1	2	1	3	3	9	16.00000	0.0			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
78	343	40	1001	3	1	1	2	2	3	3	9	13.50000	0.0			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  27 AND EQUALS 0.29750E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  55 AND EQUALS 0.17384E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  55 AND EQUALS 0.15840E 09
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  27 AND EQUALS 0.46516E 03

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    7.17 ** LAST STEP "SELT" TIME IS    6.58 ** DELTA TIME IS    0.59 *
* ELAPSED SECONDS                           249.5                                176.7                      72.8 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.23437500E-01	0.0	0.0	0.0	0.0	0.0
3	-0.34553563E 05	0.0	0.0	0.0	0.0	0.0
4	0.34553563E 05	0.0	0.0	0.0	0.0	0.0
5	0.32051689E 04	-0.80693398E 04	0.21606688E 05	0.0	0.0	0.0
6	0.78125000E-02	0.0	0.0	0.0	0.0	0.0
8	0.78125000E-02	0.0	0.0	0.0	0.0	0.0
10	0.80073086E 04	-0.16878887E 05	0.0	0.0	0.0	-0.11523438E 00
11	-0.20977036E 04	0.19587700E 04	0.0	0.0	0.0	0.0
13	-0.73380547E 04	0.18551863E 05	0.0	0.0	0.0	0.36254883E 00
15	0.16471371E 05	0.39765297E 05	0.0	0.0	0.0	0.0
16	0.39765297E 05	-0.30743500E 05	0.0	0.0	0.0	0.0
17	0.0	0.47214875E 05	0.0	0.0	0.0	0.0
18	-0.34553570E 05	0.0	0.0	0.0	0.0	0.0
20	-0.19940340E 05	0.19940246E 05	0.0	0.0	0.0	0.13183594E-01
23	0.0	-0.21683055E 05	0.0	0.0	0.0	0.0
24	-0.10986953E 05	0.0	0.0	0.0	0.0	0.0
25	0.53885195E 05	0.0	0.0	0.0	0.0	0.0
26	0.14750770E 05	0.14750977E 05	0.0	0.0	0.0	-0.10498047E-01
29	0.0	-0.13338383E 05	0.0	0.0	0.0	0.0
30	0.17783578E 05	-0.28858801E 04	0.0	0.0	0.0	0.0
32	0.19940176E 05	0.19939242E 05	0.0	0.0	0.0	0.30224609E 00
34	0.18670469E 05	0.0	0.0	0.0	0.0	0.0
37	-0.12063801E 05	0.0	-0.12063555E 05	0.0	-0.10009766E-01	0.0
51	0.0	-0.14412073E 04	0.61061914E 04	0.48843384E-01	0.0	0.0
54	0.0	0.78214426E 01	0.37558228E 03	0.0	0.0	0.0
55	0.0	0.12841254E 02	0.0	0.0	0.0	0.0
57	-0.12063355E 05	0.12035301E 05	0.81594507E 03	0.15153275E-03	0.24467139E-02	-0.33857822E-01
60	0.12063234E 05	0.0	-0.12063297E 05	0.0	-0.95214844E-02	0.0
64	0.0	-0.12063297E 05	0.12063336E 05	0.19775391E-01	0.0	0.0
67	0.0	0.12062820E 05	0.12063398E 05	-0.91552734E-01	0.0	0.0
69	0.0	0.0	0.31999998E-01	0.0	0.0	0.0
71	-0.24486207E 05	-0.24486574E 05	0.0	0.0	0.0	-0.37841797E-01
75	0.0	0.24486289E 05	0.24486504E 05	-0.51269531E-01	0.0	0.0
78	0.0	-0.17605406E 05	0.0	0.0	0.0	0.0
79	0.0	0.17605406E 05	0.0	0.0	0.0	0.0
341	-0.18670469E 05	0.0	0.0	0.0	0.0	0.0
342	0.0	0.0	0.47715930E 05	0.0	0.0	0.0
344	-0.32051689E 04	0.0	-0.25641355E 05	0.0	0.0	0.0
345	-0.19803824E 05	-0.93415156E 04	0.0	0.0	0.0	-0.10376626E 04
346	0.19762465E 05	0.94276563E 04	0.0	0.0	0.0	0.10377896E 04
347	-0.29177035E 05	-0.13692730E 05	0.0	0.0	0.0	0.94132104E 03
348	-0.39067954E 04	0.99748242E 04	0.0	0.0	0.0	-0.94169678E 03
349	-0.17783578E 05	-0.53350742E 05	0.0	0.0	0.0	0.0
350	0.14100055E 05	0.22197035E 05	0.0	0.0	0.0	-0.27974976E 04
351	-0.25018426E 05	0.14100336E 05	0.0	0.0	0.0	0.27972139E 04
352	0.0	0.0	-0.51851813E 05	0.0	0.0	0.0
353	0.11571738E 05	0.0	-0.85301172E 04	0.0	-0.84618018E 03	0.0
354	-0.85297344E 04	0.0	0.11571871E 05	0.0	0.84619678E 03	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
355	0.0	-0.56236672E 05	0.0	0.0	0.0	0.0
356	0.12357012E 05	0.14099855E 05	0.0	0.0	0.0	-0.27973877E 04
357	-0.14099715E 05	-0.12357059E 05	0.0	0.0	0.0	0.27973933E 04
358	-0.11843594E 05	0.10430656E 05	0.0	0.0	0.0	0.13796084E 04
359	0.10431199E 05	-0.11843246E 05	0.0	0.0	0.0	-0.13796082E 04
360	0.20118348E 05	-0.17314688E 05	0.0	0.0	0.0	0.34352021E 04
361	-0.17315164E 05	0.20118211E 05	0.0	0.0	0.0	-0.34351865E 04
362	0.0	-0.20118391E 05	0.17314711E 05	0.34352048E 04	0.0	0.0
363	0.0	0.17315133E 05	-0.20118164E 05	-0.34351721E 04	0.0	0.0
364	0.0	-0.17428590E 05	-0.52079336E 04	0.90948654E 02	0.0	0.0
365	0.0	0.17917340E 05	0.31364131E 04	-0.90997726E 02	0.0	0.0
367	-0.85301094E 04	-0.11545258E 05	-0.78270776E 03	0.0	-0.57235703E 02	0.84423950E 03
368	0.11571668E 05	0.85110898E 04	0.57700903E 03	-0.15153371E-03	0.57233963E 02	-0.84421606E 03
369	-0.11571762E 05	0.0	-0.85301094E 04	0.0	0.84617749E 03	0.0
370	0.85303164E 04	0.0	0.11571609E 05	0.0	-0.84617676E 03	0.0
371	0.0	-0.85300586E 04	-0.11571848E 05	0.84616528E 03	0.0	0.0
372	0.0	0.11571555E 05	0.85302969E 04	-0.84619263E 03	0.0	0.0
373	0.0	-0.11571445E 05	0.85302383E 04	0.84621436E 03	0.0	0.0
374	0.0	0.85304102E 04	0.73308125E 06	-0.84613086E 03	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS   10.58 ** LAST STEP "EDIT" TIME IS    7.17 ** DELTA TIME IS    3.41 *
* ELAPSED SECONDS                           981.4                                249.5                     731.9 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS   10.63 ** LAST STEP "SLVR" TIME IS   10.58 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           985.2                                981.4                       3.8 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	-0.057772841	-0.012109641	0.008043464	-0.000124514	0.000900811	0.001398199
3	-0.055861056	-0.009244762	0.006207235	-0.000120323	0.000909970	0.001372845
4	-0.051503539	-0.003115318	0.002123231	-0.000119476	0.000889555	0.001316282
5	-0.051589295	-0.005602289	0.005875256	-0.000120878	0.000923187	0.001227284
6	-0.049116619	0.0	0.0	-0.000120835	0.000783658	0.001064642
7	-0.021905772	-0.003459598	-0.006831609	-0.000136329	-0.000148751	-0.000639218
8	0.005305067	0.0	0.0	-0.000151824	-0.000175165	0.001550200
10	0.009478301	0.008903880	0.000640723	-0.000153966	-0.000117337	0.002084146
11	0.003431330	0.021804497	0.000286720	-0.000137534	-0.000046040	0.001744067
13	0.003241641	0.029468507	-0.000084986	-0.000110826	0.000002658	0.000249162
15	0.015761267	0.023169853	-0.000224282	-0.000090648	0.000011657	-0.001311851
16	0.014682349	0.018226411	-0.000069764	-0.000087148	0.000010489	-0.001542768
17	0.009594921	0.015686203	0.000055379	-0.000016937	-0.000002615	-0.000011591
18	0.006620180	0.012936343	0.000075810	-0.000014788	-0.000004302	0.000321177
20	-0.002110437	0.004858807	0.000003294	-0.000001331	-0.000006494	0.000800348
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	-0.001708874	0.0	0.0	0.0	0.0
24	0.012395125	0.014471050	0.000093860	-0.000015455	-0.000001725	0.000255380
25	0.013591744	0.014833495	0.000095642	-0.000015264	-0.000001346	0.000270197
26	0.020022687	0.006538957	0.000021295	0.000002399	0.000010532	-0.003592546
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	-0.000732375	0.0	0.0	0.0	0.0
30	0.021189053	0.022071194	-0.000423009	-0.000088657	0.000008839	-0.001658971
32	0.024536084	0.024958640	-0.000612961	-0.000088072	0.000007107	-0.001685812
34	0.003909964	0.008285742	-0.001633758	0.000158490	0.000027297	0.001707651
35	-0.000825346	0.0	0.0	0.000151251	0.000259567	0.001475847
37	-0.027154263	-0.000484824	-0.006907571	-0.000093744	0.005777381	-0.000353422
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.000163358	-0.000106393	0.001677812
51	-0.050765555	-0.001366484	0.007130265	-0.000230096	0.000855729	-0.000585494
53	0.0	0.019101642	0.0	-0.000196773	0.000877178	-0.002482488
54	0.025660869	0.042497169	0.001044923	0.000144920	0.000899699	0.000216958
55	0.0	0.065885901	0.0	-0.000253093	0.000861719	0.001558895
57	-0.012477051	0.080246150	-0.003355764	-0.000137678	0.000978809	-0.000377778
60	0.012864783	0.018465180	-0.016031761	0.001465293	-0.000654878	-0.002646945
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	-0.019223161	0.017206948	0.001488473	0.0	0.0
67	0.0	-0.000231219	0.033733569	0.000026528	0.0	0.0
69	0.0	0.0	0.031999998	0.0	0.0	0.0
71	-0.077062488	-0.007772963	0.016301129	-0.000164915	-0.000479555	-0.003068257
73	-0.054216992	-0.000521803	0.014918350	-0.000279807	-0.001364595	-0.004351147
75	-0.023240529	0.005818408	0.011536364	-0.000600483	-0.002379873	-0.003980201
77	0.0	0.0	0.0	0.0	0.0	0.0
78	0.010431997	0.023974951	-0.000542416	-0.000029457	0.000882401	-0.001706118
79	0.015427522	0.026902582	-0.000606836	-0.000014690	0.000882983	-0.001626221
341	0.000035424	0.001568301	-0.000808079	0.000159448	0.000368205	0.001634861
342	0.002007420	0.004809383	-0.001092654	0.000162288	0.000018860	0.001677812
343	0.001364250	0.002204711	-0.000500028	0.000163133	-0.000080162	0.001677812
344	-0.053681806	-0.006150175	0.004153337	-0.000119179	0.000906189	0.001342767
345	0.009160832	0.007418204	0.000587144	-0.000154019	-0.000119917	0.002062699

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	0.009114064	0.010403786	0.000638038	-0.000153671	-0.000114602	0.002101214
347	0.002874981	0.029031556	-0.000050216	-0.000111749	0.000001509	0.000307004
348	0.003750156	0.029699393	-0.000098638	-0.000109912	0.000003639	0.000189087
349	0.015300732	0.020770077	-0.000146542	-0.000088749	0.000010786	-0.001494075
350	0.023116883	0.023164470	-0.000522363	-0.000088478	0.000008095	-0.001681440
351	0.024262950	0.027185008	-0.000644699	-0.000087546	0.000006316	-0.001672298
352	0.001995595	0.004890505	-0.001573662	0.000162162	0.000033519	0.001677812
353	-0.027920738	-0.000694989	-0.010176834	-0.000092594	0.005697824	-0.000358364
354	-0.024232373	-0.000356846	-0.005100507	-0.000094516	0.005835891	-0.000347272
355	0.009534489	0.013736617	0.000087431	-0.000015907	-0.000002904	0.000156572
356	-0.001452830	0.006192926	0.000010101	-0.000001894	-0.000006935	0.000830746
357	-0.001675313	0.003457190	0.000001377	-0.000000929	-0.000005884	0.000751563
358	0.020409588	0.009305935	0.000029687	0.000002034	0.000010765	-0.003418502
359	0.017591164	0.004754912	0.000016260	0.000002656	0.000010196	-0.003730693
360	-0.077368617	-0.011386190	0.016856309	-0.000167470	-0.000442229	-0.002948262
361	-0.074136198	-0.005365588	0.015915412	-0.000163421	-0.000525077	-0.003180751
362	-0.028593369	0.005048547	0.012591962	-0.000581052	-0.002330042	-0.004054200
363	-0.018912882	0.005586687	0.010231197	-0.000616624	-0.002411387	-0.003879426
364	-0.050911605	-0.001539163	0.007109951	-0.000229099	0.000856619	-0.000575058
365	-0.050645817	-0.001193675	0.007110056	-0.000231095	0.000855424	-0.000595510
366	0.012959722	0.025438767	-0.000580189	-0.000021710	0.000882692	-0.001665549
367	-0.012916774	0.079805195	-0.003101151	-0.000142446	0.000976553	-0.000348833
368	-0.011860028	0.080252767	-0.003891363	-0.000131807	0.000980904	-0.000406942
369	0.012490377	0.020195872	-0.016589642	0.001458358	-0.000640717	-0.002659815
370	0.012726232	0.017104287	-0.015368614	0.001470719	-0.000668426	-0.002631085
371	0.0	-0.018645532	0.016361248	0.001492723	0.0	0.0
372	0.0	-0.019032568	0.018210169	0.001483531	0.0	0.0
373	0.0	-0.000755158	0.033931445	0.000036419	0.0	0.0
374	0.0	-0.000006685	0.033220500	0.000017127	0.0	0.0

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	-172.	-458.	47.	-86.	14.	-63.	1.00	82.	329.	411.
			3	172.	458.	-47.	-7.	-14.	-281.	2.10	82.	1812.	1894.
2	TEE	1	3	47.	-458.	172.	281.	14.	-7.	2.10	52.	578.	630.
			344	-47.	458.	-172.	-668.	-14.	112.	2.10	52.	663.	715.
3	TEE	1	4	-43.	-483.	189.	-630.	-4.	-311.	2.10	52.	1444.	1496.
			344	43.	483.	-189.	205.	4.	214.	2.10	52.	290.	342.
4	TEE	1	5	-25.	-0.	-17.	-40.	-457.	51.	2.10	52.	948.	1000.
			344	25.	0.	17.	75.	457.	-102.	2.10	58.	13717.	13775.
5	TAN	1	4	-189.	-483.	43.	311.	-4.	630.	2.10	82.	4524.	4606.
			6	189.	483.	-43.	-418.	4.	-1102.	1.00	82.	3615.	3697.
6	TAN	1	6	41.	-483.	-10.	418.	-4.	1102.	1.00	82.	3615.	3697.
			7	-41.	483.	10.	-145.	4.	73.	1.00	82.	498.	580.
7	TAN	1	7	41.	-483.	-10.	145.	-4.	-73.	1.00	82.	498.	580.
			8	-41.	483.	10.	129.	4.	1249.	1.00	82.	3850.	3932.
8	TAN	1	8	-78.	-483.	5.	-129.	-4.	-1249.	1.00	82.	3850.	3932.
			345	78.	483.	-5.	107.	4.	935.	2.10	82.	6061.	6143.
9	BEND	1	345	-78.	-5.	-483.	-107.	935.	-4.	2.10	60.	2399.	2459.
			10	277.	5.	403.	94.	-816.	-42.	2.10	60.	2095.	2155.
10	BEND	1	10	-277.	-5.	-403.	-94.	816.	42.	2.10	60.	2095.	2155.
			346	423.	5.	245.	64.	-579.	-77.	2.10	60.	1498.	1558.
11	TAN	1	346	423.	-245.	-5.	64.	77.	579.	2.10	82.	3785.	3867.
			11	-423.	245.	5.	-34.	-77.	1713.	1.00	82.	5259.	5341.
12	TAN	1	11	387.	-299.	-5.	44.	72.	-1713.	1.00	82.	5259.	5341.
			347	-387.	299.	5.	-18.	-72.	3536.	2.10	82.	22769.	22851.
13	BEND	1	347	387.	5.	-299.	18.	3536.	72.	2.10	52.	7266.	7318.
			13	-250.	-5.	420.	-40.	-3718.	-61.	2.10	52.	7640.	7692.
14	BEND	1	13	250.	5.	-420.	40.	3718.	61.	2.10	52.	7640.	7692.
			348	-78.	-5.	483.	-57.	-3812.	-42.	2.10	52.	7832.	7884.
15	TAN	1	348	-78.	-483.	5.	-57.	42.	3812.	1.00	52.	3730.	3782.
			15	78.	483.	-5.	-11.	-42.	-4775.	1.00	52.	4672.	4724.

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	286.	-396.	5.	-22.	38.	4775.	2.10	52.	9811.	9863.
			349	-286.	396.	-5.	14.	-38.	-4370.	2.10	52.	4276.	4328.
17	TEE	1	16	-659.	-798.	4.	20.	26.	756.	2.10	52.	1554.	1607.
			349	659.	798.	-4.	-26.	-26.	-1688.	2.10	52.	1652.	1704.
18	TEE	1	30	-526.	154.	2.	-10.	-16.	1019.	2.10	52.	2093.	2145.
			349	526.	-154.	-2.	5.	16.	-2683.	2.10	52.	2624.	2677.
19	TAN	1	30	-548.	-21.	-2.	-5.	-18.	-1019.	1.00	52.	997.	1049.
			350	548.	21.	2.	6.	18.	405.	1.00	52.	397.	449.
20	BEND	1	350	548.	-2.	-21.	6.	-405.	-18.	2.10	60.	1034.	1094.
			32	-373.	2.	402.	7.	-167.	18.	2.10	60.	428.	488.
21	BEND	1	32	373.	-2.	-402.	-7.	167.	-18.	2.10	60.	428.	488.
			351	21.	2.	548.	16.	-385.	9.	2.10	60.	983.	1043.
22	TAN	1	351	21.	-548.	-2.	16.	-9.	385.	2.10	58.	11487.	11545.
			34	-21.	548.	2.	18.	9.	72.	2.10	58.	2225.	2283.
23	TEE	1	34	2.	-548.	21.	72.	-9.	-18.	2.10	39.	544.	583.
			352	-2.	548.	-21.	-113.	9.	21.	2.10	39.	404.	443.
24	TEE	1	341	768.	-607.	20.	-154.	6.	-272.	2.10	39.	2273.	2312.
			352	-768.	607.	-20.	113.	-6.	1807.	2.10	39.	6274.	6313.
25	TEE	1	342	-60.	-769.	1.	15.	0.	1757.	2.10	39.	12782.	12821.
			352	60.	769.	-1.	-15.	-0.	-1786.	2.10	117.	550.	667.
26	TAN	1	341	20.	-607.	768.	-272.	6.	-154.	2.10	58.	9300.	9358.
			35	-20.	607.	-768.	-496.	-6.	174.	1.00	58.	7444.	7502.
27	TAN	1	35	-7.	-607.	-46.	496.	6.	-174.	1.00	58.	7444.	7502.
			353	7.	607.	46.	872.	-6.	-47.	2.10	58.	25985.	26043.
28	BEND	1	353	46.	7.	-607.	-47.	872.	6.	2.10	39.	6352.	6390.
			37	397.	-7.	462.	32.	-763.	-39.	2.10	39.	5561.	5600.
29	BEND	1	37	-397.	7.	-462.	-32.	763.	39.	2.10	39.	5561.	5600.
			354	607.	-7.	46.	-1.	-451.	-52.	2.10	39.	3301.	3340.
30	TAN	1	354	-607.	-46.	-7.	1.	52.	-451.	2.10	58.	13504.	13562.
			39	607.	46.	7.	38.	-52.	-2738.	1.00	58.	38817.	38875.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	1030.	-98.	4.	-33.	4.	756.	1.00	58.	10726.	10784.
			17	-1030.	98.	-4.	22.	-4.	1954.	1.00	58.	27697.	27755.
32	TEE	1	17	-1030.	-98.	-4.	22.	4.	1954.	2.10	52.	4014.	4066.
			355	1030.	98.	4.	-14.	-4.	-4014.	2.10	52.	3927.	3979.
33	TEE	1	18	-250.	-292.	-2.	-13.	-10.	1572.	2.10	52.	3229.	3282.
			355	250.	292.	2.	20.	10.	-2323.	2.10	52.	2272.	2324.
34	TEE	1	24	349.	-1322.	2.	12.	4.	-646.	2.10	52.	1328.	1380.
			355	-349.	1322.	-2.	-16.	-4.	1692.	2.10	52.	1655.	1707.
35	TAN	1	18	250.	-292.	-2.	13.	-10.	1572.	2.10	82.	10120.	10202.
			356	-250.	292.	2.	7.	10.	525.	2.10	82.	3382.	3463.
36	BEND	1	356	-250.	-2.	-292.	7.	-525.	-10.	2.10	60.	1339.	1399.
			20	383.	2.	29.	-1.	919.	14.	2.10	60.	2341.	2401.
37	BEND	1	20	-383.	-2.	-29.	1.	-919.	-14.	2.10	60.	2341.	2401.
			357	292.	2.	-250.	7.	1338.	11.	2.10	60.	3410.	3470.
38	TAN	1	357	-292.	250.	2.	-7.	-11.	1338.	2.10	82.	8614.	8695.
			22	292.	-250.	-2.	-2.	11.	-2359.	1.00	82.	7231.	7312.
39	TAN	1	22	0.	-0.	0.	0.	0.	0.	1.00	82.	0.	82.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	-349.	-1322.	2.	-12.	4.	-646.	2.10	39.	1125.	1164.
			25	349.	1322.	-2.	10.	-4.	210.	2.10	35.	478.	513.
41	TAN	1	25	-349.	-1322.	2.	-10.	4.	-210.	1.00	62.	1600.	1661.
			358	349.	1322.	-2.	-2.	-4.	-2491.	1.00	62.	18916.	18977.
42	BEND	1	358	349.	2.	-1322.	-2.	2491.	4.	2.10	46.	11900.	11946.
			26	688.	-2.	1181.	-0.	-2350.	-5.	2.10	46.	11228.	11274.
43	BEND	1	26	-688.	2.	-1181.	0.	2350.	5.	2.10	46.	11228.	11274.
			359	1322.	-2.	349.	-3.	-1517.	-4.	2.10	46.	7250.	7296.
44	TAN	1	359	1322.	-349.	2.	-3.	4.	1517.	1.00	62.	11524.	11585.
			28	-1322.	349.	-2.	-5.	-4.	5092.	1.00	62.	38672.	38734.
45	TAN	1	28	0.	-0.	0.	0.	0.	0.	1.00	62.	0.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	172.	-458.	47.	86.	14.	-63.	1.00	82.	329.	411.
			360	-172.	458.	-47.	-1042.	-14.	3587.	2.10	82.	24047.	24129.
47	BEND	1	360	172.	-47.	-458.	1042.	3587.	14.	2.10	52.	7674.	7726.
			71	202.	47.	445.	-796.	-3568.	747.	2.10	52.	7666.	7718.
48	BEND	1	71	-202.	-47.	-445.	796.	3568.	-747.	2.10	52.	7666.	7718.
			361	458.	47.	172.	-84.	-3159.	1112.	2.10	52.	6881.	6933.
49	TAN	1	361	-458.	-172.	47.	84.	-1112.	-3159.	2.10	82.	21564.	21646.
			73	458.	172.	-47.	-317.	1112.	871.	1.00	82.	4437.	4519.
50	TAN	1	73	-458.	-172.	47.	317.	-1112.	-871.	1.00	82.	4437.	4519.
			362	458.	172.	-47.	-585.	1112.	-1760.	2.10	82.	13920.	14002.
51	BEND	1	362	47.	-458.	-172.	1760.	585.	-1112.	2.10	52.	4442.	4494.
			75	89.	458.	155.	-944.	-559.	2232.	2.10	52.	5108.	5160.
52	BEND	1	75	-89.	-458.	-155.	944.	559.	-2232.	2.10	52.	5108.	5160.
			363	172.	458.	47.	425.	-397.	2446.	2.10	52.	5166.	5218.
53	TAN	1	363	-458.	-47.	-172.	397.	-2446.	-425.	2.10	82.	16188.	16270.
			77	458.	47.	172.	1408.	2446.	-4379.	2.10	82.	33538.	33620.
54	TAN	2	5	-25.	-17.	4.	16.	-159.	-433.	1.00	58.	6541.	6599.
			364	25.	17.	-4.	-35.	159.	325.	2.10	58.	10833.	10892.
55	BEND	2	364	4.	-25.	-17.	-325.	35.	-159.	2.10	39.	2648.	2687.
			51	-0.	25.	17.	349.	-36.	81.	2.10	39.	2619.	2658.
56	BEND	2	51	0.	-25.	-17.	-349.	36.	-81.	2.10	39.	2619.	2658.
			365	4.	25.	17.	354.	-36.	-1.	2.10	39.	2587.	2626.
57	TAN	2	365	-25.	-17.	-4.	36.	1.	-354.	2.10	58.	10585.	10643.
			53	25.	17.	4.	39.	-1.	-167.	1.00	58.	2436.	2494.
58	TAN	2	53	3.	-17.	2.	-39.	1.	167.	1.00	58.	2436.	2494.
			78	-3.	17.	-2.	30.	-1.	-152.	2.10	58.	4615.	4673.
59	TAN	2	78	3.	-17.	2.	-30.	1.	152.	2.10	37.	1224.	1262.
			366	-3.	17.	-2.	27.	-1.	-148.	2.10	37.	1185.	1222.
60	TAN	2	366	3.	-17.	2.	-27.	1.	148.	2.10	37.	1185.	1222.
			79	-3.	17.	-2.	25.	-1.	-143.	2.10	37.	1145.	1183.

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	3.	-17.	2.	-25.	1.	143.	2.10	58.	4317.	4375.
			54	-3.	17.	-2.	-4.	-1.	-94.	1.00	58.	1335.	1393.
62	TAN	2	54	3.	-17.	1.	4.	-3.	94.	1.00	58.	1335.	1393.
			55	-3.	17.	-1.	-30.	3.	-21.	1.00	58.	519.	577.
63	TAN	2	55	23.	-17.	-5.	30.	-1.	21.	1.00	58.	519.	577.
			367	-23.	17.	5.	46.	1.	301.	2.10	58.	9067.	9125.
64	BEND	2	367	23.	5.	-17.	-46.	301.	-1.	2.10	39.	2216.	2255.
			57	-4.	-5.	29.	36.	-309.	-33.	2.10	39.	2280.	2318.
65	BEND	2	57	4.	5.	-29.	-36.	309.	33.	2.10	39.	2280.	2318.
			368	17.	-5.	23.	5.	-305.	-50.	2.10	39.	2251.	2290.
66	TAN	2	368	17.	-23.	7.	-16.	50.	305.	2.10	58.	9210.	9268.
			369	-17.	23.	-7.	-149.	-50.	119.	2.10	58.	5884.	5942.
67	BEND	2	369	7.	17.	-23.	-119.	149.	50.	2.10	39.	1438.	1477.
			60	12.	-17.	21.	58.	-148.	-124.	2.10	39.	1464.	1503.
68	BEND	2	60	-12.	17.	-21.	-58.	148.	124.	2.10	39.	1464.	1503.
			370	23.	-17.	7.	-38.	-137.	-132.	2.10	39.	1412.	1451.
69	TAN	2	370	23.	-7.	17.	-38.	132.	137.	2.10	58.	5776.	5834.
			62	-23.	7.	-17.	-230.	-132.	224.	1.00	58.	4922.	4980.
70	TAN	2	62	0.	3.	16.	-224.	0.	0.	1.00	58.	3169.	3227.
			371	0.	-3.	-16.	-40.	0.	0.	2.10	58.	1197.	1255.
71	BEND	2	371	16.	0.	3.	0.	40.	0.	2.10	39.	293.	331.
			64	-13.	0.	9.	0.	-49.	0.	2.10	39.	358.	396.
72	BEND	2	64	13.	0.	-9.	0.	49.	0.	2.10	39.	358.	396.
			372	-3.	0.	16.	0.	-54.	0.	2.10	39.	393.	432.
73	TAN	2	372	0.	-16.	3.	54.	0.	0.	2.10	58.	1609.	1667.
			373	0.	16.	-3.	-105.	0.	0.	2.10	58.	3118.	3176.
74	BEND	2	373	3.	0.	-16.	0.	105.	0.	2.10	39.	762.	801.
			67	9.	0.	13.	0.	-103.	0.	2.10	39.	747.	786.
75	BEND	2	67	-9.	0.	-13.	0.	103.	0.	2.10	39.	747.	786.
			374	16.	0.	3.	0.	-95.	0.	2.10	39.	691.	730.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	-3.	-16.	95.	0.	0.	1.00	39.	329.	368.
			69	0.	3.	16.	-75.	0.	0.	1.00	39.	261.	300.
77	TAN	3	342	60.	-769.	1.	-15.	0.	1757.	2.10	0.	1136.	1136.
			343	-60.	769.	-1.	7.	-0.	-804.	1.00	0.	247.	247.
78	TAN	3	343	60.	-769.	1.	-7.	0.	804.	1.00	0.	247.	247.
			40	-60.	769.	-1.	0.	-0.	-0.	2.10	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: UPSET THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	360	-0.077368617	-0.011386190	0.016856309
2	368	-0.011860028	0.080252767	-0.003891363
3	373	0.0	-0.000755158	0.033931445

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	30	38817.	30	38875.
2	54	10833.	54	10892.
3	77	1136.	77	1136.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	0.	230.	-53.	0.	0.	0.
8	0.	-119.	15.	0.	-0.	-0.
22	292.	-250.	-2.	-2.	11.	-2359.
28	-1322.	349.	-2.	-5.	-4.	5092.
35	-0.	-28.	814.	0.	0.	0.
39	607.	7.	-46.	38.	-2738.	52:
40	-60.	-1.	-769.	0.	-0.	0.
53	28.	0.	-5.	-0.	-0.	-0.
55	20.	0.	8.	0.	0.	-0.
62	-23.	-1.	-9.	-453.	224.	132.
69	0.	-16.	3.	-75.	0.	0.
77	458.	-172.	47.	1408.	4379.	2446.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS   11.61 ** LAST STEP "UPDT" TIME IS   10.63 ** DELTA TIME IS    0.98 *
* ELAPSED SECONDS                          1209.1                               985.2                     223.9 *
* CPU SECONDS ** THIS STEP "BEGP" TIME IS   11.64 ** LAST STEP "ST3D" TIME IS   11.61 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                          1209.8                              1209.1                       0.7 *
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START NC3600 NO PRODUCTION NO TAPE 31
WPPSS OUTLET AND BALANCE LINES
GEOMETRY
WPPSS OUTLET AND BALANCE LINES
COORDINATE INCHES
2 0 5 0
3 2 5 0
4 6.5 5 0
5 4.5 5 2
6 9 5 0
7 37.5 5 0
8 66 5 0
10 70.75 5 0
11 74.63 9.75 0
13 78.5 13.38 0
15 91.5 13.38 0
16 93.5 11.38 0
17 93.5 8.75 0
18 90.5 6.75 0
20 80.62 6.75 0
22 80.62 1.75 0
23 80.62 0 0
24 96.5 6.75 0
25 97.75 6.75 0
26 106.5 6.75 0
28 106.5 .75 0
29 106.5 0 0
30 93.5 15.38 0
32 93.5 18 0
34 69.81 18 0
35 64.81 18 0
37 34.31 18 0
39 34.31 18 6
40 67.81 18 30
51 4.5 9 4
53 4.5 30 4
54 4.5 54 4
55 4.5 78 3
57 4.5 92.75 4
60 31 92.75 4
62 31 92.75 20.5
64 31 92.75 38
67 31 113 38
69 31 113 36
71 -22 5 0
73 -22 11.5 0
75 -22 18.75 0
77 -22 18.75 -12
78 4.5 35 4
79 4.5 38 4
341 65.81 18 0
342 67.81 18 .5
343 67.81 18 16.5
BOUNDARY
6 YZSTOP
77 ANCHOR
8 YZSTOP
22 ANCHOR
28 ANCHOR
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35 YZSTOP
39 ANCHOR
40 SPECIAL 1 1 1 0 0 0
53 ZXSTOP
55 ZXSTOP
62 ANCHOR
69 ANCHOR
MATERIAL 1.5
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL .75
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL 4.0
70 28300000 .3 .0000091
75 28300000 .3 .0000091
SIF
100 1 1 1
101 2.1 2.1 1
BRANCH 1 1.5 25 1
RUN 2 3 1.9 .145 .23 2
TEE RUN 1 3 WELDED 101
FULL 2.5 .30 .42
TEE RUN 1 4 WELDED 101
FULL
TEE BRANCH 1 5 WELDED 101
REDUCED 2.5 .30 .42 1.05 .113 .092
RUN 4 6 1.9 .145 .23 1
RUN 6 7 1.9 .145 .23 0
RUN 7 8
RUN 8 0  1.9 .145 .23 2
ELBOW 10 1.5 2.4 .25 .42 0 101
RUN 0 11 1.9 .145 .23 1
RUN 11 0 1.9 .145 .23 2
ELBOW 13 1.5 2.5 .30 .42 0 101
RUN 0 15
TEE RUN 2 15 WELDED 101
FULL 2.5 .30 .42
TEE RUN 2 16 WELDED 101
FULL
TEE BRANCH 2 30 WELDED 101
FULL
RUN 30 0
ELBOW 32 1.5 2.4 .25 .42 0 101
RUN 0 34 1.05 .113 .09 3
TEE RUN 3 34 WELDED 101
FULL 1.55 .25 .26
TEE RUN 3 341 WELDED 101
FULL
TEE BRANCH 3 342 WELDED 101
REDUCED 1.55 .25 .42 4.5 .24 .9
RUN 341 35 1.05 .113 .09 1
RUN 35 0 1.05 .113 .09 2
ELBOW 37 .75 1.55 .25 .26 0 101
RUN 0 39 1.05 .113 .09 1
RUN 16 17
TEE BRANCH 4 17 WELDED 101
FULL  2.5 .30 .42
TEE RUN 4 18 WELDED 101
FULL
```

```
TEE RUN 4 24 WELDED 101
FULL
RUN 18 0 1.9 .145 .23 3
ELBOW 20 1.5 2.4 .25 .42 0 101
RUN 0 22 1.9 .145 .23 1
RUN 22 23 1.9 .145 .23 0
REDUCER 24 25 2.5 .4 2.25 .4 1 101
RUN 25 0  1.31 .133 .14 0
ELBOW 26 1.0 1.84 .25 .44 0 101
RUN 0 28 1.31 .133 .14 0
RUN 28 29 1.31 .133 .14 0
RUN 2 0  1.9 .145 .23 2
ELBOW 71 1.5 2.5 .30 .42 0 101
RUN 0 73 1.9 .145 .23 1
RUN 73 0 1.9 .145 .23 2
ELBOW 75 1.5 2.5 .30 .42 0 101
RUN 0 77 1.9 .145 .23 3
BRANCH 2 .75 25 2
RUN 5 0 1.05 .113 .094 2
ELBOW 51 .75 1.55 .25 .3 0 101
RUN 0 53 1.05 .113 .094 1
RUN 53 78 1.05 .113 .094 2
VALVE 78 79 1.5 .25 4 3
RUN 79 54 1.05 .113 .094 1
RUN 54 55 1.05 .113 .094 0
RUN 55 0  1.05 .113 .094 2
ELBOW 57 .75 1.55 .25 .3 0 101
RUN 0 0 1.05 .113 .094 3
ELBOW 60 .75 1.55 .25 .3 0 101
RUN 0 62 1.05 .113 .094 1
RUN 62 0 1.05 .113 .094 2
ELBOW 64 .75 1.55 .25 .3 0 101
RUN 0 0  1.05 .113 .094 3
ELBOW 67 .75 1.55 .25 .3  0 101
RUN 0 69
BRANCH 3 4.0 0 3
RUN 342 343 4.5 .24 .9 1
RUN 343 40 4.5 .24 .9 2
LOAD 1
DESIGN
DEADWEIGHT -Z 1.0
FORCE 343 0 0 90
LOAD 2
VERTICAL +Z
DEADWEIGHT +Z 1.0
FORCE 343 0 0 90
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
FORCE 343 90
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
FORCE 343 90
LOAD 5
HORIZONTAL +Y
DEADWEIGHT +Y 1.0
FORCE 343 0 90
LOAD 6
HORIZONTAL -Y
```

```
DEADWEIGHT -Y 1.0
FORCE 343 0 90
SUPERPOSITION
GROUP-7D
16 2 1 -4
OBE + SRV XZ
3
1 1.0 2 1.04 3 .8
OBE + SRV X-Z
2
1 2.04 3 .8
OBE + SRV YZ
3
1 1.0 2 1.04 5 .8
OBE + SRV Y-Z
2
1 2.04 5 .8
OBE + SRV -XZ
3
1 1.0 2 1.04 4 .8
OBE + SRV -X-Z
2
1 2.04 4 .8
OBE + SRV -YZ
3
1 1.0 2 1.04 6 .8
OBE + SRV -Y-Z
2
1 2.04 6 .8
SSE + SRV + LOCA XZ
3
1 1.0 2 1.9 3 1.3
SSE + SRV + LOCA X-Z
2
1 2.9 3 1.3
SSE + SRV + LOCA YZ
3
1 1.0 2 1.9 5 1.3
SSE + SRV + LOCA Y-Z
2
1 2.9 5 1.3
SSE + SRV + LOCA -XZ
3
1 1.0 2 1.9 4 1.3
SSE + SRV + LOCA -X-Z
2
1 2.9 4 1.3
SSE + SRV + LOCA -YZ
3
1 1.0 2 1.9 6 1.3
SSE + SRV + LOCA -Y-Z
2
1 2.9 6 1.3
END OF JOB
```

```
     1    31     0     0                                                    PD1
WPPSS OUTLET AND BALANCE LINES
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                              P 1
WPPSS OUTLET AND BALANCE LINES                                              P 2
    78    79     6     0    12    18    13     3     0     3     0     0   P 3
     6     2     0     2     1     0     0                                  P 4
     1    79    13     0     0   344     2                                  P 5
     2     0.0         5.00000     0.0          0                          P 7
     3     2.00000     5.00000     0.0          0                          P 7
     4     6.50000     5.00000     0.0          0                          P 7
     5     4.50000     5.00000     2.00000      0                          P 7
     6     9.00000     5.00000     0.0          0                          P 7
     7    37.50000     5.00000     0.0          0                          P 7
     8    66.00000     5.00000     0.0          0                          P 7
    10    70.68130     5.14475     0.0          0                          P 7
    11    74.62999     9.75000     0.0          0                          P 7
    13    78.54158    13.27482     0.0          0                          P 7
    15    91.50000    13.38000     0.0          0                          P 7
    16    93.50000    11.38000     0.0          0                          P 7
    17    93.50000     8.75000     0.0          0                          P 7
    18    90.50000     6.75000     0.0          0                          P 7
    20    81.05933     6.31066     0.0          0                          P 7
    22    80.62000     1.75000     0.0          0                          P 7
    23    80.62000     0.0         0.0          0                          P 7
    24    96.50000     6.75000     0.0          0                          P 7
    25    97.75000     6.75000     0.0          0                          P 7
    26   106.20709     6.45711     0.0          0                          P 7
    28   106.50000     0.75000     0.0          0                          P 7
    29   106.50000     0.0         0.0          0                          P 7
    30    93.50000    15.38000     0.0          0                          P 7
    32    93.06065    17.56065     0.0          0                          P 7
    34    69.81000    18.00000     0.0          0                          P 7
    35    64.81000    18.00000     0.0          0                          P 7
    37    34.52966    18.00000     0.21967      0                          P 7
    39    34.31000    18.00000     6.00000      0                          P 7
    40    67.81000    18.00000    30.00000      0                          P 7
    51     4.50000     9.00473     3.97994      0                          P 7
    53     4.50000    30.00000     4.00000      0                          P 7
    54     4.50000    54.00000     4.00000      0                          P 7
    55     4.50000    78.00000     3.00000      0                          P 7
    57     4.71967    92.53081     3.98514      0                          P 7
    60    30.78032    92.75000     4.21967      0                          P 7
    62    31.00000    92.75000    20.50000      0                          P 7
    64    31.00000    92.96967    37.78032      0                          P 7
    67    31.00000   112.78032    37.78032      0                          P 7
    69    31.00000   113.00000    36.00000      0                          P 7
    71   -21.56065     5.43934     0.0          0                          P 7
    73   -22.00000    11.50000     0.0          0                          P 7
    75   -22.00000    18.31065    -0.43934      0                          P 7
    77   -22.00000    18.75000   -12.00000      0                          P 7
    78     4.50000    35.00000     4.00000      0                          P 7
    79     4.50000    38.00000     4.00000      0                          P 7
   341    65.81000    18.00000     0.0          0                          P 7
   342    67.81000    18.00000     0.50000      0                          P 7
   343    67.81000    18.00000    16.50000      0                          P 7
   344     4.25000     5.00000     0.0          0                          P 7
   345    70.03844     5.00000     0.0          0                          P 7
   346    71.20013     5.55108     0.0          0                          P 7
```

347	78.06720	12.97404	0.0	0			P 7
348	79.09338	13.38000	0.0	0			P 7
349	92.50000	12.38000	0.0	0			P 7
350	93.50000	16.50000	0.0	0			P 7
351	92.00000	18.00000	0.0	0			P 7
352	67.81000	18.00000	0.0	0			P 7
353	35.06000	18.00000	0.0	0			P 7
354	34.31000	18.00000	0.75000	0			P 7
355	93.50000	6.75000	0.0	0			P 7
356	82.12000	6.75000	0.0	0			P 7
357	80.62000	5.25000	0.0	0			P 7
358	105.50000	6.75000	0.0	0			P 7
359	106.50000	5.75000	0.0	0			P 7
360	-20.50000	5.00000	0.0	0			P 7
361	-22.00000	6.50000	0.0	0			P 7
362	-22.00000	17.25000	0.0	0			P 7
363	-22.00000	18.75000	-1.50000	0			P 7
364	4.50000	8.84164	3.92082	0			P 7
365	4.50000	9.17705	4.00000	0			P 7
366	4.50000	36.50000	4.00000	0			P 7
367	4.50000	92.00171	3.94927	0			P 7
368	5.25000	92.75000	4.00000	0			P 7
369	30.25000	92.75000	4.00000	0			P 7
370	31.00000	92.75000	4.75000	0			P 7
371	31.00000	92.75000	37.25000	0			P 7
372	31.00000	93.50000	38.00000	0			P 7
373	31.00000	112.25000	38.00000	0			P 7
374	31.00000	113.00000	37.25000	0			P 7
390	70.03842	6.50000	0.0	0			P 7
391	79.09338	11.88000	0.0	0			P 7
392	92.00000	16.50000	0.0	0			P 7
393	35.06000	18.00000	0.75000	0			P 7
394	82.12000	5.25000	0.0	0			P 7
395	105.50000	5.75000	0.0	0			P 7
396	-20.50000	6.50000	0.0	0			P 7
397	-22.00000	17.25000	-1.50000	0			P 7
398	4.50000	9.17705	3.25000	0			P 7
399	5.25000	92.00171	3.94927	0			P 7
400	30.25000	92.75000	4.75000	0			P 7
401	31.00000	93.50000	37.25000	0			P 7
402	31.00000	112.25000	37.25000	0			P 7
1 3	1.9000	0.1450	2.0000	0.0	0.0	0.0	P11D
2 3	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
3 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
4 4	2.4000	0.2500	2.0000	0.0	0.0	0.0	P11D
5 4	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
6 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
7 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
8 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
9 3	4.5000	0.2400	2.0000	0.0	0.0	0.0	P11D
10 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
11 3	2.5000	0.4000	2.0000	0.0	0.0	0.0	P11D
12 3	2.2500	0.4000	2.0000	0.0	0.0	0.0	P11D
13 3	1.3100	0.1330	2.0000	0.0	0.0	0.0	P11D
14 4	1.8400	0.2500	2.0000	0.0	0.0	0.0	P11D
15 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
16 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
17 3	1.5000	0.2500	2.0000	0.0	0.0	0.0	P11D
18 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
1 5	2.5000	0.3000	2.5000	0.3000	0.0	0.0	P12

```
 2  5      1.5500      0.2500      1.5500      0.2500      0.0          0.0      P12
  100    1.000000    1.000000    1.000000                                        P 12.1
  101    2.099999    2.099999    1.000000                                        P 12.1
   0.230     0.420     0.092     0.420     0.420     0.090     0.260     0.420  P13
   0.900     0.260     0.800     0.800     0.140     0.440     0.094     0.300  P13
   1.333     0.300
 1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
 2  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
 3  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14
      0.75000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14A
   25.00000     0.0          0.0          0.0          0.0          0.0       P15
    1      0.0          0.0         -1.00000                                   P17
    2      0.0          0.0          1.00000                                   P17
    3      1.00000      0.0          0.0                                       P17
    4     -1.00000      0.0          0.0                                       P17
    5      0.0          1.00000      0.0                                       P17
    6      0.0         -1.00000      0.0                                       P17
 6  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0                P18
77  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
 8  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0                P18
22  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
28  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
35  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0                P18
39  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
40  0 0.100E 01 0.100E 01 0.100E 01 0.0        0.0        0.0                P18
53  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0                P18
55  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0                P18
62  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
69  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01              P18
  1   2   31002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   1                                                       P21B
  2   3 344   5   1   1   1   2   2   2   1   0   0   0   0  0.0               P21
   1  101   1   1   1   1                                                       P21B
  3   4 344   5   1   1   1   2   2   2   1   0   0   0   0  0.0               P21
   1  101   1   1   1   1                                                       P21B
  4   5 344   3   1   3   2   2   3   2   1   0   0   0   0  0.0               P21
   1  101   1   2   1   1                                                       P21B
  5   4   61002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   1   1   0   0   1                                                       P21B
  6   6   71002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                       P21B
  7   7   81002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                       P21B
  8   8 3451002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   1                                                       P21B
  9 345  10 390   1   2   1   4   4   1   1   0   0   0   0  0.0               P21
   1  101   1   0   0   1                                                       P21B
 10  10 346 390   1   2   1   4   4   1   1   0   0   0   0  0.0               P21
   1  101   1   0   0   1                                                       P21B
 11 346  111001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   1   1   0   0   1                                                       P21B
 12  11 3471001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   1                                                       P21B
 13 347  13 391   1   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1  101   1   0   0   1                                                       P21B
 14  13 348 391   1   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1  101   1   0   0   1                                                       P21B
 15 348  151002   1   1   1   2   2   1   1   0   0   0   0  0.0               P21
```

```
  1     0    1    0    0    1                                                  P21B
 16  15 349  30    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    1    1    1                                                  P21B
 17  16 349  30    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    1    1    1                                                  P21B
 18  30 349  15    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    2    1    1                                                  P21B
 19  30 3501001    1    1    1    2    2    1    1    0    0    0    0  0.0    P21
  1    0    1    0    0    1                                                  P21B
 20 350  32 392    1    2    1    4    4    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 21  32 351 392    1    2    1    4    4    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 22 351  341002    1    1    1    6    6    1    1    0    0    0    0  0.0    P21
  1    3    1    0    0    1                                                  P21B
 23  34 352 342    1    1    1    7    7    2    1    0    0    0    0  0.0    P21
  1  101    1    1    2    1                                                  P21B
 24 341 352 342    1    1    1    7    7    2    1    0    0    0    0  0.0    P21
  1  101    1    1    2    1                                                  P21B
 25 342 352  34    1    3    2    8    9    2    1    0    0    0    0  0.0    P21
  1  101    1    2    2    1                                                  P21B
 26 341  351002    1    1    1    6    6    1    1    0    0    0    0  0.0    P21
  1    1    1    0    0    1                                                  P21B
 27  35 3531002    1    1    1    6    6    1    1    0    0    0    0  0.0    P21
  1    2    1    0    0    1                                                  P21B
 28 353  37 393    1    2    1   10   10    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 29  37 354 393    1    2    1   10   10    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 30 354  391001    1    1    1    6    6    1    1    0    0    0    0  0.0    P21
  1    1    1    0    0    1                                                  P21B
 31  16  171001    1    1    1    6    6    1    1    0    0    0    0  0.0    P21
  1    0    1    0    0    1                                                  P21B
 32  17 355  18    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    2    1    1                                                  P21B
 33  18 355  17    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    1    1    1                                                  P21B
 34  24 355  17    1    1    1    2    2    2    1    0    0    0    0  0.0    P21
  1  101    1    1    1    1                                                  P21B
 35  18 3561002    1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    3    1    0    0    1                                                  P21B
 36 356  20 394    1    2    1    4    4    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 37  20 357 394    1    2    1    4    4    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 38 357  221001    1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    1    1    0    0    1                                                  P21B
 39  22  231001    1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    0    1    0    0    1                                                  P21B
 40  24  251002    1    3    2   11   12    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 41  25 3581002    1    1    1   13   13    1    1    0    0    0    0  0.0    P21
  1    0    1    0    0    1                                                  P21B
 42 358  26 395    1    2    1   14   14    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 43  26 359 395    1    2    1   14   14    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                  P21B
 44 359  281001    1    1    1   13   13    1    1    0    0    0    0  0.0    P21
  1    0    1    0    0    1                                                  P21B
 45  28  291001    1    1    1   13   13    1    1    0    0    0    0  0.0    P21
```

```
  1     0     1     0     0     1                                                  P21B
46    2 3601002     1     1     1     1     1     1     1     0     0     0     0   0.0   P21
  1     2     1     0     0     1                                                  P21B
47  360    71 396     1     2     1     5     5     1     1     0     0     0     0   0.0   P21
  1   101     1     0     0     1                                                  P21B
48   71 361 396     1     2     1     5     5     1     1     0     0     0     0   0.0   P21
  1   101     1     0     0     1                                                  P21B
49  361   731001     1     1     1     1     1     1     1     0     0     0     0   0.0   P21
  1     1     1     0     0     1                                                  P21B
50   73 3621001     1     1     1     1     1     1     1     0     0     0     0   0.0   P21
  1     2     1     0     0     1                                                  P21B
51  362    75 397     1     2     1     5     5     1     1     0     0     0     0   0.0   P21
  1   101     1     0     0     1                                                  P21B
52   75 363 397     1     2     1     5     5     1     1     0     0     0     0   0.0   P21
  1   101     1     0     0     1                                                  P21B
53  363   771001     1     1     1     1     1     1     1     0     0     0     0   0.0   P21
  1     3     1     0     0     1                                                  P21B
54    5 3641001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     2     2     0     0     2                                                  P21B
55  364    51 398     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
56   51 365 398     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
57  365   531001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     1     2     0     0     2                                                  P21B
58   53   781001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     2     2     0     0     2                                                  P21B
59   78 3661001     2     1     1    17    17     1     1     0     0     0     0   0.0   P21
  1     3     2     0     0     2                                                  P21B
60  366   791001     2     1     1    17    17     1     1     0     0     0     0   0.0   P21
  1     3     2     0     0     2                                                  P21B
61   79   541001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     1     2     0     0     2                                                  P21B
62   54   551001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     0     2     0     0     2                                                  P21B
63   55 3671001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     2     2     0     0     2                                                  P21B
64  367    57 399     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
65   57 368 399     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
66  368 3691002     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     3     2     0     0     2                                                  P21B
67  369    60 400     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
68   60 370 400     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
69  370   621001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     1     2     0     0     2                                                  P21B
70   62 3711001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     2     2     0     0     2                                                  P21B
71  371    64 401     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
72   64 372 401     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
73  372 3731001     2     1     1    15    15     1     1     0     0     0     0   0.0   P21
  1     3     2     0     0     2                                                  P21B
74  373    67 402     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
  1   101     2     0     0     2                                                  P21B
75   67 374 402     2     2     1    16    16     1     1     0     0     0     0   0.0   P21
```

```
    1  101     2     0     0     2                                                    P21B
   76 374  691001    2    1    1  18   18    1    1    0    0    0    0  0.0          P21
    1    0     2     0     0     2                                                    P21B
   77 342 3431001    3    1    1   9    9    1    1    0    0    0    0  0.0          P21
    2    1     3     0     0     3                                                    P21B
   78 343  401001    3    1    1   9    9    1    1    0    0    0    0  0.0          P21
    2    2     3     0     0     3                                                    P21B
   1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0   P32
   6                                                                                  P33
   1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0                P34
    343     6                                                                         P39
      1     00.0        0.0        0.9000E 020.0        0.0        0.0                P40
      2     00.0        0.0        0.9000E 020.0        0.0        0.0                P40
      3     00.9000E 020.0        0.0        0.0        0.0        0.0                P40
      4     00.9000E 020.0        0.0        0.0        0.0        0.0                P40
      5     00.0        0.9000E 020.0        0.0        0.0        0.0                P40
      6     00.0        0.9000E 020.0        0.0        0.0        0.0                P40
999999                                                                                P41
DESIGN                                                                                P41
VERTICAL +Z                                                                           P41
HORIZONTAL +X                                                                         P41
HORIZONTAL -X                                                                         P41
HORIZONTAL +Y                                                                         P41
HORIZONTAL -Y                                                                         P41
    11     1     0     0     1                                                       P 1
GROUP-7D                                                                              P 2
    78    79    16     0     2     1    -4                                            P60
     3                                                                                P61
OBE + SRV XZ                                                                          P62
  1   1.0000  2   1.0400  3   0.8000
     2                                                                                P61
OBE + SRV X-Z                                                                         P62
  1   2.0400  3   0.8000
     3                                                                                P61
OBE + SRV YZ                                                                          P62
  1   1.0000  2   1.0400  5   0.8000
     2                                                                                P61
OBE + SRV Y-Z                                                                         P62
  1   2.0400  5   0.8000
     3                                                                                P61
OBE + SRV -XZ                                                                         P62
  1   1.0000  2   1.0400  4   0.8000
     2                                                                                P61
OBE + SRV -X-Z                                                                        P62
  1   2.0400  4   0.8000
     3                                                                                P61
OBE + SRV -YZ                                                                         P62
  1   1.0000  2   1.0400  6   0.8000
     2                                                                                P61
OBE + SRV -Y-Z                                                                        P62
  1   2.0400  6   0.8000
     3                                                                                P61
SSE + SRV + LOCA XZ                                                                   P62
  1   1.0000  2   1.9000  3   1.3000
     2                                                                                P61
SSE + SRV + LOCA X-Z                                                                  P62
  1   2.9000  3   1.3000
     3                                                                                P61
SSE + SRV + LOCA YZ                                                                   P62
  1   1.0000  2   1.9000  5   1.3000
```

```
     2                                                                P61
SSE + SRV + LOCA Y-Z                                                  P62
  1   2.9000  5   1.3000
     3                                                                P61
SSE + SRV + LOCA -XZ                                                  P62
  1   1.0000  2   1.9000  4   1.3000
     2                                                                P61
SSE + SRV + LOCA -X-Z                                                 P62
  1   2.9000  4   1.3000
     3                                                                P61
SSE + SRV + LOCA -YZ                                                  P62
  1   1.0000  2   1.9000  6   1.3000
     2                                                                P61
SSE + SRV + LOCA -Y-Z                                                 P62
  1   2.9000  6   1.3000
     0                                                                P68
     0                                                                PD1
     0                                                                 PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.32 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.32 *
* ELAPSED SECONDS                             0.8                                 0.0                       0.8 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	78
TOTAL NUMBER OF STRUCTURAL JOINTS	79
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	13
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	6
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	12
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	18
TOTAL NUMBER OF MATERIALS	3
TOTAL NUMBER OF PIPE PRESSURES	2
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	79
TOTAL FICTIOUS JOINTS READ IN	13
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
2	0.0	5.000000	0.0
3	2.000000	5.000000	0.0
4	6.500000	5.000000	0.0
5	4.500000	5.000000	2.000000
6	9.000000	5.000000	0.0
7	37.500000	5.000000	0.0
8	66.000000	5.000000	0.0
10	70.681290	5.144750	0.0
11	74.629990	9.750000	0.0
13	78.541565	13.274819	0.0
15	91.500000	13.379999	0.0
16	93.500000	11.379999	0.0
17	93.500000	8.750000	0.0
18	90.500000	6.750000	0.0
20	81.059326	6.310659	0.0
22	80.619995	1.750000	0.0
23	80.619995	0.0	0.0
24	96.500000	6.750000	0.0
25	97.750000	6.750000	0.0
26	106.207077	6.457109	0.0
28	106.500000	0.750000	0.0
29	106.500000	0.0	0.0
30	93.500000	15.379999	0.0
32	93.060638	17.560638	0.0
34	69.809998	18.000000	0.0
35	64.809998	18.000000	0.0
37	34.529648	18.000000	0.219670
39	34.309998	18.000000	6.000000
40	67.809998	18.000000	30.000000
51	4.500000	9.004729	3.979939
53	4.500000	30.000000	4.000000
54	4.500000	54.000000	4.000000
55	4.500000	78.000000	3.000000
57	4.719669	92.530807	3.985140
60	30.780319	92.750000	4.219669
62	31.000000	92.750000	20.500000
64	31.000000	92.969666	37.780319
67	31.000000	112.780319	37.780319
69	31.000000	113.000000	36.000000
71	-21.560638	5.439340	0.0
73	-22.000000	11.500000	0.0
75	-22.000000	18.310638	-0.439340
77	-22.000000	18.750000	-12.000000
78	4.500000	35.000000	4.000000
79	4.500000	38.000000	4.000000
341	65.809998	18.000000	0.0
342	67.809998	18.000000	0.500000
343	67.809998	18.000000	16.500000
344	4.250000	5.000000	0.0
345	70.038437	5.000000	0.0
346	71.200119	5.551080	0.0
347	78.067200	12.974039	0.0
348	79.093369	13.379999	0.0
349	92.500000	12.379999	0.0
350	93.500000	16.500000	0.0
351	92.000000	18.000000	0.0

352	67.809998	18.000000	0.0
353	35.059998	18.000000	0.0
354	34.309998	18.000000	0.750000
355	93.500000	6.750000	0.0
356	82.119995	6.750000	0.0
357	80.619995	5.250000	0.0
358	105.500000	6.750000	0.0
359	106.500000	5.750000	0.0
360	-20.500000	5.000000	0.0
361	-22.000000	6.500000	0.0
362	-22.000000	17.250000	0.0
363	-22.000000	18.750000	-1.500000
364	4.500000	8.841640	3.920819
365	4.500000	9.177050	4.000000
366	4.500000	36.500000	4.000000
367	4.500000	92.001709	3.949269
368	5.250000	92.750000	4.000000
369	30.250000	92.750000	4.000000
370	31.000000	92.750000	4.750000
371	31.000000	92.750000	37.250000
372	31.000000	93.500000	38.000000
373	31.000000	112.250000	38.000000
374	31.000000	113.000000	37.250000
390	70.038406	6.500000	0.0
391	79.093369	11.879999	0.0
392	92.000000	16.500000	0.0
393	35.059998	18.000000	0.750000
394	82.119995	5.250000	0.0
395	105.500000	5.750000	0.0
396	-20.500000	6.500000	0.0
397	-22.000000	17.250000	-1.500000
398	4.500000	9.177050	3.250000
399	5.250000	92.001709	3.949269
400	30.250000	92.750000	4.750000
401	31.000000	93.500000	37.250000
402	31.000000	112.250000	37.250000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	S	2.500	0.300	.2073E 01	.1278E 01	.2556E 01	.1278E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
3	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
4	C	2.400	0.250	.1689E 01	.9889E 00	.9889E 00	.1978E 01	2.0	2.0	1.20	0.0	0.0	1.20	-1.20	0.0	0.0	-1.20
5	C	2.500	0.300	.2073E 01	.1278E 01	.1278E 01	.2556E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
6	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
7	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
8	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
9	S	4.500	0.240	.3212E 01	.7309E 01	.1462E 02	.7309E 01	2.0	2.0	2.25	0.0	0.0	2.25	-2.25	0.0	0.0	-2.25
10	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
11	S	2.500	0.400	.2639E 01	.1507E 01	.3015E 01	.1507E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
12	S	2.250	0.400	.2325E 01	.1041E 01	.2082E 01	.1041E 01	2.0	2.0	1.13	0.0	0.0	1.13	-1.13	0.0	0.0	-1.13
13	S	1.310	0.133	.4918E 00	.8625E-01	.1725E 00	.8625E-01	2.0	2.0	0.65	0.0	0.0	0.65	-0.65	0.0	0.0	-0.65
14	C	1.840	0.250	.1249E 01	.4044E 00	.4044E 00	.8088E 00	2.0	2.0	0.92	0.0	0.0	0.92	-0.92	0.0	0.0	-0.92
15	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
16	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
17	S	1.500	0.250	.9817E 00	.1994E 00	.3988E 00	.1994E 00	2.0	2.0	0.75	0.0	0.0	0.75	-0.75	0.0	0.0	-0.75
18	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2500000E 01	.3000000E 00	.2500000E 01	.3000000E 00	.0
2	.1549999E 01	.2500000E 00	.1549999E 01	.2500000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	175.00	27774992.00	0.300000	0.000009300	18800.00
2	70.00	28300000.00	0.300000	0.000009100	18800.00
2-A	175.00	27774992.00	0.300000	0.000009300	18800.00
3	70.00	28300000.00	0.300000	0.000009100	0.0
3-A	75.00	28300000.00	0.300000	0.000009100	0.0

PRESSURE DATA

TYPE	PRESSURE
1	25.00
2	0.0

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.

1	0.0	0.0	-1.000000
2	0.0	0.0	1.000000
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	1.000000	0.0
6	0.0	-1.000000	0.0

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	6	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
2	77	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	8	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
4	22	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
5	28	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
6	35	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
7	39	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
8	40	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
9	53	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
10	55	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
11	62	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
12	69	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.49 ** LAST STEP "BEGP" TIME IS    0.32 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                              1.5                                 0.8                       0.8 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   79


 BAND-WIDTH =    36  BY D.O.F.          BAND-WIDTH =     6  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.79 ** LAST STEP "DA3D" TIME IS    0.49 ** DELTA TIME IS    0.30 *
* ELAPSED SECONDS                              6.6                                 1.5                       5.1 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

WPPSS OUTLET AND BALANCE LINES

APPLIED CONCENTRATED JOINT LOADS

JOINT	LOAD NO	F1 (LB)	F2 (LB)	F3 (LB)	M1 (IN-LB)	M2 (IN-LB)	M3 (IN-LB)
343	1	0.0	0.0	0.90000E 02	0.0	0.0	0.0
	2	0.0	0.0	0.90000E 02	0.0	0.0	0.0
	3	0.90000E 02	0.0	0.0	0.0	0.0	0.0
	4	0.90000E 02	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.90000E 02	0.0	0.0	0.0	0.0
	6	0.0	0.90000E 02	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.80 ** LAST STEP "JCSO" TIME IS    0.79 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                             6.7                                 6.6                       0.1 *
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CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.30927E 09) OCCURS AT THE 56TH DOF
MINIMUM VALUE (0.38862E 04) OCCURS AT THE 163TH DOF
RATIO OF MAX/MIN= 0.79582E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    4.11 ** LAST STEP "INPT" TIME IS    0.80 ** DELTA TIME IS    3.31 *
* ELAPSED SECONDS                             13.9                                6.7                       7.3 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    6.05 ** LAST STEP "EQ3D" TIME IS    4.11 ** DELTA TIME IS    1.94 *
* ELAPSED SECONDS                             23.0                                13.9                      9.0 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	2	3	1002	1	1	1	1	2	1	1	1	2.00000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
2	3	344	5	1	1	2	1	101	1	1	2	2.25000	0.42000			0.0	0.0	1.000000
																-1.000000	0.0	0.0
																0.0	-1.000000	0.0
3	4	344	5	1	1	2	1	101	1	1	2	2.25000	0.42000			0.0	0.0	1.000000
																1.000000	0.0	0.0
																0.0	1.000000	0.0
4	5	344	3	1	3	2	1	101	1	1	2	0.0	0.25600			-0.992278	0.0	0.124035
											3	2.01556				0.124035	0.0	0.992278
																0.0	1.000000	0.0
5	4	6	1002	1	1	1	1	1	1	1	1	2.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
6	6	7	1002	1	1	1	1	0	1	1	1	28.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	7	8	1002	1	1	1	1	0	1	1	1	28.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
8	8	345	1002	1	1	1	1	2	1	1	1	4.03844	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
9	345	10	390	1	2	1	1	101	1	1	4	0.44291	0.42000	RAD=	1.5000	-0.000020	1.000000	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	-0.000020	0.0
10	10	346	390	1	2	1	1	101	1	1	4	0.44294	0.42000	RAD=	1.5000	-0.428589	0.903500	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-0.903500	-0.428589	0.0
11	346	11	1001	1	1	1	1	1	1	1	1	5.42171	0.23000			0.774464	-0.632618	0.0
																-0.632618	-0.774464	0.0
																0.0	0.0	-1.000000
12	11	347	1001	1	1	1	1	2	1	1	1	4.71263	0.23000			0.684128	-0.729362	0.0
																-0.729362	-0.684128	0.0
																0.0	0.0	-1.000000
13	347	13	391	1	2	1	1	101	1	1	5	0.37665	0.42000	RAD=	1.5000	0.684121	-0.729369	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.729369	-0.684121	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	13	348	391	1	2	1	1	101	1	1	5	0.37672	0.42000	RAD=	1.5000	0.367868 -0.929878 0.0
														FLX=	1.0000	0.0 0.0 1.000000
														ECC=	0.0	-0.929878 -0.367868 0.0
15	348	15	1002	1	1	1	1	0	1	1	2	12.40663	0.42000			0.0 1.000000 0.0
																-1.000000 0.0 0.0
																0.0 0.0 1.000000
16	15	349	30	1	1	2	1	101	1	1	2	1.41421	0.42000			0.707107 0.707107 0.0
																-0.707107 0.707107 0.0
																0.0 0.0 1.000000
17	16	349	30	1	1	2	1	101	1	1	2	1.41421	0.42000			0.707107 0.707107 0.0
																0.707107 -0.707107 0.0
																0.0 0.0 -1.000000
18	30	349	15	1	1	2	1	101	1	1	2	3.16228	0.42000			-0.948683 0.316228 0.0
																0.316228 0.948683 0.0
																0.0 0.0 -1.000000
19	30	350	1001	1	1	1	1	0	1	1	2	1.12000	0.42000			1.000000 0.0 0.0
																0.0 -1.000000 0.0
																0.0 0.0 -1.000000
20	350	32	392	1	2	1	1	101	1	1	4	0.78542	0.42000	RAD=	1.5000	-1.000000 0.0 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.0 -1.000000 0.0
21	32	351	392	1	2	1	1	101	1	1	4	0.78538	0.42000	RAD=	1.5000	-0.707107 -0.707107 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.707107 -0.707107 0.0
22	351	34	1002	1	1	1	1	3	1	1	6	22.19000	0.09000			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000
23	34	352	342	1	1	2	1	101	1	1	7	2.00000	0.26000			0.0 0.0 1.000000
																1.000000 0.0 0.0
																0.0 1.000000 0.0
24	341	352	342	1	1	2	1	101	1	1	7	2.00000	0.26000			0.0 0.0 1.000000
																-1.000000 0.0 0.0
																0.0 -1.000000 0.0
25	342	352	34	1	3	2	1	101	1	1	8	0.0	0.66000			1.000000 0.0 0.0
											9	0.50000				0.0 0.0 1.000000
																0.0 -1.000000 0.0
26	341	35	1002	1	1	1	1	1	1	1	6	1.00000	0.09000			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
27	35	353	1002	1	1	1	1	2	1	1	6	29.75000	0.09000			0.0 1.000000 0.0 1.000000 0.0 0.0 0.0 0.0 -1.000000
28	353	37	393	1	2	1	1	101	1	1	10	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.0 1.000000 0.0 -1.000000 0.0 1.000000 0.0 0.0
29	37	354	393	1	2	1	1	101	1	1	10	0.78540	0.26000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707120 0.0 0.707094 0.0 -1.000000 0.0 0.707094 0.0 -0.707120
30	354	39	1001	1	1	1	1	1	1	1	6	5.25000	0.09000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
31	16	17	1001	1	1	1	1	0	1	1	6	2.63000	0.09000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
32	17	355	18	1	1	2	1	101	1	1	2	2.00000	0.42000			-1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 -1.000000
33	18	355	17	1	1	2	1	101	1	1	2	3.00000	0.42000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
34	24	355	17	1	1	2	1	101	1	1	2	3.00000	0.42000			0.0 1.000000 0.0 1.000000 0.0 0.0 0.0 0.0 -1.000000
35	18	356	1002	1	1	1	1	3	1	1	1	8.38000	0.23000			0.0 1.000000 0.0 1.000000 0.0 0.0 0.0 0.0 -1.000000
36	356	20	394	1	2	1	1	101	1	1	4	0.78540	0.42000	RAD= FLX= ECC=	1.5000 1.0000 0.0	0.0 -1.000000 0.0 0.0 0.0 -1.000000 1.000000 0.0 0.0
37	20	357	394	1	2	1	1	101	1	1	4	0.78540	0.42000	RAD= FLX= ECC=	1.5000 1.0000 0.0	0.707110-0.707104 0.0 0.0 0.0 -1.000000 0.707104 0.707110 0.0
38	357	22	1001	1	1	1	1	1	1	1	1	3.50000	0.23000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
39	22	23	1001	1	1	1	1	0	1	1	1	1.75000	0.23000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
40	24	25	1002	1	3	1	1	101	1	1	11	0.0	0.80000			0.0	1.000000	0.0
											12	1.25000				-1.000000	0.0	0.0
																0.0	0.0	1.000000
41	25	358	1002	1	1	1	1	0	1	1	13	7.75000	0.14000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
42	358	26	395	1	2	1	1	101	1	1	14	0.78539	0.44000	RAD=	1.0000	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0
43	26	359	395	1	2	1	1	101	1	1	14	0.78540	0.44000	RAD=	1.0000	-0.707091	-0.707123	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707123	0.707091	0.0
44	359	28	1001	1	1	1	1	0	1	1	13	5.00000	0.14000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
45	28	29	1001	1	1	1	1	0	1	1	13	0.75000	0.14000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
46	2	360	1002	1	1	1	1	2	1	1	1	20.50000	0.23000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
47	360	71	396	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	1.000000	0.0	0.0
48	71	361	396	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.707099	0.707114	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.707114	-0.707099	0.0
49	361	73	1001	1	1	1	1	1	1	1	1	5.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
50	73	362	1001	1	1	1	1	2	1	1	1	5.75000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
51	362	75	397	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
52	75	363	397	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	-0.707100	-0.707114
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707114	0.707100

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
53	363	77	1001	1	1	1	1	3	1	1	1	10.50000	0.23000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
54	5	364	1001	2	1	1	1	2	2	2	15	4.29508	0.09400			1.000000 0.0 0.0 0.0 -0.894427-0.447213 0.0 0.447213-0.894427
55	364	51	398	2	2	1	1	101	2	2	16	0.23179	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.447214-0.894427 1.000000 0.0 0.0 0.0 -0.894427-0.447214
56	51	365	398	2	2	1	1	101	2	2	16	0.23185	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.229759-0.973247 1.000000 0.0 0.0 0.0 -0.973247-0.229759
57	365	53	1001	2	1	1	1	1	2	2	15	20.82294	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
58	53	78	1001	2	1	1	1	2	2	2	15	5.00000	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
59	78	366	1001	2	1	1	1	3	2	2	17	1.50000	1.33300			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
60	366	79	1001	2	1	1	1	3	2	2	17	1.50000	1.33300			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
61	79	54	1001	2	1	1	1	1	2	2	15	16.00000	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
62	54	55	1001	2	1	1	1	0	2	2	15	24.02081	0.09400			1.000000 0.0 0.0 0.0 -0.999133 0.041631 0.0 -0.041631-0.999133
63	55	367	1001	2	1	1	1	2	2	2	15	14.03385	0.09400			1.000000 0.0 0.0 0.0 -0.997710-0.067641 0.0 0.067641-0.997710
64	367	57	399	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 -0.067640 0.997710 0.0 -0.997710-0.067640
65	57	368	399	2	2	1	1	101	2	2	16	0.78539	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707119-0.705476-0.047828 0.000000-0.067640 0.997710 -0.707095-0.705499-0.047829

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
66	368	369	1002	2	1	1	1	3	2	2	15	25.00000	0.09400			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
67	369	60	400	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-1.000000	0.0	0.0
68	60	370	400	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD=	0.7500	-0.707099	0.0	0.707114
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707114	0.0	-0.707099
69	370	62	1001	2	1	1	1	1	2	2	15	15.75000	0.09400			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
70	62	371	1001	2	1	1	1	2	2	2	15	16.75000	0.09400			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
71	371	64	401	2	2	1	1	101	2	2	16	0.78539	0.30000	RAD=	0.7500	0.0	1.000000	0.0
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.0	-1.000000
72	64	372	401	2	2	1	1	101	2	2	16	0.78541	0.30000	RAD=	0.7500	0.0	0.707117	-0.707097
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707097	-0.707117
73	372	373	1001	2	1	1	1	3	2	2	15	18.75000	0.09400			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
74	373	67	402	2	2	1	1	101	2	2	16	0.78542	0.30000	RAD=	0.7500	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
75	67	374	402	2	2	1	1	101	2	2	16	0.78538	0.30000	RAD=	0.7500	0.0	-0.707107	-0.707107
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707107	0.707107
76	374	69	1001	2	1	1	1	0	2	2	18	1.25000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
77	342	343	1001	3	1	1	2	1	3	3	9	16.00000	0.90000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
78	343	40	1001	3	1	1	2	2	3	3	9	13.50000	0.90000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

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MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  27 AND EQUALS 0.29750E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  55 AND EQUALS 0.17384E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  55 AND EQUALS 0.16140E 09
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  27 AND EQUALS 0.47395E 03

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    6.50 ** LAST STEP "SELT" TIME IS    6.05 ** DELTA TIME IS    0.45 *
* ELAPSED SECONDS                            27.7                                23.0                      4.7 *
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RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	-0.25874968E 01	0.0	-0.79781046E 01	0.0
3	0.0	0.0	-0.70249909E 00	0.0	0.10052061E 00	0.0
4	0.0	0.0	-0.75999910E 00	0.0	-0.57395477E-01	0.0
5	-0.47379266E-03	-0.28679601E-07	-0.53398657E 00	-0.12925076E 00	-0.21145921E-01	0.0
6	0.0	0.0	0.0	0.0	0.15448301E 02	0.0
7	0.0	0.0	-0.65549984E 01	0.0	-0.12283323E-03	0.0
8	0.0	0.0	0.0	0.0	-0.15255628E 02	0.0
10	0.0	0.0	-0.27904117E 00	-0.46580724E-04	-0.20271575E-04	0.0
11	0.0	0.0	-0.11654482E 01	0.14512670E 00	-0.45954492E-01	0.0
13	0.0	0.0	-0.23730928E 00	0.19653540E-04	0.12893162E-04	0.0
15	0.0	0.0	-0.29023800E 01	0.49497314E-01	-0.53378954E 01	0.0
16	0.0	0.0	-0.41533405E 00	0.23793115E-02	-0.49497314E-01	0.0
17	0.0	0.0	-0.53834963E 00	0.88122666E-01	0.0	0.0
18	0.0	0.0	-0.15936975E 01	0.0	-0.10309658E 01	0.0
20	0.0	0.0	-0.49480104E 00	0.61495160E-03	0.61463914E-03	0.0
23	0.0	0.0	-0.20124996E 00	-0.58698010E-01	0.0	0.0
24	0.0	0.0	-0.11406403E 01	0.0	-0.20424604E 00	0.0
25	0.0	0.0	-0.10318565E 01	0.0	0.60327196E 00	0.0
26	0.0	0.0	-0.34557170E 00	0.28567086E-03	-0.28619869E-03	0.0
29	0.0	0.0	-0.52500036E-01	-0.65625161E-02	0.0	0.0
30	0.0	0.0	-0.89927709E 00	0.28813475E 00	-0.11067951E 00	0.0
32	0.0	0.0	-0.49479508E 00	0.61912742E-03	-0.60860300E-03	0.0
34	0.0	0.0	-0.12585506E 01	0.0	0.36063080E 01	0.0
35	0.0	0.0	0.0	0.0	-0.66303902E 01	0.0
37	0.28825257E-01	0.0	-0.15315425E 00	0.0	0.23629984E-02	0.0
51	0.0	-0.51032775E-03	-0.51143870E-01	-0.31880816E-04	0.0	0.0
53	0.0	0.0	0.0	0.32007084E 01	0.0	0.0
54	0.0	0.78303685E-07	-0.18809767E 01	-0.25105171E 01	0.0	0.0
55	0.0	-0.26105096E-06	0.0	0.29767132E 01	0.0	0.0
57	-0.22495454E-02	-0.21316855E-08	-0.17671180E 00	0.10976200E-03	0.12132969E-03	-0.17659910E-03
60	-0.33258818E-01	0.0	-0.17671335E 00	0.0	-0.27265344E-02	0.0
64	0.0	-0.33259284E-01	-0.17671484E 00	-0.27266636E-02	0.0	0.0
67	0.0	0.33259615E-01	-0.17671442E 00	0.27269684E-02	0.0	0.0
71	0.0	0.0	-0.49479818E 00	-0.61370013E-03	0.61532203E-03	0.0
73	0.0	0.0	-0.12362480E 01	-0.15452570E 00	0.0	0.0
75	0.0	0.93247294E-01	-0.49479747E 00	0.15211169E-01	0.0	0.0
78	0.0	0.0	-0.12347498E 01	-0.54105043E-01	0.0	0.0
79	0.0	0.0	-0.17517462E 01	-0.17553759E 01	0.0	0.0
341	0.0	0.0	-0.30499983E 00	0.0	0.79166710E-01	0.0
342	0.0	0.0	-0.73341637E 01	0.0	0.0	0.0
343	0.0	0.0	0.76724991E 02	0.0	0.0	0.0
344	0.47380035E-03	0.0	-0.11288671E 01	0.0	0.35619538E-02	0.0
345	0.0	0.0	-0.60393727E 00	-0.25680740E-04	-0.29698050E 00	0.0
346	0.0	0.0	-0.76302034E 00	-0.42425871E 00	0.34652114E 00	0.0
347	0.0	0.0	-0.66059446E 00	0.28352177E 00	-0.30225134E 00	0.0
348	0.0	0.0	-0.27240553E 01	0.11230081E-04	0.53760815E 01	0.0
349	0.0	0.0	-0.12580490E 01	-0.33204085E 00	0.11068028E 00	0.0
350	0.0	0.0	-0.48260748E 00	-0.62315986E-02	-0.43465779E-03	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
351	0.0	0.0	-0.12459373E 01	0.43578981E-03	-0.36428270E 01	0.0
352	0.0	0.0	-0.71583307E 00	0.0	0.0	0.0
353	-0.26915345E-01	0.0	-0.14009171E 01	0.0	0.66322803E 01	0.0
354	-0.19099347E-02	0.0	-0.32723933E 00	0.0	0.16708567E-02	0.0
355	0.0	0.0	-0.16800003E 01	-0.14000052E 00	0.0	0.0
356	0.0	0.0	-0.12111025E 01	0.43454161E-03	0.12958450E 01	0.0
357	0.0	0.0	-0.64990062E 00	0.18465787E 00	0.43464475E-03	0.0
358	0.0	0.0	-0.71528786E 00	0.20243053E-03	-0.67738950E 00	0.0
359	0.0	0.0	-0.52278447E 00	0.26832354E 00	-0.20283587E-03	0.0
360	0.0	0.0	-0.26049013E 01	-0.43452112E-03	0.80046873E 01	0.0
361	0.0	0.0	-0.82239771E 00	-0.42903501E 00	0.43546595E-03	0.0
362	0.0	-0.87167621E-01	-0.86202699E 00	0.59673679E 00	0.0	0.0
363	0.0	-0.60798973E-02	-0.15015211E 01	0.10757335E-01	0.0	0.0
364	0.0	-0.35587593E-02	-0.22952974E 00	0.12856370E 00	0.0	0.0
365	0.0	0.40690713E-02	-0.10041904E 01	-0.33957548E 01	0.0	0.0
366	0.0	0.0	-0.19994984E 01	-0.15890589E-06	0.0	0.0
367	0.14901516E-03	-0.11220758E-02	-0.74802727E 00	0.15303211E 01	0.86102853E-04	-0.12487028E-03
368	0.21005291E-02	0.11222579E-02	-0.12632751E 01	0.77675693E-04	0.48868456E 01	-0.15867225E-03
369	0.31056095E-01	0.0	-0.12467299E 01	0.0	-0.48892632E 01	0.0
370	0.22027262E-02	0.0	-0.84523547E 00	0.0	-0.19280256E-02	0.0
371	0.0	0.22031404E-02	-0.89223576E 00	-0.19279234E-02	0.0	0.0
372	0.0	0.31056158E-01	-0.95297563E 00	-0.27472610E 01	0.0	0.0
373	0.0	-0.31057078E-01	-0.95298028E 00	0.27472906E 01	0.0	0.0
374	0.0	-0.22025248E-02	-0.29248178E 00	0.19279183E-02	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	0.25874968E 01	0.0	0.79781046E 01	0.0
3	0.0	0.0	0.70249909E 00	0.0	-0.10052061E 00	0.0
4	0.0	0.0	0.75999910E 00	0.0	0.57395477E-01	0.0
5	0.47379266E-03	0.28679601E-07	0.53398657E 00	0.12925076E 00	0.21145921E-01	0.0
6	0.0	0.0	0.0	0.0	-0.15448301E 02	0.0
7	0.0	0.0	0.65549984E 01	0.0	0.12283323E-03	0.0
8	0.0	0.0	0.0	0.0	0.15255628E 02	0.0
10	0.0	0.0	0.27904117E 00	0.46580724E-04	0.20271575E-04	0.0
11	0.0	0.0	0.11654482E 01	-0.14512670E 00	0.45954492E-01	0.0
13	0.0	0.0	0.23730928E 00	-0.19653540E-04	-0.12893162E-04	0.0
15	0.0	0.0	0.29023800E 01	-0.49497314E-01	0.53378954E 01	0.0
16	0.0	0.0	0.41533405E 00	-0.23793115E-02	0.49497314E-01	0.0
17	0.0	0.0	0.53834963E 00	-0.88122666E-01	0.0	0.0
18	0.0	0.0	0.15936975E 01	0.0	0.10309658E 01	0.0
20	0.0	0.0	0.49480104E 00	-0.61495160E-03	-0.61463914E-03	0.0
23	0.0	0.0	0.20124996E 00	0.58698010E-01	0.0	0.0
24	0.0	0.0	0.11406403E 01	0.0	0.20424604E 00	0.0
25	0.0	0.0	0.10318565E 01	0.0	-0.60327196E 00	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
26	0.0	0.0	0.34557170E 00	-0.28567086E-03	0.28619869E-03	0.0
29	0.0	0.0	0.52500036E-01	0.65625161E-02	0.0	0.0
30	0.0	0.0	0.89927709E 00	-0.28813475E 00	0.11067951E 00	0.0
32	0.0	0.0	0.49479508E 00	-0.61912742E-03	0.60860300E-03	0.0
34	0.0	0.0	0.12585506E 01	0.0	-0.36063080E 01	0.0
35	0.0	0.0	0.0	0.0	0.66303902E 01	0.0
37	-0.28825257E-01	0.0	0.15315425E 00	0.0	-0.23629984E-02	0.0
51	0.0	0.51032775E-03	0.51143870E-01	0.31880816E-04	0.0	0.0
53	0.0	0.0	0.0	-0.32007084E 01	0.0	0.0
54	0.0	-0.78303685E-07	0.18809767E 01	0.25105171E 01	0.0	0.0
55	0.0	0.26105096E-06	0.0	-0.29767132E 01	0.0	0.0
57	0.22495454E-02	0.21316855E-08	0.17671180E 00	-0.10976200E-03	-0.12132969E-03	0.17659910E-03
60	0.33258818E-01	0.0	0.17671335E 00	0.0	0.27265344E-02	0.0
64	0.0	0.33259284E-01	0.17671484E 00	0.27266636E-02	0.0	0.0
67	0.0	-0.33259615E-01	0.17671442E 00	-0.27269684E-02	0.0	0.0
71	0.0	0.0	0.49479818E 00	0.61370013E-03	-0.61532203E-03	0.0
73	0.0	0.0	0.12362480E 01	0.15452570E 00	0.0	0.0
75	0.0	-0.93247294E-01	0.49479747E 00	-0.15211169E-01	0.0	0.0
78	0.0	0.0	0.12347498E 01	0.54105043E-01	0.0	0.0
79	0.0	0.0	0.17517462E 01	0.17553759E 01	0.0	0.0
341	0.0	0.0	0.30499983E 00	0.0	-0.79166710E-01	0.0
342	0.0	0.0	0.73341637E 01	0.0	0.0	0.0
343	0.0	0.0	0.10327499E 03	0.0	0.0	0.0
344	-0.47380035E-03	0.0	0.11288671E 01	0.0	-0.35619538E-02	0.0
345	0.0	0.0	0.60393727E 00	0.25680740E-04	0.29698050E 00	0.0
346	0.0	0.0	0.76302034E 00	0.42425871E 00	-0.34652114E 00	0.0
347	0.0	0.0	0.66059446E 00	-0.28352177E 00	0.30225134E 00	0.0
348	0.0	0.0	0.27240553E 01	-0.11230081E-04	-0.53760815E 01	0.0
349	0.0	0.0	0.12580490E 01	0.33204085E 00	-0.11068028E 00	0.0
350	0.0	0.0	0.48260748E 00	0.62315986E-02	0.43465779E-03	0.0
351	0.0	0.0	0.12459373E 01	-0.43578981E-03	0.36428270E 01	0.0
352	0.0	0.0	0.71583307E 00	0.0	0.0	0.0
353	0.26915345E-01	0.0	0.14009171E 01	0.0	-0.66322803E 01	0.0
354	0.19099347E-02	0.0	0.32723933E 00	0.0	-0.16708567E-02	0.0
355	0.0	0.0	0.16800003E 01	0.14000052E 00	0.0	0.0
356	0.0	0.0	0.12111025E 01	-0.43454161E-03	-0.12958450E 01	0.0
357	0.0	0.0	0.64990062E 00	-0.18465787E 00	-0.43464475E-03	0.0
358	0.0	0.0	0.71528786E 00	-0.20243053E-03	0.67738950E 00	0.0
359	0.0	0.0	0.52278447E 00	-0.26832354E 00	0.20283587E-03	0.0
360	0.0	0.0	0.26049013E 01	0.43452112E-03	-0.80046873E 01	0.0
361	0.0	0.0	0.82239771E 00	0.42903501E 00	-0.43546595E-03	0.0
362	0.0	0.87167621E-01	0.86202699E 00	-0.59673679E 00	0.0	0.0
363	0.0	0.60798973E-02	0.15015211E 01	-0.10757335E-01	0.0	0.0
364	0.0	0.35587593E-02	0.22952974E 00	-0.12856370E 00	0.0	0.0
365	0.0	-0.40690713E-02	0.10041904E 01	0.33957548E 01	0.0	0.0
366	0.0	0.0	0.19994984E 01	0.15890589E-06	0.0	0.0
367	-0.14901516E-03	0.11220758E-02	0.74802727E 00	-0.15303211E 01	-0.86102853E-04	0.12487028E-03
368	-0.21005291E-02	-0.11222579E-02	0.12632751E 01	-0.77675693E-04	-0.48868456E 01	0.15867225E-03
369	-0.31056095E-01	0.0	0.12467299E 01	0.0	0.48892632E 01	0.0
370	-0.22027262E-02	0.0	0.84523547E 00	0.0	0.19280256E-02	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
371	0.0	-0.22031404E-02	0.89223576E 00	0.19279234E-02	0.0	0.0
372	0.0	-0.31056158E-01	0.95297563E 00	0.27472610E 01	0.0	0.0
373	0.0	0.31057078E-01	0.95298028E 00	-0.27472906E 01	0.0	0.0
374	0.0	0.22025248E-02	0.29248178E 00	-0.19279183E-02	0.0	0.0

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.25874958E 01	0.0	0.0	0.0	0.0	0.0
3	0.70249927E 00	0.0	0.0	0.0	0.0	0.0
4	0.75999886E 00	0.0	0.0	0.0	0.0	0.0
5	0.53025556E 00	0.0	0.47380268E-03	0.0	-0.10454184E 00	-0.12925112E 00
6	0.35649967E 01	0.0	0.0	0.0	0.0	0.0
7	0.65549984E 01	0.0	0.0	0.0	0.0	0.0
8	0.37419205E 01	0.0	0.0	0.0	0.0	0.0
10	0.29207504E 00	0.15954640E-01	0.0	0.0	0.0	-0.44411868E-02
11	0.11654482E 01	-0.24779530E-06	0.0	0.0	0.0	0.14512652E 00
13	0.24681085E 00	0.89168809E-02	0.0	0.0	0.0	0.29018656E-02
15	0.29023781E 01	-0.75101809E-07	0.0	0.0	0.0	0.49497362E-01
16	0.41533411E 00	-0.75101809E-07	0.0	0.0	0.0	0.23791706E-02
17	0.53834963E 00	0.0	0.0	0.0	0.0	0.88122845E-01
18	0.15936975E 01	0.0	0.0	0.0	0.0	0.0
20	0.49480039E 00	0.93270600E-01	0.0	0.0	0.0	0.15203271E-01
23	0.20124996E 00	0.0	0.0	0.0	0.0	-0.58698077E-01
24	0.11405582E 01	0.0	0.0	0.0	0.0	0.0
25	0.10319395E 01	0.0	0.0	0.0	0.0	0.0
26	0.34557301E 00	-0.65079272E-01	0.0	0.0	0.0	0.70961602E-02
29	0.52500036E-01	0.0	0.0	0.0	0.0	-0.65625273E-02
30	0.89927703E 00	-0.47087603E-07	0.0	0.0	0.0	0.28813463E 00
32	0.49480051E 00	-0.93271017E-01	0.0	0.0	0.0	0.15204396E-01
34	0.12585506E 01	0.0	0.0	0.0	0.0	0.0
35	0.13837490E 01	0.0	0.0	0.0	0.0	0.0
37	0.15315354E 00	0.0	-0.28825615E-01	0.0	0.23632895E-02	0.0
40	0.0	0.0	0.0	0.0	-0.13668834E 02	0.0
51	0.52159853E-01	0.0	0.0	0.0	-0.27208819E-06	-0.48697154E-06
53	0.0	0.0	0.0	0.0	0.0	0.32007017E 01
54	0.18809767E 01	0.0	0.0	0.0	-0.18816167E 00	-0.25105190E 01
55	0.0	0.0	0.0	0.0	0.29251802E 00	0.29767084E 01
57	0.17671174E 00	0.33182215E-01	0.22496101E-02	0.53203397E-09	-0.18443039E-03	0.27203644E-02
60	0.17671371E 00	0.0	0.33258595E-01	0.0	0.27264797E-02	0.0
64	0.17671394E 00	0.0	0.0	0.0	-0.10952134E-03	-0.10996636E-03
67	0.17671263E 00	0.0	0.0	0.0	-0.10871788E-03	0.11060198E-03
71	0.49479854E 00	-0.93246937E-01	0.0	0.0	0.0	-0.15211955E-01
73	0.12362480E 01	0.0	0.0	0.0	0.0	-0.15452570E 00
75	0.49479759E 00	0.0	0.0	0.0	-0.61319955E-03	0.61556534E-03
78	0.12347498E 01	0.0	0.0	0.0	0.0	-0.54104265E-01

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
79	0.17517462E 01	0.0	0.0	0.0	0.0	-0.17553816E 01
341	0.30499983E 00	0.0	0.0	0.0	0.0	0.0
342	0.73341646E 01	0.0	0.0	0.0	0.19193436E 02	0.0
343	0.10327499E 03	0.0	0.0	0.0	-0.55314293E 01	0.0
344	0.11325979E 01	0.0	-0.47379476E-03	0.0	0.28495632E-01	0.0
345	0.61423737E 00	-0.59200227E-02	0.0	0.0	0.0	-0.24573330E-02
346	0.73968583E 00	-0.10034375E-01	0.0	0.0	0.0	-0.42700422E 00
347	0.64457488E 00	-0.41821040E-02	0.0	0.0	0.0	0.28522074E 00
348	0.27305746E 01	-0.47348626E-02	0.0	0.0	0.0	0.15612729E-02
349	0.12580481E 01	0.10311595E-06	0.0	0.0	0.0	-0.33204085E 00
350	0.43596911E 00	0.87207317E-01	0.0	0.0	0.0	0.69399588E-02
351	0.12925701E 01	0.60639009E-02	0.0	0.0	0.0	0.10749336E-01
352	0.71582127E 00	0.0	0.0	0.0	0.21910504E-01	0.0
353	0.14297380E 01	0.0	0.19092858E-02	0.0	0.16709077E-02	0.0
354	0.29841524E 00	0.0	0.26916318E-01	0.0	0.20099682E 00	0.0
355	0.16800013E 01	0.0	0.0	0.0	0.0	-0.14000064E 00
356	0.12577372E 01	-0.60651526E-02	0.0	0.0	0.0	0.10749489E-01
357	0.60326576E 00	-0.87205231E-01	0.0	0.0	0.0	0.19782889E 00
358	0.74782741E 00	0.42786412E-02	0.0	0.0	0.0	0.50179549E-02
359	0.49024272E 00	0.60800619E-01	0.0	0.0	0.0	0.27445614E 00
360	0.26515265E 01	0.60806349E-02	0.0	0.0	0.0	-0.10756433E-01
361	0.77577263E 00	0.87166071E-01	0.0	0.0	0.0	-0.44220555E 00
362	0.90865123E 00	0.0	0.0	0.0	-0.43455791E-03	0.58356750E 00
363	0.14548941E 01	0.0	0.0	0.0	-0.20629854E 01	0.43508201E-03
364	0.22794563E 00	0.0	0.0	0.0	-0.64287603E-01	0.12857491E 00
365	0.10047588E 01	0.0	0.0	0.0	-0.16875418E-06	-0.33957262E 01
366	0.19994984E 01	0.0	0.0	0.0	0.0	-0.15890589E-06
367	0.73132157E 00	-0.30984968E-01	-0.21006437E-02	0.0	-0.10391057E 00	0.15326796E 01
368	0.12799826E 01	-0.21972437E-02	-0.14896582E-03	0.33133984E-09	-0.13041086E-03	0.19236184E-02
369	0.12799873E 01	0.0	-0.22030531E-02	0.0	0.19279681E-02	0.0
370	0.81197435E 00	0.0	-0.31055506E-01	0.0	0.19365501E 01	0.0
371	0.87560874E 00	0.0	0.0	0.0	-0.21888189E 01	-0.77629389E-04
372	0.96960580E 00	0.0	0.0	0.0	-0.77695135E-04	-0.27449188E 01
373	0.96961105E 00	0.0	0.0	0.0	-0.77647273E-04	0.27449484E 01
374	0.27585292E 00	0.0	0.0	0.0	-0.30110940E-01	0.77786026E-04

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.25874958E 01	0.0	0.0	0.0	0.0	0.0
3	-0.70249927E 00	0.0	0.0	0.0	0.0	0.0
4	-0.75999886E 00	0.0	0.0	0.0	0.0	0.0
5	-0.53025556E 00	0.0	-0.47380268E-03	0.0	0.10454184E 00	0.12925112E 00
6	-0.35649967E 01	0.0	0.0	0.0	0.0	0.0
7	-0.65549984E 01	0.0	0.0	0.0	0.0	0.0
8	-0.37419205E 01	0.0	0.0	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
10	-0.29207504E 00	-0.15954640E-01	0.0	0.0	0.0	0.44411868E-02
11	-0.11654482E 01	0.24779530E-06	0.0	0.0	0.0	-0.14512652E 00
13	-0.24681085E 00	-0.89168809E-02	0.0	0.0	0.0	-0.29018656E-02
15	-0.29023781E 01	0.75101809E-07	0.0	0.0	0.0	-0.49497362E-01
16	-0.41533411E 00	0.75101809E-07	0.0	0.0	0.0	-0.23791706E-02
17	-0.53834963E 00	0.0	0.0	0.0	0.0	-0.88122845E-01
18	-0.15936975E 01	0.0	0.0	0.0	0.0	0.0
20	-0.49480039E 00	-0.93270600E-01	0.0	0.0	0.0	-0.15203271E-01
23	-0.20124996E 00	0.0	0.0	0.0	0.0	0.58698077E-01
24	-0.11405582E 01	0.0	0.0	0.0	0.0	0.0
25	-0.10319395E 01	0.0	0.0	0.0	0.0	0.0
26	-0.34557301E 00	0.65079272E-01	0.0	0.0	0.0	-0.70961602E-02
29	-0.52500036E-01	0.0	0.0	0.0	0.0	0.65625273E-02
30	-0.89927703E 00	0.47087603E-07	0.0	0.0	0.0	-0.28813463E 00
32	-0.49480051E 00	0.93271017E-01	0.0	0.0	0.0	-0.15204396E-01
34	-0.12585506E 01	0.0	0.0	0.0	0.0	0.0
35	-0.13837490E 01	0.0	0.0	0.0	0.0	0.0
37	-0.15315354E 00	0.0	0.28825615E-01	0.0	-0.23632895E-02	0.0
40	0.0	0.0	0.0	0.0	0.13668834E 02	0.0
51	-0.52159853E-01	0.0	0.0	0.0	0.27208819E-06	0.48697154E-06
53	0.0	0.0	0.0	0.0	0.0	-0.32007017E 01
54	-0.18809767E 01	0.0	0.0	0.0	0.18816167E 00	0.25105190E 01
55	0.0	0.0	0.0	0.0	-0.29251802E 00	-0.29767084E 01
57	-0.17671174E 00	-0.33182215E-01	-0.22496101E-02	-0.53203397E-09	0.18443039E-03	-0.27203644E-02
60	-0.17671371E 00	0.0	-0.33258595E-01	0.0	-0.27264797E-02	0.0
64	-0.17671394E 00	0.0	0.0	0.0	0.10952134E-03	0.10996636E-03
67	-0.17671263E 00	0.0	0.0	0.0	0.10871788E-03	-0.11060198E-03
71	-0.49479854E 00	0.93246937E-01	0.0	0.0	0.0	0.15211955E-01
73	-0.12362480E 01	0.0	0.0	0.0	0.0	0.15452570E 00
75	-0.49479759E 00	0.0	0.0	0.0	0.61319955E-03	-0.61556534E-03
78	-0.12347498E 01	0.0	0.0	0.0	0.0	0.54104265E-01
79	-0.17517462E 01	0.0	0.0	0.0	0.0	0.17553816E 01
341	-0.30499983E 00	0.0	0.0	0.0	0.0	0.0
342	-0.73341646E 01	0.0	0.0	0.0	-0.19193436E 02	0.0
343	0.76724991E 02	0.0	0.0	0.0	0.55314293E 01	0.0
344	-0.11325979E 01	0.0	0.47379476E-03	0.0	-0.28495632E-01	0.0
345	-0.61423737E 00	0.59200227E-02	0.0	0.0	0.0	0.24573330E-02
346	-0.73968583E 00	0.10034375E-01	0.0	0.0	0.0	0.42700422E 00
347	-0.64457488E 00	0.41821040E-02	0.0	0.0	0.0	-0.28522074E 00
348	-0.27305746E 01	0.47348626E-02	0.0	0.0	0.0	-0.15612729E-02
349	-0.12580481E 01	-0.10311595E-06	0.0	0.0	0.0	0.33204085E 00
350	-0.43596911E 00	-0.87207317E-01	0.0	0.0	0.0	-0.69399588E-02
351	-0.12925701E 01	-0.60639009E-02	0.0	0.0	0.0	-0.10749336E-01
352	-0.71582127E 00	0.0	0.0	0.0	-0.21910504E-01	0.0
353	-0.14297380E 01	0.0	-0.19092858E-02	0.0	-0.16709077E-02	0.0
354	-0.29841524E 00	0.0	-0.26916318E-01	0.0	-0.20099682E 00	0.0
355	-0.16800013E 01	0.0	0.0	0.0	0.0	0.14000064E 00
356	-0.12577372E 01	0.60651526E-02	0.0	0.0	0.0	-0.10749489E-01
357	-0.60326576E 00	0.87205231E-01	0.0	0.0	0.0	-0.19782889E 00
358	-0.74782741E 00	-0.42786412E-02	0.0	0.0	0.0	-0.50179549E-02

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
359	-0.49024272E 00	-0.60800619E-01	0.0	0.0	0.0	-0.27445614E 00
360	-0.26515265E 01	-0.60806349E-02	0.0	0.0	0.0	0.10756433E-01
361	-0.77577263E 00	-0.87166071E-01	0.0	0.0	0.0	0.44220555E 00
362	-0.90865123E 00	0.0	0.0	0.0	0.43455791E-03	-0.58356750E 00
363	-0.14548941E 01	0.0	0.0	0.0	0.20629854E 01	-0.43508201E-03
364	-0.22794563E 00	0.0	0.0	0.0	0.64287603E-01	-0.12857491E 00
365	-0.10047588E 01	0.0	0.0	0.0	0.16875418E-06	0.33957262E 01
366	-0.19994984E 01	0.0	0.0	0.0	0.0	0.15890589E-06
367	-0.73132157E 00	0.30984968F-01	0.21006437E-02	0.0	0.10391057E 00	-0.15326796E 01
368	-0.12799826E 01	0.21972437E-02	0.14896582E-03	-0.33133984E-09	0.13041086E-03	-0.19236184E-02
369	-0.12799873E 01	0.0	0.22030531E-02	0.0	-0.19279681E-02	0.0
370	-0.81197435E 00	0.0	0.31055506E-01	0.0	-0.19365501E 01	0.0
371	-0.87560874E 00	0.0	0.0	0.0	0.21888189E 01	0.77629389E-04
372	-0.96960580E 00	0.0	0.0	0.0	0.77695135E-04	0.27449188E 01
373	-0.96961105E 00	0.0	0.0	0.0	0.77647273E-04	-0.27449484E 01
374	-0.27585292E 00	0.0	0.0	0.0	0.30110940E-01	-0.77786026E-04

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.25874968E 01	0.0	0.0	0.0	-0.79780865E 01
3	0.0	0.70249909E 00	0.0	0.0	0.0	0.10052043E 00
4	0.0	0.75999910E 00	0.0	0.0	0.0	-0.57395186E-01
5	0.0	0.53019625E 00	-0.28679601E-07	0.10454202E 00	0.0	-0.21145921E-01
6	0.0	0.0	0.0	0.0	0.0	0.15448295E 02
7	0.0	0.65549984E 01	0.0	0.0	0.0	-0.12283323E-03
8	0.0	0.0	0.0	0.0	0.0	-0.15255621E 02
10	0.15951082E-01	0.26600689E 00	0.0	0.0	0.0	-0.21044142E-02
11	-0.17810362E-06	0.11654482E 01	0.0	0.0	0.0	-0.45954410E-01
13	0.89259706E-02	0.22780758E 00	0.0	0.0	0.0	0.11529957E-02
15	-0.75101809E-07	0.29023800E 01	0.0	0.0	0.0	-0.53379078E 01
16	-0.75101809E-07	0.41533417E 00	0.0	0.0	0.0	-0.49497362E-01
17	0.0	0.53834981E 00	0.0	0.0	0.0	0.0
18	0.0	0.15936975E 01	0.0	0.0	0.0	-0.10309620E 01
20	0.93270540E-01	0.49480206E 00	0.0	0.0	0.0	0.15202291E-01
23	0.0	0.20125008E 00	0.0	0.0	0.0	0.0
24	0.0	0.11406403E 01	0.0	0.0	0.0	-0.20424622E 00
25	0.0	0.10318565E 01	0.0	0.0	0.0	0.60327429E 00
26	-0.65079629E-01	0.34557050E 00	0.0	0.0	0.0	-0.70962347E-02
29	0.0	0.52500036E-01	0.0	0.0	0.0	0.0
30	0.47087603E-07	0.89927703E 00	0.0	0.0	0.0	-0.11067951E 00
32	-0.93263090E-01	0.49478972E 00	0.0	0.0	0.0	-0.15198845E-01
34	0.0	0.12585506E 01	0.0	0.0	0.0	0.36063147E 01
35	0.0	0.0	0.0	0.0	0.0	-0.66304188E 01
37	0.0	0.15315396E 00	0.0	-0.95471813E-04	0.0	0.95031166E-04
40	0.0	0.0	0.0	0.13668804E 02	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
51	0.0	0.53175759E-01	0.50856266E-03	0.13327553E-03	0.0	0.0
53	0.0	0.12136784E 01	0.0	0.0	0.0	0.0
54	0.0	0.18809757E 01	-0.78303685E-07	0.18816131E 00	0.0	0.0
55	0.0	0.17885685E 01	0.0	-0.29251677E 00	0.0	0.0
57	0.33181332E-01	0.17671186E 00	-0.33588909E-08	0.74435502E-05	-0.17659957E-03	0.27142402E-02
60	0.0	0.17671359E 00	0.0	-0.10963671E-03	0.0	-0.10980926E-03
64	0.0	0.17671305E 00	0.33258602E-01	0.27264019E-02	0.0	0.0
67	0.0	0.17671078E 00	-0.33256754E-01	0.27258752E-02	0.0	0.0
71	-0.93247235E-01	0.49479789E 00	0.0	0.0	0.0	0.15211865E-01
73	0.0	0.12362490E 01	0.0	0.0	0.0	0.0
75	0.0	0.49479735E 00	-0.93246102E-01	0.15211925E-01	0.0	0.0
78	0.0	0.12347488E 01	0.0	0.0	0.0	0.0
79	0.0	0.17517490E 01	0.0	0.0	0.0	0.0
341	0.0	0.30499983E 00	0.0	0.0	0.0	0.79166651E-01
342	0.0	0.73341646E 01	0.0	-0.19193375E 02	0.0	0.0
343	0.0	0.10327499E 03	0.0	0.55314035E 01	0.0	0.0
344	0.0	0.11326571E 01	0.0	-0.28495636E-01	0.0	0.35619538E-02
345	-0.37505008E-01	0.59363693E 00	0.0	0.0	0.0	-0.29853827E 00
346	0.21554317E-01	0.78635478E 00	0.0	0.0	0.0	0.34562337E 00
347	0.19290864E-01	0.67661345E 00	0.0	0.0	0.0	-0.30179805E 00
348	-0.28216969E-01	0.27175369E 01	0.0	0.0	0.0	0.53769274E 01
349	0.19729134E-06	0.12580481E 01	0.0	0.0	0.0	0.11068022E 00
350	0.60646459E-02	0.52924567E 00	0.0	0.0	0.0	-0.10750137E-01
351	0.87198257E-01	0.11993036E 01	0.0	0.0	0.0	-0.36560030E 01
352	0.0	0.71582127E 00	0.0	-0.21910504E-01	0.0	0.0
353	0.0	0.14153290E 01	0.0	-0.67284505E-04	0.0	0.66302719E 01
354	0.0	0.31282735E 00	0.0	-0.19895792E 00	0.0	0.67133180E-04
355	0.0	0.16800003E 01	0.0	0.0	0.0	0.0
356	-0.87204814E-01	0.11644669E 01	0.0	0.0	0.0	0.13090124E 01
357	-0.60659014E-02	0.69653499E 00	0.0	0.0	0.0	0.10749895E-01
358	0.60802352E-01	0.68274742E 00	0.0	0.0	0.0	-0.68352300E 00
359	0.42773485E-02	0.55532622E 00	0.0	0.0	0.0	-0.50182343E-02
360	0.87167382E-01	0.25582771E 01	0.0	0.0	0.0	0.80178394E 01
361	0.60799681E-02	0.86902165E 00	0.0	0.0	0.0	0.10757152E-01
362	0.0	0.95527536E 00	0.60804710E-02	0.10756467E-01	0.0	0.0
363	0.0	0.14082699E 01	0.87165415E-01	0.20761471E 01	0.0	0.0
364	0.0	0.22636127E 00	0.23745303E-03	0.64358413E-01	0.0	0.0
365	0.0	0.10053282E 01	-0.74602501E-03	0.68519032E-04	0.0	0.0
366	0.0	0.19994984E 01	0.0	0.0	0.0	0.0
367	-0.21980072E-02	0.76450205E 00	0.11220735E-02	0.10375065E 00	-0.12487028E-03	0.19195019E-02
368	-0.30983299E-01	0.12467976E 01	-0.11222532E-02	0.52648693E-05	-0.15867258E-03	0.48891869E 01
369	0.0	0.12633600E 01	0.0	-0.77637218E-04	0.0	-0.48869238E 01
370	0.0	0.82860422E 00	0.0	-0.19341946E 01	0.0	-0.77713194E-04
371	0.0	0.85897946E 00	-0.31055752E-01	0.21911631E 01	0.0	0.0
372	0.0	0.98623687E 00	-0.22028659E-02	0.19280515E-02	0.0	0.0
373	0.0	0.98624080E 00	0.22028675E-02	0.19280887E-02	0.0	0.0
374	0.0	0.25922394E 00	0.31053893E-01	0.32462012E-01	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.25874968E 01	0.0	0.0	0.0	0.79780865E 01
3	0.0	-0.70249909E 00	0.0	0.0	0.0	-0.10052043E 00
4	0.0	-0.75999910E 00	0.0	0.0	0.0	0.57395186E-01
5	0.0	-0.53019625E 00	0.28679601E-07	-0.10454202E 00	0.0	0.21145921E-01
6	0.0	0.0	0.0	0.0	0.0	-0.15448295E 02
7	0.0	-0.65549984E 01	0.0	0.0	0.0	0.12283323E-03
8	0.0	0.0	0.0	0.0	0.0	0.15255621E 02
10	-0.15951082E-01	-0.26600689E 00	0.0	0.0	0.0	0.21044142E-02
11	0.17810362E-06	-0.11654482E 01	0.0	0.0	0.0	0.45954410E-01
13	-0.89259706E-02	-0.22780758E 00	0.0	0.0	0.0	-0.11529957E-02
15	0.75101809E-07	-0.29023800E 01	0.0	0.0	0.0	0.53379078E 01
16	0.75101809E-07	-0.41533417E 00	0.0	0.0	0.0	0.49497362E-01
17	0.0	-0.53834981E 00	0.0	0.0	0.0	0.0
18	0.0	-0.15936975E 01	0.0	0.0	0.0	0.10309620E 01
20	-0.93270540E-01	-0.49480206E 00	0.0	0.0	0.0	-0.15202291E-01
23	0.0	-0.20125008E 00	0.0	0.0	0.0	0.0
24	0.0	-0.11406403E 01	0.0	0.0	0.0	0.20424622E 00
25	0.0	-0.10318565E 01	0.0	0.0	0.0	-0.60327429E 00
26	0.65079629E-01	-0.34557050E 00	0.0	0.0	0.0	0.70962347E-02
29	0.0	-0.52500036E-01	0.0	0.0	0.0	0.0
30	-0.47087603E-07	-0.89927703E 00	0.0	0.0	0.0	0.11067951E 00
32	0.93263090E-01	-0.49478972E 00	0.0	0.0	0.0	0.15198845E-01
34	0.0	-0.12585506E 01	0.0	0.0	0.0	-0.36063147E 01
35	0.0	0.0	0.0	0.0	0.0	0.66304188E 01
37	0.0	-0.15315396E 00	0.0	0.95471813E-04	0.0	-0.95031166E-04
40	0.0	0.0	0.0	-0.13668804E 02	0.0	0.0
51	0.0	-0.53175759E-01	-0.50856266E-03	-0.13327553E-03	0.0	0.0
53	0.0	-0.12136784E 01	0.0	0.0	0.0	0.0
54	0.0	-0.18809757E 01	0.78303685E-07	-0.18816131E 00	0.0	0.0
55	0.0	-0.17885685E 01	0.0	0.29251677E 00	0.0	0.0
57	-0.33181332E-01	-0.17671186E 00	0.33588909E-08	-0.74435502E-05	0.17659957E-03	-0.27142402E-02
60	0.0	-0.17671359E 00	0.0	0.10963671E-03	0.0	0.10980926E-03
64	0.0	-0.17671305E 00	-0.33258602E-01	-0.27264019E-02	0.0	0.0
67	0.0	-0.17671078E 00	0.33256754E-01	-0.27258752E-02	0.0	0.0
71	0.93247235E-01	-0.49479789E 00	0.0	0.0	0.0	-0.15211865E-01
73	0.0	-0.12362490E 01	0.0	0.0	0.0	0.0
75	0.0	-0.49479735E 00	0.93246102E-01	-0.15211925E-01	0.0	0.0
78	0.0	-0.12347488E 01	0.0	0.0	0.0	0.0
79	0.0	-0.17517490E 01	0.0	0.0	0.0	0.0
341	0.0	-0.30499983E 00	0.0	0.0	0.0	-0.79166651E-01
342	0.0	-0.73341646E 01	0.0	0.19193375E 02	0.0	0.0
343	0.0	0.76724991E 02	0.0	-0.55314035E 01	0.0	0.0
344	0.0	-0.11326571E 01	0.0	0.28495636E-01	0.0	-0.35619538E-02
345	0.37505008E-01	-0.59363693E 00	0.0	0.0	0.0	0.29853827E 00
346	-0.21554317E-01	-0.78635478E 00	0.0	0.0	0.0	-0.34562337E 00
347	-0.19290864E-01	-0.67661345E 00	0.0	0.0	0.0	0.30179805E 00
348	0.28216969E-01	-0.27175369E 01	0.0	0.0	0.0	-0.53769274E 01
349	-0.19729134E-06	-0.12580481E 01	0.0	0.0	0.0	-0.11068022E 00
350	-0.60646459E-02	-0.52924567E 00	0.0	0.0	0.0	0.10750137E-01
351	-0.87198257E-01	-0.11993036E 01	0.0	0.0	0.0	0.36560030E 01

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
352	0.0	-0.71582127E 00	0.0	0.21910504E-01	0.0	0.0
353	0.0	-0.14153290E 01	0.0	0.67284505E-04	0.0	-0.66302719E 01
354	0.0	-0.31282735E 00	0.0	0.19895792E 00	0.0	-0.67133180E-04
355	0.0	-0.16800003E 01	0.0	0.0	0.0	0.0
356	0.87204814E-01	-0.11644669E 01	0.0	0.0	0.0	-0.13090124E 01
357	0.60659014E-02	-0.69653499E 00	0.0	0.0	0.0	-0.10749895E-01
358	-0.60802352E-01	-0.68274742E 00	0.0	0.0	0.0	0.68352300E 00
359	-0.42773485E-02	-0.55532622E 00	0.0	0.0	0.0	0.50182343E-02
360	-0.87167382E-01	-0.25582771E 01	0.0	0.0	0.0	-0.80178394E 01
361	-0.60799681E-02	-0.86902165E 00	0.0	0.0	0.0	-0.10757152E-01
362	0.0	-0.95527536E 00	-0.60804710E-02	-0.10756467E-01	0.0	0.0
363	0.0	-0.14082699E 01	-0.87165415E-01	-0.20761471E 01	0.0	0.0
364	0.0	-0.22636127E 00	-0.23745303E-03	-0.64358413E-01	0.0	0.0
365	0.0	-0.10053282E 01	0.74602501E-03	-0.68519032E-04	0.0	0.0
366	0.0	-0.19994984E 01	0.0	0.0	0.0	0.0
367	0.21980072E-02	-0.76450205E 00	-0.11220735E-02	-0.10375065E 00	0.12487028E-03	-0.19195019E-02
368	0.30983299E-01	-0.12467976E 01	0.11222532E-02	-0.52648693E-05	0.15867258E-03	-0.48891869E 01
369	0.0	-0.12633600E 01	0.0	0.77637218E-04	0.0	0.48869238E 01
370	0.0	-0.82860422E 00	0.0	0.19341946E 01	0.0	0.77713194E-04
371	0.0	-0.85897946E 00	0.31055752E-01	-0.21911631E 01	0.0	0.0
372	0.0	-0.98623687E 00	0.22028659E-02	-0.19280515E-02	0.0	0.0
373	0.0	-0.98624080E 00	-0.22028675E-02	-0.19280887E-02	0.0	0.0
374	0.0	-0.25922394E 00	-0.31053893E-01	-0.32462012E-01	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS   10.56 ** LAST STEP "EDIT" TIME IS    6.50 ** DELTA TIME IS    4.06 *
* ELAPSED SECONDS                            89.6                                27.7                      61.9 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS   10.60 ** LAST STEP "SLVR" TIME IS   10.56 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            89.9                                89.6                       0.3 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	-0.000021512	-0.000067850	-0.000112302	0.000006219	-0.000020789	0.000008288
3	-0.000021541	-0.000051669	-0.000073898	0.000002476	-0.000015547	0.000007713
4	-0.000021571	-0.000017647	-0.000011246	0.000000072	-0.000010877	0.000007378
5	-0.000048440	-0.000036785	-0.000036789	0.000002299	-0.000013448	0.000007096
6	-0.000021620	0.0	0.0	-0.000006264	0.000005854	0.000006566
7	-0.000022184	0.000065347	-0.000988036	-0.000078497	0.000005565	-0.000000968
8	-0.000022748	0.0	0.0	-0.000150730	-0.000028620	-0.000002606
10	-0.000022545	-0.000011303	0.000058218	-0.000161444	-0.000011580	-0.000001952
11	-0.000017027	-0.000016379	-0.000676996	-0.000165294	-0.000001396	-0.000000477
13	-0.000017635	-0.000015825	-0.001259730	-0.000162218	0.000001446	0.000000715
15	-0.000017808	0.000002576	-0.001291076	-0.000158329	0.000001846	0.000002546
16	-0.000012212	0.000008138	-0.000978542	-0.000157378	0.000002477	0.000002905
17	-0.000004415	0.000008014	-0.000628232	-0.000093742	0.000015288	0.000000832
18	-0.000002706	0.000006044	-0.000387341	-0.000086813	0.000019299	0.000000648
20	-0.000002253	0.000000274	-0.000106797	-0.000031497	0.000023144	0.000000599
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	-0.000000112	0.000000023	0.0	0.0
24	-0.000002702	0.000009417	-0.000481645	-0.000090707	0.000011821	0.000000387
25	-0.000002693	0.000009809	-0.000495234	-0.000090403	0.000010512	0.000000307
26	-0.000002503	0.000000259	-0.000251397	-0.000062280	-0.000035436	-0.000000354
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	-0.000000017	0.000000004	0.0	0.0
30	-0.000024995	0.000008482	-0.001611635	-0.000157374	0.000004841	0.000003373
32	-0.000032821	0.000006900	-0.001951601	-0.000156995	0.000006677	0.000003503
34	-0.000037823	-0.000011814	-0.000008575	-0.000002849	0.000011548	-0.000002253
35	-0.000038067	0.0	0.0	-0.000000524	-0.000008786	-0.000002211
37	-0.000037119	0.000000617	-0.000004526	0.000000105	0.000016012	0.000000532
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	-0.000000116	0.000000852	-0.000002344
51	-0.000087795	-0.000060418	0.000011500	0.000020830	-0.000012944	0.000000295
53	0.0	-0.000060754	0.0	-0.000120444	-0.000009750	-0.000000031
54	-0.000153494	-0.000060667	-0.002480191	0.000040714	-0.000006446	0.000006715
55	0.0	0.000042596	0.0	0.000014023	-0.000003477	-0.000026078
57	0.000486660	0.000121270	-0.001268668	-0.000123381	-0.000004919	-0.000033019
60	0.000479620	-0.000373566	-0.000019053	-0.000043520	-0.000067436	-0.000009498
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	-0.000002490	-0.000004933	-0.000006888	0.0	0.0
67	0.0	-0.000000970	-0.000000331	0.000001149	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
71	-0.000023507	-0.000242071	-0.000600951	0.000045064	-0.000016225	0.000005159
73	-0.000047505	-0.000244391	-0.000320946	0.000047655	-0.000012587	0.000002756
75	-0.000055818	-0.000227641	-0.000019729	0.000037725	-0.000008399	0.000001264
77	0.0	0.0	0.0	0.0	0.0	0.0
78	-0.000013785	-0.000060735	-0.000809533	-0.000176797	-0.000008984	0.000005163
79	-0.000029975	-0.000060731	-0.001337567	-0.000173308	-0.000008898	0.000005582
341	-0.000037980	-0.000002411	0.000006531	-0.000000545	-0.000001342	-0.000002377
342	-0.000036825	-0.000006956	0.000006861	-0.000000507	0.000002146	-0.000002344
343	-0.000012251	-0.000001792	0.000009320	-0.000000198	0.000001123	-0.000002344
344	-0.000021553	-0.000034465	-0.000040120	0.000001455	-0.000013564	0.000007511
345	-0.000022828	-0.000010005	0.000074273	-0.000160966	-0.000012140	-0.000002007

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	-0.000021769	-0.000012311	-0.000001894	-0.000161813	-0.000011063	-0.000001893
347	-0.000017424	-0.000016147	-0.001210151	-0.000162369	0.000001431	0.000000680
348	-0.000017714	-0.000015438	-0.001277657	-0.000162052	0.000001440	0.000000752
349	-0.000015156	0.000005228	-0.001134568	-0.000157959	0.000002525	0.000002876
350	-0.000028968	0.000008482	-0.001787807	-0.000157184	0.000005650	0.000003457
351	-0.000034424	0.000003135	-0.002012878	-0.000156775	0.000007523	0.000003501
352	-0.000037922	-0.000007217	0.000006800	-0.000000552	0.000002294	-0.000002344
353	-0.000040681	0.000000926	-0.000013254	0.000000102	0.000016492	0.000000540
354	-0.000028802	0.000000444	-0.000001015	0.000000107	0.000015511	0.000000523
355	-0.000002730	0.000007999	-0.000441602	-0.000091427	0.000015570	0.000000659
356	-0.000002536	0.000000924	-0.000147359	-0.000033671	0.000024413	0.000000601
357	-0.000001576	-0.000000002	-0.000063436	-0.000029383	0.000021266	0.000000582
358	-0.000002395	0.000000581	-0.000295696	-0.000062838	-0.000036044	-0.000000467
359	-0.000002672	0.000000165	-0.000196562	-0.000061596	-0.000034448	-0.000000243
360	-0.000021219	-0.000236488	-0.000603522	0.000044578	-0.000016398	0.000005318
361	-0.000028870	-0.000244317	-0.000559856	0.000045431	-0.000016060	0.000005000
362	-0.000058199	-0.000244477	-0.000060686	0.000038641	-0.000008594	0.000001316
363	-0.000047522	-0.000188093	-0.000003131	0.000036688	-0.000008225	0.000001215
364	-0.000086982	-0.000059188	0.000008103	0.000020716	-0.000012945	0.000000332
365	-0.000088098	-0.000060837	0.000015112	0.000020943	-0.000012941	0.000000258
366	-0.000021723	-0.000060733	-0.001075189	-0.000175650	-0.000008941	0.000005388
367	0.000469305	0.000124103	-0.001204280	-0.000123580	-0.000004906	-0.000033145
368	0.000493824	0.000105626	-0.001293178	-0.000123098	-0.000004966	-0.000032884
369	0.000494509	-0.000378093	-0.000055103	-0.000043821	-0.000067985	-0.000009570
370	0.000444001	-0.000352636	-0.000004230	-0.000043263	-0.000066838	-0.000009419
371	0.0	-0.000006111	-0.000003400	-0.000006724	0.0	0.0
372	0.0	-0.000000948	-0.000008698	-0.000007023	0.0	0.0
373	0.0	-0.000001273	-0.000001130	0.000001485	0.0	0.0
374	0.0	-0.000000445	-0.000000066	0.000000778	0.0	0.0

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	-0.	-0.	-4.	-19.	-13.	2.	1.00	82.	71.	153.
			3	0.	0.	4.	27.	13.	-3.	1.57	82.	144.	226.
2	TEE	1	3	-4.	-0.	0.	3.	-13.	27.	1.57	52.	46.	98.
			344	5.	0.	-0.	-4.	13.	-37.	1.57	52.	41.	93.
3	TEE	1	4	7.	-0.	0.	-2.	-17.	50.	1.57	52.	82.	134.
			344	-6.	0.	-0.	2.	17.	-36.	1.57	52.	44.	96.
4	TEE	1	5	-0.	-0.	0.	-5.	-1.	0.	1.57	52.	8.	60.
			344	0.	1.	-0.	5.	1.	-1.	1.57	58.	72.	131.
5	TAN	1	4	-0.	-0.	-7.	-50.	-17.	2.	1.57	82.	256.	338.
			6	0.	0.	7.	67.	17.	-3.	1.00	82.	213.	295.
6	TAN	1	6	0.	-0.	7.	-67.	-17.	3.	1.00	82.	213.	295.
			7	-0.	0.	-0.	-36.	17.	-1.	1.00	82.	123.	205.
7	TAN	1	7	0.	-0.	0.	36.	-17.	1.	1.00	82.	123.	205.
			8	-0.	0.	6.	47.	17.	0.	1.00	82.	152.	234.
8	TAN	1	8	0.	-0.	6.	-47.	-17.	-0.	1.00	82.	152.	234.
			345	-0.	0.	-5.	26.	17.	2.	1.57	82.	149.	231.
9	BEND	1	345	0.	-5.	-0.	-26.	2.	-17.	1.57	60.	59.	119.
			10	-0.	4.	1.	28.	-2.	5.	1.57	60.	54.	114.
10	BEND	1	10	0.	-4.	-1.	-28.	2.	-5.	1.57	60.	54.	114.
			346	0.	4.	1.	24.	-2.	-7.	1.57	60.	48.	108.
11	TAN	1	346	0.	-1.	-4.	24.	7.	2.	1.57	82.	122.	204.
			11	-0.	1.	3.	-5.	-7.	-2.	1.00	82.	27.	109.
12	TAN	1	11	-0.	-1.	-3.	6.	6.	2.	1.00	82.	27.	109.
			347	0.	1.	2.	5.	-6.	-2.	1.57	82.	39.	120.
13	BEND	1	347	-0.	2.	-1.	-5.	-2.	6.	1.57	52.	12.	64.
			13	0.	-2.	1.	3.	2.	-7.	1.57	52.	13.	65.
14	BEND	1	13	-0.	2.	-1.	-3.	-2.	7.	1.57	52.	13.	65.
			348	0.	-1.	0.	1.	2.	-8.	1.57	52.	14.	66.
15	TAN	1	348	0.	-0.	1.	1.	8.	-2.	1.00	52.	9.	61.
			15	-0.	0.	4.	14.	-8.	8.	1.00	52.	18.	70.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	1.	-0.	-4.	-16.	-4.	-8.	1.57	52.	28.	81.
			349	-1.	0.	4.	22.	4.	9.	1.57	52.	24.	76.
17	TEE	1	16	0.	1.	-7.	14.	9.	-0.	1.57	52.	26.	78.
			349	-0.	-1.	6.	-5.	-9.	1.	1.57	52.	14.	66.
18	TEE	1	30	1.	-0.	0.	1.	21.	-4.	1.57	52.	33.	85.
			349	-1.	0.	-2.	-4.	-21.	8.	1.57	52.	33.	86.
19	TAN	1	30	1.	-0.	-0.	-6.	20.	4.	1.00	52.	21.	73.
			350	-1.	0.	-0.	6.	-20.	-2.	1.00	52.	21.	73.
20	BEND	1	350	-1.	0.	-0.	6.	2.	20.	1.57	60.	40.	100.
			32	1.	-1.	-1.	-18.	-0.	-10.	1.57	60.	40.	100.
21	BEND	1	32	-1.	1.	1.	18.	0.	10.	1.57	60.	40.	100.
			351	0.	-1.	-1.	-19.	0.	6.	1.57	60.	38.	98.
22	TAN	1	351	0.	1.	1.	-19.	-6.	-0.	1.57	58.	444.	502.
			34	-0.	-1.	-3.	-26.	6.	0.	1.57	58.	596.	654.
23	TEE	1	34	-3.	1.	0.	0.	-6.	26.	1.57	39.	146.	184.
			352	4.	-1.	-0.	-0.	6.	-33.	1.57	39.	117.	156.
24	TEE	1	341	-2.	1.	-0.	0.	-0.	9.	1.57	39.	49.	88.
			352	3.	-1.	0.	0.	0.	-14.	1.57	39.	49.	88.
25	TEE	1	342	-1.	7.	0.	5.	-0.	18.	1.57	39.	103.	142.
			352	1.	-6.	-0.	-6.	0.	-18.	1.57	117.	6.	123.
26	TAN	1	341	-0.	1.	-2.	9.	-0.	0.	1.57	58.	200.	258.
			35	0.	-1.	2.	-7.	0.	-0.	1.00	58.	94.	152.
27	TAN	1	35	0.	1.	-1.	7.	-0.	0.	1.00	58.	94.	152.
			353	-0.	-1.	-1.	-5.	0.	0.	1.57	58.	108.	166.
28	BEND	1	353	-1.	-0.	1.	0.	-5.	-0.	1.57	39.	26.	65.
			37	0.	0.	-2.	-0.	5.	0.	1.57	39.	29.	68.
29	BEND	1	37	-0.	-0.	2.	0.	-5.	-0.	1.57	39.	29.	68.
			354	-1.	0.	-2.	0.	5.	0.	1.57	39.	29.	68.
30	TAN	1	354	1.	2.	0.	-0.	-0.	5.	1.57	58.	118.	176.
			39	-1.	-2.	-0.	-0.	0.	-1.	1.00	58.	13.	71.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	-1.	0.	-7.	-16.	-4.	-0.	1.00	58.	238.	296.
			17	1.	-0.	7.	35.	4.	-2.	1.00	58.	493.	552.
32	TEE	1	17	1.	0.	7.	35.	-4.	-2.	1.57	52.	54.	106.
			355	-1.	-0.	-8.	-49.	4.	4.	1.57	52.	49.	101.
33	TEE	1	18	0.	-0.	7.	36.	-43.	-0.	1.57	52.	86.	138.
			355	-0.	0.	-5.	-54.	43.	0.	1.57	52.	84.	136.
34	TEE	1	24	-0.	1.	-4.	-40.	7.	3.	1.57	52.	63.	115.
			355	0.	-1.	3.	50.	-7.	-4.	1.57	52.	50.	102.
35	TAN	1	18	-0.	-0.	7.	-36.	-43.	-0.	1.57	82.	269.	351.
			356	0.	0.	-9.	-28.	43.	-0.	1.57	82.	246.	328.
36	BEND	1	356	0.	9.	-0.	-28.	0.	-43.	1.57	60.	97.	157.
			20	0.	-9.	0.	59.	0.	7.	1.57	60.	114.	174.
37	BEND	1	20	-0.	9.	-0.	-59.	-0.	-7.	1.57	60.	114.	174.
			357	0.	-10.	0.	57.	1.	-41.	1.57	60.	133.	193.
38	TAN	1	357	-0.	-0.	-10.	-57.	41.	1.	1.57	82.	337.	419.
			22	0.	0.	10.	91.	-41.	-2.	1.00	82.	307.	389.
39	TAN	1	22	0.	0.	0.	-0.	0.	0.	1.00	82.	1.	83.
			23	0.	0.	0.	-0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	0.	1.	-4.	40.	7.	3.	1.57	39.	53.	92.
			25	-0.	-1.	5.	-35.	-7.	-2.	1.57	35.	60.	95.
41	TAN	1	25	0.	1.	-5.	35.	7.	2.	1.00	62.	269.	330.
			358	-0.	-1.	6.	7.	-7.	2.	1.00	62.	73.	135.
42	BEND	1	358	-0.	-6.	1.	7.	-2.	7.	1.57	46.	35.	81.
			26	-0.	6.	-1.	-14.	2.	2.	1.57	46.	50.	96.
43	BEND	1	26	0.	-6.	1.	14.	-2.	-2.	1.57	46.	50.	96.
			359	-1.	7.	-0.	-13.	1.	13.	1.57	46.	66.	112.
44	TAN	1	359	-1.	0.	-7.	-13.	-13.	-1.	1.00	62.	140.	201.
			28	1.	-0.	7.	48.	13.	-1.	1.00	62.	375.	437.
45	TAN	1	28	0.	0.	0.	-0.	0.	0.	1.00	62.	0.	62.
			29	0.	0.	0.	-0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	0.	-0.	-4.	19.	-13.	2.	1.00	82.	71.	153.
			360	-0.	0.	-1.	7.	13.	5.	1.57	82.	73.	155.
47	BEND	1	360	0.	-1.	-0.	-7.	5.	-13.	1.57	52.	23.	75.
			71	-0.	2.	0.	12.	-5.	5.	1.57	52.	22.	74.
48	BEND	1	71	0.	-2.	-0.	-12.	5.	-5.	1.57	52.	22.	74.
			361	0.	2.	0.	10.	-5.	-5.	1.57	52.	19.	71.
49	TAN	1	361	-0.	-0.	2.	-10.	5.	-5.	1.57	82.	58.	140.
			73	0.	0.	-3.	-3.	-5.	3.	1.00	82.	20.	102.
50	TAN	1	73	-0.	-0.	3.	3.	5.	-3.	1.00	82.	20.	102.
			362	0.	0.	-5.	-26.	-5.	1.	1.57	82.	126.	207.
51	BEND	1	362	5.	-0.	-0.	-1.	26.	5.	1.57	52.	40.	92.
			75	-3.	0.	4.	-3.	-30.	-4.	1.57	52.	48.	100.
52	BEND	1	75	3.	-0.	-4.	3.	30.	4.	1.57	52.	48.	100.
			363	0.	0.	6.	-5.	-32.	-1.	1.57	52.	51.	103.
53	TAN	1	363	-0.	-6.	-0.	32.	1.	5.	1.57	82.	159.	240.
			77	0.	8.	0.	-29.	-1.	-9.	1.57	82.	145.	227.
54	TAN	2	5	-0.	-0.	-0.	-5.	-0.	-2.	1.00	58.	70.	128.
			364	0.	-0.	-0.	4.	0.	1.	1.57	58.	98.	156.
55	BEND	2	364	0.	-0.	0.	-1.	-4.	-0.	1.57	39.	24.	63.
			51	-0.	0.	-0.	1.	4.	0.	1.57	39.	24.	62.
56	BEND	2	51	0.	-0.	0.	-1.	-4.	-0.	1.57	39.	24.	62.
			365	-0.	0.	-0.	1.	4.	-0.	1.57	39.	23.	62.
57	TAN	2	365	-0.	0.	0.	-4.	0.	-1.	1.57	58.	95.	153.
			53	0.	-0.	-2.	-25.	-0.	-1.	1.00	58.	356.	414.
58	TAN	2	53	0.	0.	-5.	25.	0.	1.	1.00	58.	356.	414.
			78	-0.	-0.	5.	1.	-0.	-1.	1.57	58.	31.	89.
59	TAN	2	78	0.	0.	-5.	-1.	0.	1.	1.57	37.	8.	46.
			366	-0.	-0.	3.	7.	-0.	-1.	1.57	37.	42.	80.
60	TAN	2	366	0.	0.	-3.	-7.	0.	1.	1.57	37.	42.	80.
			79	-0.	-0.	1.	10.	-0.	-1.	1.57	37.	60.	97.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	0.	-1.	-10.	0.	1.	1.57	58.	225.	283.
			54	-0.	-0.	-1.	14.	-0.	1.	1.00	58.	198.	256.
62	TAN	2	54	0.	0.	1.	-14.	0.	-1.	1.00	58.	198.	256.
			55	-0.	0.	-3.	-25.	-0.	2.	1.00	58.	361.	419.
63	TAN	2	55	-0.	-0.	-3.	25.	-0.	-2.	1.00	58.	361.	419.
			367	0.	0.	1.	2.	0.	-1.	1.57	58.	48.	106.
64	BEND	2	367	-0.	1.	-0.	-2.	-1.	-0.	1.57	39.	12.	50.
			57	0.	-1.	-0.	2.	1.	-1.	1.57	39.	15.	54.
65	BEND	2	57	-0.	1.	0.	-2.	-1.	1.	1.57	39.	15.	54.
			368	0.	-1.	-0.	1.	2.	-3.	1.57	39.	17.	56.
66	TAN	2	368	-0.	0.	1.	1.	3.	-1.	1.57	58.	69.	127.
			369	0.	-0.	1.	5.	-3.	1.	1.57	58.	136.	194.
67	BEND	2	369	-1.	-0.	0.	-1.	-5.	3.	1.57	39.	33.	72.
			60	1.	0.	-1.	-1.	6.	-2.	1.57	39.	37.	76.
68	BEND	2	60	-1.	-0.	1.	1.	-6.	2.	1.57	39.	37.	76.
			370	-0.	0.	-2.	-3.	6.	-0.	1.57	39.	38.	77.
69	TAN	2	370	-0.	2.	-0.	-3.	0.	-6.	1.57	58.	156.	214.
			62	0.	-3.	0.	3.	-0.	2.	1.00	58.	57.	115.
70	TAN	2	62	0.	-3.	0.	-1.	0.	0.	1.00	58.	13.	71.
			371	0.	1.	-0.	-2.	0.	0.	1.57	58.	40.	98.
71	BEND	2	371	0.	0.	-1.	0.	2.	0.	1.57	39.	10.	48.
			64	1.	0.	1.	0.	-2.	0.	1.57	39.	9.	48.
72	BEND	2	64	-1.	0.	-1.	0.	2.	0.	1.57	39.	9.	48.
			372	1.	0.	0.	0.	-1.	0.	1.57	39.	7.	45.
73	TAN	2	372	0.	-0.	-1.	1.	0.	0.	1.57	58.	28.	86.
			373	0.	0.	-1.	-3.	0.	0.	1.57	58.	74.	132.
74	BEND	2	373	1.	0.	-0.	0.	3.	0.	1.57	39.	18.	57.
			67	-1.	0.	1.	0.	-4.	0.	1.57	39.	21.	60.
75	BEND	2	67	1.	0.	-1.	0.	4.	0.	1.57	39.	21.	60.
			374	0.	0.	1.	0.	-4.	0.	1.57	39.	22.	61.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	-1.	-0.	4.	0.	0.	1.00	39.	14.	53.
			69	0.	2.	0.	-4.	0.	0.	1.00	39.	13.	52.
77	TAN	3	342	1.	7.	0.	-5.	-0.	18.	1.57	0.	9.	9.
			343	-1.	-21.	-0.	3.	0.	-8.	1.00	0.	3.	3.
78	TAN	3	343	1.	-69.	0.	-3.	-0.	8.	1.00	0.	3.	3.
			40	-1.	57.	-0.	-0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	369	0.000494509	-0.000378093	-0.000055103
2	369	0.000494509	-0.000378093	-0.000055103
3	54	-0.000153494	-0.000060667	-0.002480191

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	596.	22	654.
2	63	361.	63	419.
3	77	9.	77	9.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
6	0.	0.	14.	0.	-0.	0.
8	0.	0.	12.	0.	-0.	-0.
22	0.	0.	11.	91.	-41.	-2.
28	1.	-0.	7.	48.	13.	-1.
35	0.	0.	-1.	-0.	0.	-0.
39	-1.	-0.	2.	-0.	-1.	-0.
40	-1.	-0.	-57.	-0.	0.	-0.
53	0.	-0.	8.	0.	-0.	-0.
55	-0.	-0.	5.	0.	-0.	0.
62	0.	0.	6.	2.	2.	0.
69	0.	-0.	2.	-4.	0.	0.
77	0.	-0.	8.	-29.	9.	-1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	0.000028921	0.000069044	0.000111661	-0.000005988	0.000020720	-0.000008397
3	0.000028953	0.000052624	0.000073402	-0.000002233	0.000015475	-0.000007838
4	0.000028985	0.000018015	0.000011075	0.000000181	0.000010806	-0.000007513
5	0.000055704	0.000036936	0.000036475	-0.000002058	0.000013374	-0.000007210
6	0.000029039	0.0	0.0	0.000006544	-0.000005916	-0.000006720
7	0.000029656	-0.000069975	0.000988479	0.000079090	-0.000005550	0.000000885
8	0.000030274	0.0	0.0	0.000151636	0.000028621	0.000003101
10	0.000030005	0.000013834	-0.000058068	0.000162397	0.000011583	0.000002451
11	0.000022717	0.000020488	0.000681559	0.000166285	0.000001444	0.000000699
13	0.000023184	0.000020098	0.001267512	0.000163220	-0.000001338	-0.000000873
15	0.000023382	-0.000003367	0.001297193	0.000159323	-0.000001670	-0.000003280
16	0.000016157	-0.000010544	0.000982309	0.000158362	-0.000002291	-0.000003748
17	0.000005893	-0.000010386	0.000630042	0.000094195	-0.000015299	-0.000001098
18	0.000003632	-0.000007808	0.000388190	0.000087227	-0.000019323	-0.000000846
20	0.000003021	-0.000000360	0.000107152	0.000031619	-0.000023184	-0.000000791
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.000000112	-0.000000023	0.0	0.0
24	0.000003629	-0.000012238	0.000482594	0.000091139	-0.000011831	-0.000000511
25	0.000003616	-0.000012758	0.000496193	0.000090832	-0.000010520	-0.000000406
26	0.000003360	-0.000000334	0.000252004	0.000062456	0.000035480	0.000000446
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.000000017	-0.000000004	0.0	0.0
30	0.000032606	-0.000010973	0.001619378	0.000158378	-0.000004617	-0.000004332
32	0.000042646	-0.000008944	0.001961651	0.000157998	-0.000006422	-0.000004493
34	0.000049019	0.000013345	0.000035680	0.000002896	-0.000013001	0.000002565
35	0.000049230	0.0	0.0	0.000000554	0.000000030	0.000002486
37	0.000046869	-0.000000707	0.000004816	-0.000000122	-0.000017458	-0.000000598
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.000000146	-0.000000734	0.000002653
51	0.000094860	0.000060214	-0.000011099	-0.000020705	0.000012879	-0.000000174
53	0.0	0.000060548	0.0	0.000120382	0.000009693	0.000000339
54	0.000151072	0.000060461	0.002479755	-0.000040699	0.000006398	-0.000006775
55	0.0	-0.000042784	0.0	-0.000014018	0.000003450	0.000026009
57	-0.000486303	-0.000121452	0.001268576	0.000123370	0.000004915	0.000033017
60	-0.000479268	0.000373489	0.000019049	0.000043513	0.000067415	0.000009503
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.000002490	0.000004933	0.000006888	0.0	0.0
67	0.0	0.000000970	0.000000331	-0.000001149	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
71	0.000030736	0.000241589	0.000599858	-0.000044966	0.000016274	-0.000004829
73	0.000052386	0.000243764	0.000320409	-0.000047575	0.000012707	-0.000002335
75	0.000057789	0.000227049	0.000019698	-0.000037652	0.000008600	-0.000000892
77	0.0	0.0	0.0	0.0	0.0	0.0
78	0.000012560	0.000060528	0.000809290	0.000176761	0.000008929	-0.000004977
79	0.000028211	0.000060524	0.001337221	0.000173275	0.000008844	-0.000005408
341	0.000049179	0.000002704	0.000005995	0.000000577	-0.000004880	0.000002680
342	0.000047305	0.000007849	0.000017274	0.000000539	-0.000003574	0.000002653
343	0.000011544	0.000002193	0.000016224	0.000000228	-0.000001329	0.000002653
344	0.000028966	0.000035132	0.000039787	-0.000001208	0.000013491	-0.000007640
345	0.000030361	0.000012206	-0.000074259	0.000161916	0.000012141	0.000002512

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** VERTICAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	0.000029026	0.000015104	0.000002431	0.000162767	0.000011066	0.000002385
347	0.000022928	0.000020488	0.001217682	0.000163370	-0.000001325	-0.000000825
348	0.000023279	0.000019626	0.001285485	0.000163053	-0.000001329	-0.000000924
349	0.000019958	-0.000006789	0.001139512	0.000158950	-0.000002338	-0.000003705
350	0.000037704	-0.000010973	0.001796678	0.000158189	-0.000005413	-0.000004437
351	0.000044700	-0.000004118	0.002023652	0.000157775	-0.000007254	-0.000004488
352	0.000049145	0.000008126	0.000017262	0.000000584	-0.000003900	0.000002653
353	0.000050753	-0.000001055	0.000014292	-0.000000119	-0.000017863	-0.000000607
354	0.000037737	-0.000000510	0.000000975	-0.000000124	-0.000017021	-0.000000588
355	0.000003665	-0.000010367	0.000442515	0.000091866	-0.000015585	-0.000000868
356	0.000003396	-0.000001216	0.000147814	0.000033804	-0.000024455	-0.000000790
357	0.000002123	0.000000005	0.000063649	0.000029494	-0.000021303	-0.000000771
358	0.000003224	-0.000000744	0.000296388	0.000063019	0.000036088	0.000000595
359	0.000003568	-0.000000216	0.000197033	0.000061768	0.000034492	0.000000301
360	0.000028592	0.000236351	0.000602335	-0.000044478	0.000016444	-0.000004997
361	0.000035740	0.000243688	0.000558887	-0.000045335	0.000016113	-0.000004662
362	0.000060660	0.000243852	0.000060577	-0.000038568	0.000008791	-0.000000937
363	0.000049111	0.000187579	0.000003132	-0.000036615	0.000008429	-0.000000853
364	0.000094072	0.000058991	-0.000007723	-0.000020590	0.000012880	-0.000000213
365	0.000095142	0.000060631	-0.000014689	-0.000020818	0.000012876	-0.000000137
366	0.000020224	0.000060526	0.001074894	0.000175615	0.000008886	-0.000005208
367	-0.000468949	-0.000124285	0.001204194	0.000123568	0.000004903	0.000033144
368	-0.000493466	-0.000105809	0.001293086	0.000123087	0.000004963	0.000032882
369	-0.000494153	0.000378011	0.000055088	0.000043814	0.000067964	0.000009575
370	-0.000443661	0.000352564	0.000004231	0.000043256	0.000066817	0.000009424
371	0.0	0.000006111	0.000003400	0.000006724	0.0	0.0
372	0.0	0.000000948	0.000008698	0.000007023	0.0	0.0
373	0.0	0.000001273	0.000001130	-0.000001485	0.0	0.0
374	0.0	0.000000445	0.000000066	-0.000000778	0.0	0.0

WPPSS OUTLET AND BALANCE LINES
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STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	0.	0.	4.	19.	13.	-2.	1.00	82.	71.	153.
			3	-0.	-0.	-4.	-27.	-13.	3.	1.57	82.	144.	226.
2	TEE	1	3	4.	0.	-0.	-3.	13.	-27.	1.57	52.	46.	98.
			344	-5.	-0.	0.	4.	-13.	37.	1.57	52.	41.	94.
3	TEE	1	4	-7.	0.	-0.	2.	17.	-50.	1.57	52.	82.	134.
			344	6.	-0.	0.	-2.	-17.	36.	1.57	52.	44.	97.
4	TEE	1	5	0.	0.	-0.	5.	1.	-0.	1.57	52.	8.	60.
			344	-0.	-1.	0.	-5.	-1.	1.	1.57	58.	73.	132.
5	TAN	1	4	0.	0.	7.	50.	17.	-2.	1.57	82.	256.	338.
			6	-0.	-0.	-7.	-67.	-17.	3.	1.00	82.	213.	295.
6	TAN	1	6	-0.	0.	-7.	67.	17.	-3.	1.00	82.	213.	295.
			7	0.	-0.	0.	36.	-17.	2.	1.00	82.	124.	206.
7	TAN	1	7	-0.	0.	-0.	-36.	17.	-2.	1.00	82.	124.	206.
			8	0.	-0.	-6.	-47.	-17.	-0.	1.00	82.	152.	234.
8	TAN	1	8	-1.	0.	-6.	47.	17.	0.	1.00	82.	152.	234.
			345	1.	-0.	5.	-26.	-17.	-2.	1.57	82.	149.	231.
9	BEND	1	345	-1.	5.	0.	26.	-2.	17.	1.57	60.	59.	119.
			10	0.	-4.	-1.	-28.	3.	-5.	1.57	60.	54.	114.
10	BEND	1	10	-0.	4.	1.	28.	-3.	5.	1.57	60.	54.	114.
			346	-0.	-4.	-1.	-24.	3.	7.	1.57	60.	49.	109.
11	TAN	1	346	-0.	1.	4.	-24.	-7.	-3.	1.57	82.	123.	205.
			11	0.	-1.	-3.	5.	7.	3.	1.00	82.	27.	109.
12	TAN	1	11	0.	1.	3.	-6.	-6.	-3.	1.00	82.	27.	109.
			347	-0.	-1.	-2.	-5.	6.	3.	1.57	82.	40.	122.
13	BEND	1	347	0.	-2.	1.	5.	3.	-6.	1.57	52.	13.	65.
			13	-0.	2.	-1.	-4.	-3.	7.	1.57	52.	14.	66.
14	BEND	1	13	0.	-2.	1.	4.	3.	-7.	1.57	52.	14.	66.
			348	-1.	1.	-0.	-1.	-3.	8.	1.57	52.	14.	66.
15	TAN	1	348	-1.	0.	-1.	-1.	-8.	3.	1.00	52.	9.	61.
			15	1.	-0.	-4.	-14.	8.	-10.	1.00	52.	19.	71.

WPPSS OUTLET AND BALANCE LINES
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ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	-1.	-0.	4.	16.	4.	10.	1.57	52.	30.	82.
			349	1.	0.	-4.	-22.	-4.	-11.	1.57	52.	25.	77.
17	TEE	1	16	-1.	-1.	7.	-14.	-9.	1.	1.57	52.	26.	78.
			349	1.	1.	-6.	5.	9.	-1.	1.57	52.	15.	67.
18	TEE	1	30	-2.	1.	-0.	-1.	-21.	4.	1.57	52.	32.	85.
			349	2.	-1.	2.	4.	21.	-10.	1.57	52.	33.	86.
19	TAN	1	30	-2.	-0.	0.	6.	-20.	-4.	1.00	52.	21.	73.
			350	2.	0.	0.	-6.	20.	2.	1.00	52.	20.	72.
20	BEND	1	350	2.	-0.	-0.	-6.	-2.	-20.	1.57	60.	40.	100.
			32	-1.	1.	1.	18.	0.	10.	1.57	60.	39.	99.
21	BEND	1	32	1.	-1.	-1.	-18.	-0.	-10.	1.57	60.	39.	99.
			351	0.	1.	2.	19.	-0.	-6.	1.57	60.	37.	97.
22	TAN	1	351	0.	-2.	-1.	19.	6.	0.	1.57	58.	438.	496.
			34	-0.	2.	3.	26.	-6.	-0.	1.57	58.	586.	644.
23	TEE	1	34	3.	-2.	0.	-0.	6.	-26.	1.57	39.	143.	182.
			352	-4.	2.	-0.	0.	-6.	32.	1.57	39.	116.	154.
24	TEE	1	341	-6.	-0.	0.	-0.	0.	-2.	1.57	39.	13.	51.
			352	5.	0.	-0.	-0.	-0.	-8.	1.57	39.	29.	68.
25	TEE	1	342	1.	1.	-0.	-6.	0.	-40.	1.57	39.	219.	258.
			352	-1.	-2.	0.	6.	-0.	41.	1.57	117.	13.	130.
26	TAN	1	341	0.	-0.	-6.	-2.	0.	-0.	1.57	58.	52.	110.
			35	-0.	0.	6.	8.	-0.	0.	1.00	58.	113.	171.
27	TAN	1	35	-0.	-0.	1.	-8.	0.	-0.	1.00	58.	113.	171.
			353	0.	0.	1.	4.	-0.	-0.	1.57	58.	90.	148.
28	BEND	1	353	1.	0.	-0.	-0.	4.	0.	1.57	39.	22.	61.
			37	-1.	-0.	1.	0.	-5.	-0.	1.57	39.	25.	64.
29	BEND	1	37	1.	0.	-1.	-0.	5.	0.	1.57	39.	25.	64.
			354	0.	-0.	2.	-0.	-5.	-0.	1.57	39.	25.	64.
30	TAN	1	354	-0.	-2.	-0.	0.	0.	-5.	1.57	58.	104.	162.
			39	0.	2.	0.	0.	-0.	2.	1.00	58.	30.	88.

WPPSS OUTLET AND BALANCE LINES
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ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	1.	-1.	7.	16.	4.	1.	1.00	58.	241.	299.
			17	-1.	1.	-7.	-35.	-4.	3.	1.00	58.	498.	556.
32	TEE	1	17	-1.	-1.	-7.	-35.	4.	3.	1.57	52.	54.	106.
			355	1.	1.	8.	50.	-4.	-6.	1.57	52.	49.	101.
33	TEE	1	18	-0.	1.	-7.	-36.	43.	0.	1.57	52.	86.	138.
			355	0.	-1.	5.	54.	-43.	-0.	1.57	52.	85.	137.
34	TEE	1	24	1.	-1.	4.	40.	-7.	-3.	1.57	52.	63.	115.
			355	-1.	1.	-3.	-50.	7.	5.	1.57	52.	50.	102.
35	TAN	1	18	0.	1.	-7.	36.	43.	0.	1.57	82.	270.	352.
			356	-0.	-1.	9.	28.	-43.	0.	1.57	82.	247.	329.
36	BEND	1	356	-0.	-9.	1.	28.	-0.	43.	1.57	60.	98.	158.
			20	-0.	9.	-0.	-59.	-0.	-7.	1.57	60.	114.	174.
37	BEND	1	20	0.	-9.	0.	59.	0.	7.	1.57	60.	114.	174.
			357	-1.	10.	-0.	-57.	-1.	41.	1.57	60.	134.	194.
38	TAN	1	357	1.	0.	10.	57.	-41.	-1.	1.57	82.	338.	420.
			22	-1.	-0.	-10.	-92.	41.	3.	1.00	82.	308.	390.
39	TAN	1	22	0.	0.	-0.	0.	0.	0.	1.00	82.	1.	83.
			23	0.	0.	-0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	-1.	-1.	4.	-40.	-7.	-3.	1.57	39.	53.	92.
			25	1.	1.	-5.	35.	7.	3.	1.57	35.	60.	96.
41	TAN	1	25	-1.	-1.	5.	-35.	-7.	-3.	1.00	62.	270.	331.
			358	1.	1.	-6.	-7.	7.	-2.	1.00	62.	74.	136.
42	BEND	1	358	1.	6.	-1.	-7.	2.	-7.	1.57	46.	35.	81.
			26	0.	-6.	1.	14.	-2.	-2.	1.57	46.	51.	97.
43	BEND	1	26	-0.	6.	-1.	-14.	2.	2.	1.57	46.	51.	97.
			359	1.	-7.	1.	13.	-2.	-13.	1.57	46.	66.	112.
44	TAN	1	359	1.	-1.	7.	13.	13.	2.	1.00	62.	141.	202.
			28	-1.	1.	-7.	-48.	-13.	2.	1.00	62.	376.	438.
45	TAN	1	28	0.	0.	-0.	0.	0.	0.	1.00	62.	0.	62.
			29	0.	0.	-0.	0.	0.	0.	1.00	62.	0.	62.

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46	TAN	1	2	-0.	0.	4.	-19.	13.	-2.	1.00	82.	71.	153.
			360	0.	-0.	1.	-7.	-13.	-5.	1.57	82.	73.	155.
47	BEND	1	360	-0.	1.	0.	7.	-5.	13.	1.57	52.	23.	76.
			71	-0.	-2.	-1.	-12.	5.	-5.	1.57	52.	22.	74.
48	BEND	1	71	0.	2.	1.	12.	-5.	5.	1.57	52.	22.	74.
			361	-0.	-2.	-0.	-10.	5.	5.	1.57	52.	19.	71.
49	TAN	1	361	0.	0.	-2.	10.	-5.	5.	1.57	82.	59.	141.
			73	-0.	-0.	3.	3.	5.	-3.	1.00	82.	20.	102.
50	TAN	1	73	0.	0.	-3.	-3.	-5.	3.	1.00	82.	20.	102.
			362	-0.	-0.	5.	26.	5.	-1.	1.57	82.	125.	207.
51	BEND	1	362	-5.	0.	0.	1.	-26.	-5.	1.57	52.	40.	92.
			75	3.	-0.	-4.	3.	30.	4.	1.57	52.	48.	100.
52	BEND	1	75	-3.	0.	4.	-3.	-30.	-4.	1.57	52.	48.	100.
			363	-0.	-0.	-6.	5.	32.	1.	1.57	52.	51.	103.
53	TAN	1	363	0.	6.	0.	-32.	-1.	-5.	1.57	82.	158.	240.
			77	-0.	-8.	-0.	29.	1.	9.	1.57	82.	145.	227.
54	TAN	2	5	0.	0.	0.	5.	1.	2.	1.00	58.	70.	128.
			364	-0.	0.	0.	-4.	-1.	-1.	1.57	58.	99.	157.
55	BEND	2	364	-0.	0.	-0.	1.	4.	1.	1.57	39.	24.	63.
			51	0.	-0.	0.	-1.	-4.	-0.	1.57	39.	24.	63.
56	BEND	2	51	-0.	0.	-0.	1.	4.	0.	1.57	39.	24.	63.
			365	0.	-0.	0.	-1.	-4.	0.	1.57	39.	23.	62.
57	TAN	2	365	0.	-0.	-0.	4.	-0.	1.	1.57	58.	96.	154.
			53	-0.	0.	2.	25.	0.	1.	1.00	58.	356.	414.
58	TAN	2	53	-0.	-0.	5.	-25.	-0.	-1.	1.00	58.	356.	414.
			78	0.	0.	-5.	-1.	0.	1.	1.57	58.	32.	90.
59	TAN	2	78	-0.	-0.	5.	1.	-0.	-1.	1.57	37.	8.	46.
			366	0.	0.	-3.	-7.	0.	1.	1.57	37.	42.	80.
60	TAN	2	366	-0.	-0.	3.	7.	-0.	-1.	1.57	37.	42.	80.
			79	0.	0.	-1.	-10.	0.	1.	1.57	37.	60.	97.

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61	TAN	2	79	-0.	-0.	1.	10.	-0.	-1.	1.57	58.	225.	283.
			54	0.	0.	1.	-14.	0.	-1.	1.00	58.	198.	256.
62	TAN	2	54	-0.	-0.	-1.	14.	-0.	1.	1.00	58.	198.	256.
			55	0.	-0.	3.	25.	0.	-2.	1.00	58.	361.	419.
63	TAN	2	55	0.	0.	3.	-25.	0.	2.	1.00	58.	361.	419.
			367	-0.	-0.	-1.	-2.	-0.	1.	1.57	58.	48.	106.
64	BEND	2	367	0.	-1.	0.	2.	1.	0.	1.57	39.	12.	50.
			57	-0.	1.	0.	-2.	-1.	1.	1.57	39.	15.	54.
65	BEND	2	57	0.	-1.	-0.	2.	1.	-1.	1.57	39.	15.	54.
			368	-0.	1.	0.	-1.	-2.	3.	1.57	39.	17.	56.
66	TAN	2	368	0.	-0.	-1.	-1.	-3.	1.	1.57	58.	69.	127.
			369	-0.	0.	-1.	-6.	3.	-1.	1.57	58.	136.	194.
67	BEND	2	369	1.	0.	-0.	1.	6.	-3.	1.57	39.	33.	72.
			60	-1.	-0.	1.	1.	-6.	2.	1.57	39.	37.	76.
68	BEND	2	60	1.	0.	-1.	-1.	6.	-2.	1.57	39.	37.	76.
			370	0.	-0.	2.	3.	-6.	0.	1.57	39.	38.	77.
69	TAN	2	370	0.	-2.	0.	3.	-0.	6.	1.57	58.	156.	214.
			62	-0.	3.	-0.	-3.	0.	-2.	1.00	58.	57.	115.
70	TAN	2	62	0.	3.	-0.	1.	0.	0.	1.00	58.	13.	71.
			371	0.	-1.	0.	2.	0.	0.	1.57	58.	40.	98.
71	BEND	2	371	-0.	0.	1.	0.	-2.	0.	1.57	39.	10.	48.
			64	-1.	0.	-1.	0.	2.	0.	1.57	39.	9.	48.
72	BEND	2	64	1.	0.	1.	0.	-2.	0.	1.57	39.	9.	48.
			372	-1.	0.	-0.	0.	1.	0.	1.57	39.	7.	45.
73	TAN	2	372	0.	0.	1.	-1.	0.	0.	1.57	58.	28.	86.
			373	0.	-0.	1.	3.	0.	0.	1.57	58.	74.	132.
74	BEND	2	373	-1.	0.	0.	0.	-3.	0.	1.57	39.	18.	57.
			67	1.	0.	-1.	0.	4.	0.	1.57	39.	21.	60.
75	BEND	2	67	-1.	0.	1.	0.	-4.	0.	1.57	39.	21.	60.
			374	-0.	0.	-1.	0.	4.	0.	1.57	39.	22.	61.

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76	TAN	2	374	0.	1.	0.	-4.	0.	0.	1.00	39.	14.	53.
			69	0.	-2.	-0.	4.	0.	0.	1.00	39.	13.	52.
77	TAN	3	342	-1.	1.	-0.	6.	0.	-40.	1.57	0.	19.	19.
			343	1.	13.	0.	-3.	-0.	18.	1.00	0.	6.	6.
78	TAN	3	343	-1.	-103.	-0.	3.	0.	-18.	1.00	0.	6.	6.
			40	1.	115.	0.	0.	-0.	-0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	369	-0.000494153	0.000378011	0.000055088
2	369	-0.000494153	0.000378011	0.000055088
3	54	0.000151072	0.000060461	0.002479755

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	586.	22	644.
2	62	361.	62	419.
3	77	19.	77	19.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
6	-0.	-0.	-14.	-0.	0.	-0.
8	-0.	-1.	-12.	-0.	0.	0.
22	-1.	-0.	-11.	-91.	41.	3.
28	-1.	1.	-7.	-48.	-13.	2.
35	-0.	-0.	-7.	0.	-0.	0.
39	0.	0.	-2.	0.	2.	0.
40	1.	0.	-115.	0.	-0.	0.
53	-0.	0.	-8.	-0.	0.	0.
55	0.	0.	-5.	-0.	0.	-0.
62	-0.	-0.	-6.	-2.	-2.	-0.
69	0.	0.	-2.	4.	0.	0.
77	-0.	0.	-8.	29.	-9.	1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	0.001356524	0.000190426	-0.000065823	-0.000004352	-0.000006663	-0.000018032
3	0.001356455	0.000151456	-0.000051455	-0.000004394	-0.000007333	-0.000019996
4	0.001356305	0.000058474	-0.000017912	-0.000004331	-0.000007355	-0.000021271
5	0.001341223	0.000110396	-0.000032802	-0.000004462	-0.000007596	-0.000016593
6	0.001355951	0.0	0.0	-0.000003987	-0.000006566	-0.000024261
7	0.001347431	-0.000702969	0.000055397	-0.000000072	0.000001310	-0.000012257
8	0.001330653	0.0	0.0	0.000003842	0.000001209	0.000074402
10	0.001314651	0.000390522	-0.000003555	0.000004424	0.000000702	0.000086967
11	0.000937924	0.000712335	0.000015966	0.000004855	0.000000323	0.000056186
13	0.000857780	0.000791255	0.000032618	0.000005026	0.000000199	-0.000022496
15	0.000855005	-0.000002248	0.000029751	0.000005074	0.000000418	-0.000105357
16	0.000621866	-0.000233057	0.000018702	0.000005033	0.000000476	-0.000118183
17	0.000248628	-0.000231251	0.000008822	0.000002260	-0.000000083	-0.000036570
18	0.000171169	-0.000160477	0.000003997	0.000002063	-0.000000131	-0.000022265
20	0.000141730	-0.000012022	0.000001708	0.000000592	-0.000000178	-0.000028667
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.000000112	0.0	0.0	0.0	0.0	0.000000023
24	0.000172217	-0.000291515	0.000004592	0.000002154	-0.000000069	-0.000016967
25	0.000171837	-0.000309237	0.000004670	0.000002140	-0.000000061	-0.000013972
26	0.000159646	-0.000006076	0.000003025	0.000000878	0.000000212	0.000000460
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.000000017	0.0	0.0	0.0	0.0	0.000000004
30	0.001112822	-0.000236436	0.000039094	0.000005155	0.000000650	-0.000124596
32	0.001393164	-0.000180043	0.000050741	0.000005167	0.000000798	-0.000126315
34	0.001514300	0.000206207	0.000040552	0.000004079	-0.000017810	0.000042098
35	0.001511452	0.0	0.0	0.000003789	0.000018643	0.000036898
37	0.001358266	-0.000012118	0.000063689	-0.000002343	-0.000290657	-0.000008836
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.000004072	-0.000081818	0.000041668
51	0.001268972	0.000119542	-0.000050905	-0.000003894	-0.000000068	0.000043774
53	0.0	0.000120508	0.0	0.000009514	0.000024603	-0.000062613
54	0.001947727	0.000121444	0.000273854	0.000007108	0.000050098	0.000031983
55	0.0	0.000111047	0.0	-0.000038031	0.000061769	-0.000017545
57	0.001522005	0.000139437	-0.000760311	-0.000058382	0.000027561	-0.000105724
60	0.001523467	-0.000583638	-0.000022526	-0.000054003	-0.000103614	0.000009759
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.001073694	0.0	0.0	0.0	0.000072389	0.000055218
67	0.000003317	0.0	0.0	0.0	0.000001420	0.000005573
69	0.0	0.0	0.0	0.0	0.0	0.0
71	0.001333124	-0.000019523	0.000013263	-0.000003969	0.000019113	0.000049804
73	0.000969576	-0.000041305	-0.000000003	-0.000002334	0.000033904	0.000067202
75	0.000483585	-0.000039839	-0.000000759	0.000002319	0.000050860	0.000062005
77	0.0	0.0	0.0	0.0	0.0	0.0
78	0.000571685	0.000120721	0.000055608	0.000012370	0.000030517	-0.000139005
79	0.000989481	0.000120764	0.000093037	0.000012538	0.000031176	-0.000137547
341	0.001514283	0.000039308	-0.000014400	0.000003994	-0.000005194	0.000040753
342	0.001509089	0.000120053	0.000003878	0.000004063	-0.000019479	0.000041668
343	0.001027258	0.000054971	0.000001775	0.000004070	-0.000054985	0.000041668
344	0.001356398	0.000105727	-0.000034697	-0.000004406	-0.000007424	-0.000020300
345	0.001327607	0.000334098	-0.000003744	0.000004397	0.000000721	0.000086673

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	0.001278476	0.000436453	-0.000002106	0.000004447	0.000000685	0.000087064
347	0.000852044	0.000800667	0.000031196	0.000005024	0.000000200	-0.000019562
348	0.000859972	0.000778420	0.000033041	0.000005028	0.000000199	-0.000025543
349	0.000742858	-0.000113621	0.000024243	0.000005073	0.000000476	-0.000115434
350	0.001256136	-0.000236451	0.000044895	0.000005167	0.000000715	-0.000125909
351	0.001449819	-0.000045464	0.000053919	0.000005161	0.000000861	-0.000125784
352	0.001516106	0.000122084	0.000003988	0.000004062	-0.000018846	0.000041668
353	0.001422859	-0.000017372	0.000217468	-0.000002314	-0.000287045	-0.000008960
354	0.001200703	-0.000008919	-0.000001113	-0.000002362	-0.000293254	-0.000008682
355	0.000173246	-0.000231030	0.000004357	0.000002186	-0.000000095	-0.000027250
356	0.000155529	-0.000041429	0.000002177	0.000000651	-0.000000185	-0.000026488
357	0.000106117	0.000001754	0.000001025	0.000000540	-0.000000166	-0.000029767
358	0.000159416	-0.000009218	0.000003440	0.000000904	0.000000214	0.000005080
359	0.000156497	-0.000006396	0.000002347	0.000000856	0.000000208	-0.000003964
360	0.001354889	0.000032415	-0.000004842	-0.000003922	0.000018485	0.000048283
361	0.001279087	-0.000041694	0.000017459	-0.000004001	0.000019875	0.000051249
362	0.000573077	-0.000040859	-0.000003044	0.000002033	0.000050038	0.000063135
363	0.000401417	-0.000037093	0.000000323	0.000002578	0.000051367	0.000060440
364	0.001276118	0.000119308	-0.000050265	-0.000003909	-0.000000132	0.000043424
365	0.001261367	0.000119623	-0.000051576	-0.000003878	-0.000000023	0.000044109
366	0.000781460	0.000120742	0.000074259	0.000012468	0.000030846	-0.000138892
367	0.001464683	0.000160663	-0.000723323	-0.000058366	0.000027887	-0.000106588
368	0.001545561	0.000084487	-0.000787663	-0.000058389	0.000027265	-0.000104812
369	0.001546207	-0.000600729	-0.000077285	-0.000054020	-0.000102891	0.000009788
370	0.001468220	-0.000552823	0.000000313	-0.000053975	-0.000104302	0.000009707
371	0.001047310	0.0	0.0	0.0	0.000072654	0.000054935
372	0.001060233	0.0	0.0	0.0	0.000072063	0.000055458
373	0.000007188	0.0	0.0	0.0	0.000001659	0.000006937
374	0.000001306	0.0	0.0	0.0	0.000001167	0.000003874

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	-1.	-1.	4.	-0.	10.	1.00	82.	34.	116.
			3	-2.	1.	1.	-2.	0.	-7.	1.57	82.	35.	117.
2	TEE	1	3	-1.	-1.	-2.	7.	-0.	-2.	1.57	52.	11.	63.
			344	1.	2.	2.	-3.	0.	1.	1.57	52.	3.	55.
3	TEE	1	4	1.	-3.	-2.	-13.	1.	2.	1.57	52.	21.	73.
			344	-1.	2.	2.	18.	-1.	-0.	1.57	52.	18.	70.
4	TEE	1	5	1.	-0.	0.	2.	15.	-0.	1.57	52.	23.	75.
			344	0.	0.	-0.	-3.	-15.	1.	1.57	58.	335.	393.
5	TAN	1	4	2.	-3.	-1.	-2.	1.	13.	1.57	82.	64.	146.
			6	-2.	3.	1.	4.	-1.	-8.	1.00	82.	27.	108.
6	TAN	1	6	1.	-3.	0.	-4.	1.	8.	1.00	82.	27.	108.
			7	-1.	10.	-0.	1.	-1.	15.	1.00	82.	47.	129.
7	TAN	1	7	1.	-10.	0.	-1.	1.	-15.	1.00	82.	47.	129.
			8	-1.	17.	-0.	-1.	-1.	38.	1.00	82.	117.	199.
8	TAN	1	8	-6.	-17.	-0.	1.	1.	-38.	1.00	82.	117.	199.
			345	6.	18.	0.	-1.	-1.	15.	1.57	82.	73.	155.
9	BEND	1	345	-6.	0.	-18.	1.	15.	1.	1.57	60.	29.	89.
			10	13.	-0.	14.	-1.	-9.	-0.	1.57	60.	17.	77.
10	BEND	1	10	-13.	0.	-14.	1.	9.	0.	1.57	60.	17.	77.
			346	18.	-0.	7.	-1.	1.	0.	1.57	60.	3.	63.
11	TAN	1	346	18.	-7.	0.	-1.	-0.	-1.	1.57	82.	9.	90.
			11	-19.	8.	-0.	1.	0.	99.	1.00	82.	305.	387.
12	TAN	1	11	17.	-10.	0.	-1.	0.	-99.	1.00	82.	305.	387.
			347	-18.	11.	-0.	0.	-0.	183.	1.57	82.	884.	966.
13	BEND	1	347	18.	-0.	-11.	-0.	183.	0.	1.57	52.	282.	334.
			13	-13.	0.	17.	0.	-192.	-0.	1.57	52.	296.	348.
14	BEND	1	13	13.	-0.	-17.	-0.	192.	0.	1.57	52.	296.	348.
			348	-6.	0.	21.	-0.	-197.	-0.	1.57	52.	304.	356.
15	TAN	1	348	-6.	-21.	-0.	-0.	0.	197.	1.00	52.	193.	245.
			15	6.	26.	0.	1.	-0.	-268.	1.00	52.	262.	314.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	14.	-22.	-0.	-1.	-1.	268.	1.57	52.	413.	465.
			349	-15.	23.	0.	1.	1.	-247.	1.57	52.	242.	294.
17	TEE	1	16	-37.	-46.	0.	-1.	-1.	44.	1.57	52.	68.	121.
			349	36.	45.	-0.	1.	1.	-96.	1.57	52.	94.	146.
18	TEE	1	30	-29.	9.	-0.	0.	2.	59.	1.57	52.	91.	143.
			349	30.	-9.	0.	1.	-2.	-151.	1.57	52.	148.	200.
19	TAN	1	30	-30.	-1.	0.	-0.	2.	-59.	1.00	52.	58.	110.
			350	29.	1.	-0.	0.	-2.	26.	1.00	52.	25.	77.
20	BEND	1	350	29.	0.	-1.	0.	-26.	2.	1.57	60.	50.	110.
			32	-20.	-0.	21.	-1.	-5.	-1.	1.57	60.	9.	69.
21	BEND	1	32	20.	0.	-21.	1.	5.	1.	1.57	60.	9.	69.
			351	1.	-0.	28.	-1.	-16.	-0.	1.57	60.	32.	92.
22	TAN	1	351	1.	-28.	0.	-1.	0.	16.	1.57	58.	369.	427.
			34	-1.	26.	-0.	-3.	-0.	1.	1.57	58.	70.	128.
23	TEE	1	34	-0.	-26.	1.	1.	0.	3.	1.57	39.	17.	56.
			352	0.	26.	-1.	-2.	-0.	-3.	1.57	39.	14.	53.
24	TEE	1	341	12.	27.	1.	-4.	0.	-31.	1.57	39.	171.	209.
			352	-12.	-26.	-1.	2.	-0.	55.	1.57	39.	192.	231.
25	TEE	1	342	52.	-12.	0.	0.	0.	85.	1.57	39.	462.	501.
			352	-52.	12.	-0.	-0.	-0.	-59.	1.57	117.	18.	135.
26	TAN	1	341	1.	27.	12.	-31.	0.	-4.	1.57	58.	698.	756.
			35	-1.	-27.	-12.	19.	-0.	4.	1.00	58.	275.	333.
27	TAN	1	35	-0.	27.	2.	-19.	0.	-4.	1.00	58.	275.	333.
			353	0.	-29.	-2.	-40.	-0.	-1.	1.57	58.	903.	962.
28	BEND	1	353	-2.	0.	29.	-1.	-40.	0.	1.57	39.	221.	260.
			37	-19.	-0.	-22.	1.	35.	-1.	1.57	39.	191.	230.
29	BEND	1	37	19.	0.	22.	-1.	-35.	1.	1.57	39.	191.	230.
			354	-30.	-0.	-2.	-0.	20.	-1.	1.57	39.	108.	147.
30	TAN	1	354	30.	2.	-0.	0.	1.	20.	1.57	58.	442.	500.
			39	-30.	-2.	0.	1.	-1.	137.	1.00	58.	1946.	2004.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	58.	-6.	0.	1.	0.	44.	1.00	58.	630.	688.
			17	-59.	6.	-0.	-1.	-0.	110.	1.00	58.	1553.	1611.
32	TEE	1	17	-59.	-6.	-0.	-1.	0.	110.	1.57	52.	169.	221.
			355	60.	6.	0.	1.	-0.	-228.	1.57	52.	223.	275.
33	TEE	1	18	-11.	41.	-0.	-0.	1.	43.	1.57	52.	66.	118.
			355	11.	-40.	0.	1.	-1.	-77.	1.57	52.	75.	128.
34	TEE	1	24	18.	-21.	0.	0.	-0.	-97.	1.57	52.	150.	202.
			355	-18.	20.	-0.	-0.	0.	151.	1.57	52.	147.	199.
35	TAN	1	18	11.	41.	-0.	0.	1.	43.	1.57	82.	208.	290.
			356	-11.	-43.	0.	0.	-1.	52.	1.57	82.	251.	333.
36	BEND	1	356	-11.	-0.	43.	0.	-52.	1.	1.57	60.	99.	159.
			20	-23.	0.	-39.	-1.	45.	-1.	1.57	60.	86.	146.
37	BEND	1	20	23.	-0.	39.	1.	-45.	1.	1.57	60.	86.	146.
			357	-44.	0.	-11.	-1.	3.	0.	1.57	60.	7.	67.
38	TAN	1	357	44.	11.	0.	1.	-0.	3.	1.57	82.	17.	99.
			22	-45.	-11.	-0.	-1.	0.	153.	1.00	82.	469.	550.
39	TAN	1	22	-0.	0.	0.	0.	0.	-0.	1.00	82.	1.	83.
			23	-0.	0.	0.	0.	0.	-0.	1.00	82.	0.	82.
40	TAN	1	24	-18.	-21.	0.	-0.	-0.	-97.	1.57	39.	127.	166.
			25	18.	22.	-0.	0.	0.	75.	1.57	35.	128.	163.
41	TAN	1	25	-18.	-22.	0.	-0.	-0.	-75.	1.00	62.	569.	631.
			358	18.	23.	-0.	-0.	0.	-63.	1.00	62.	478.	540.
42	BEND	1	358	18.	0.	-23.	-0.	63.	-0.	1.57	46.	226.	272.
			26	4.	-0.	29.	0.	-69.	0.	1.57	46.	247.	293.
43	BEND	1	26	-4.	0.	-29.	-0.	69.	-0.	1.57	46.	247.	293.
			359	24.	-0.	18.	0.	-57.	-0.	1.57	46.	206.	252.
44	TAN	1	359	24.	-18.	0.	0.	0.	57.	1.00	62.	437.	498.
			28	-24.	18.	-0.	-1.	-0.	62.	1.00	62.	471.	532.
45	TAN	1	28	-0.	0.	0.	0.	0.	-0.	1.00	62.	0.	62.
			29	-0.	0.	0.	0.	0.	-0.	1.00	62.	0.	62.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	-2.	-1.	-1.	-4.	-0.	10.	1.00	82.	34.	116.
			360	2.	-4.	1.	18.	0.	-46.	1.57	82.	240.	322.
47	BEND	1	360	-2.	1.	4.	-18.	-46.	-0.	1.57	52.	77.	129.
			71	-2.	-1.	-5.	13.	46.	-13.	1.57	52.	77.	129.
48	BEND	1	71	2.	1.	5.	-13.	-46.	13.	1.57	52.	77.	129.
			361	-5.	-1.	-2.	1.	42.	-19.	1.57	52.	71.	123.
49	TAN	1	361	5.	2.	-1.	-1.	19.	42.	1.57	82.	222.	304.
			73	-6.	-2.	1.	5.	-19.	-13.	1.00	82.	72.	154.
50	TAN	1	73	6.	2.	-1.	-5.	19.	13.	1.00	82.	72.	154.
			362	-8.	-2.	1.	9.	-19.	27.	1.57	82.	164.	246.
51	BEND	1	362	-1.	8.	2.	-27.	-9.	19.	1.57	52.	52.	104.
			75	-1.	-8.	-2.	14.	9.	-36.	1.57	52.	61.	113.
52	BEND	1	75	1.	8.	2.	-14.	-9.	36.	1.57	52.	61.	113.
			363	-2.	-9.	-1.	-7.	7.	-39.	1.57	52.	62.	114.
53	TAN	1	363	9.	1.	2.	-7.	39.	7.	1.57	82.	193.	275.
			77	-11.	-1.	-2.	-11.	-39.	97.	1.57	82.	506.	587.
54	TAN	2	5	1.	0.	-0.	0.	6.	14.	1.00	58.	213.	271.
			364	-1.	-0.	0.	1.	-6.	-11.	1.57	58.	276.	334.
55	BEND	2	364	-0.	1.	0.	11.	-1.	6.	1.57	39.	67.	106.
			51	0.	-1.	-0.	-12.	1.	-4.	1.57	39.	67.	105.
56	BEND	2	51	-0.	1.	0.	12.	-1.	4.	1.57	39.	67.	105.
			365	0.	-1.	-0.	-12.	1.	-1.	1.57	39.	66.	104.
57	TAN	2	365	1.	0.	-0.	-1.	1.	12.	1.57	58.	269.	327.
			53	-3.	-0.	0.	1.	-1.	30.	1.00	58.	419.	477.
58	TAN	2	53	-6.	0.	0.	-1.	1.	-30.	1.00	58.	419.	477.
			78	5.	-0.	-0.	0.	-1.	3.	1.57	58.	69.	127.
59	TAN	2	78	-5.	0.	0.	-0.	1.	-3.	1.57	37.	18.	56.
			366	3.	-0.	-0.	0.	-1.	-3.	1.57	37.	20.	58.
60	TAN	2	366	-3.	0.	0.	-0.	1.	3.	1.57	37.	20.	58.
			79	1.	-0.	-0.	0.	-1.	-6.	1.57	37.	38.	76.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	-1.	0.	0.	-0.	1.	6.	1.57	58.	144.	202.
			54	-0.	-0.	-0.	-1.	-1.	-12.	1.00	58.	169.	227.
62	TAN	2	54	0.	0.	0.	1.	0.	12.	1.00	58.	169.	227.
			55	-3.	-0.	-0.	-3.	-0.	25.	1.00	58.	359.	417.
63	TAN	2	55	-3.	0.	-0.	3.	-2.	-25.	1.00	58.	359.	417.
			367	2.	-0.	0.	-0.	2.	-9.	1.57	58.	208.	267.
64	BEND	2	367	-2.	0.	0.	0.	-9.	-2.	1.57	39.	51.	90.
			57	1.	-0.	-1.	2.	10.	2.	1.57	39.	55.	94.
65	BEND	2	57	-1.	0.	1.	-2.	-10.	-2.	1.57	39.	55.	94.
			368	-0.	-0.	-1.	2.	10.	-0.	1.57	39.	56.	95.
66	TAN	2	368	-0.	1.	0.	3.	0.	-10.	1.57	58.	230.	288.
			369	0.	1.	-0.	-8.	-0.	-0.	1.57	58.	174.	232.
67	BEND	2	369	0.	-0.	-1.	0.	8.	0.	1.57	39.	43.	81.
			60	1.	0.	1.	-0.	-8.	0.	1.57	39.	42.	81.
68	BEND	2	60	-1.	-0.	-1.	0.	8.	-0.	1.57	39.	42.	81.
			370	1.	0.	0.	-0.	-7.	0.	1.57	39.	39.	77.
69	TAN	2	370	1.	-0.	-0.	-0.	-0.	7.	1.57	58.	158.	217.
			62	-3.	0.	0.	7.	0.	25.	1.00	58.	365.	423.
70	TAN	2	62	-2.	0.	0.	0.	3.	-16.	1.00	58.	235.	293.
			371	0.	0.	0.	0.	-3.	-3.	1.57	58.	87.	145.
71	BEND	2	371	0.	-0.	0.	3.	0.	3.	1.57	39.	21.	60.
			64	0.	0.	0.	-4.	0.	0.	1.57	39.	22.	61.
72	BEND	2	64	0.	-0.	0.	4.	0.	-0.	1.57	39.	22.	61.
			372	0.	0.	0.	-3.	0.	3.	1.57	39.	22.	61.
73	TAN	2	372	-0.	0.	0.	0.	-3.	3.	1.57	58.	91.	149.
			373	-2.	0.	0.	0.	3.	14.	1.57	58.	313.	371.
74	BEND	2	373	0.	2.	0.	-14.	0.	-3.	1.57	39.	76.	115.
			67	0.	-2.	0.	13.	0.	-8.	1.57	39.	82.	121.
75	BEND	2	67	0.	2.	0.	-13.	0.	8.	1.57	39.	82.	121.
			374	0.	-2.	0.	5.	0.	-15.	1.57	39.	86.	125.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	2.	0.	0.	0.	15.	-5.	1.00	39.	55.	93.
			69	-2.	0.	0.	0.	-15.	7.	1.00	39.	58.	97.
77	TAN	3	342	-52.	-12.	0.	-0.	0.	85.	1.57	0.	41.	41.
			343	37.	12.	-0.	0.	-0.	-795.	1.00	0.	245.	245.
78	TAN	3	343	53.	-12.	0.	-0.	0.	795.	1.00	0.	245.	245.
			40	-65.	12.	-0.	0.	-0.	-0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	54	0.001947727	0.000121444	0.000273854
2	347	0.000852044	0.000800667	0.000031196
3	368	0.001545561	0.000084487	-0.000787663

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	30	1946.	30	2004.
2	57	419.	57	477.
3	77	245.	77	245.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
6	0.	-1.	1.	-0.	-0.	0.
8	0.	-7.	-0.	-0.	0.	-0.
22	-45.	-11.	-0.	-1.	0.	152.
28	-24.	18.	-0.	-1.	-0.	62.
35	0.	-1.	10.	0.	-0.	0.
39	-30.	0.	2.	1.	137.	1.
40	-65.	-0.	-12.	0.	-0.	0.
53	-9.	-0.	-0.	-0.	-0.	0.
55	-6.	-0.	0.	0.	0.	0.
62	-5.	0.	-0.	7.	8.	-3.
69	-2.	0.	0.	0.	-7.	-15.
77	-11.	2.	-1.	-11.	-97.	-39.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	-0.000375784	-0.000023943	0.000012486	0.000005590	0.000001160	0.000002593
3	-0.000375261	-0.000018704	0.000009810	0.000005642	0.000001347	0.000002418
4	-0.000374699	-0.000007625	0.000003545	0.000005586	0.000001380	0.000002550
5	-0.000372629	-0.000024668	0.000006397	0.000005767	0.000001216	0.000000634
6	-0.000373726	0.0	0.0	0.000005260	0.000001271	0.000003067
7	-0.000358142	0.000083821	-0.000008914	0.000001548	-0.000000316	0.000001376
8	-0.000334301	0.0	0.0	-0.000002163	0.000000020	-0.000008697
10	-0.000326998	-0.000055013	-0.000000921	-0.000002716	0.000000147	-0.000020851
11	-0.000184569	-0.000167909	-0.000015175	-0.000003236	0.000000056	-0.000026931
13	-0.000123058	-0.000225310	-0.000027120	-0.000003562	-0.000000144	0.000001550
15	-0.000116879	-0.000102625	-0.000024166	-0.000003727	-0.000000429	0.000008146
16	-0.000099454	-0.000085793	-0.000015764	-0.000003714	-0.000000480	0.000006569
17	-0.000052947	-0.000083075	-0.000008119	-0.000001839	0.000000093	0.000001343
18	-0.000048583	-0.000073296	-0.000004069	-0.000001684	0.000000148	-0.000004011
20	-0.000039954	0.000000626	-0.000001513	-0.000000505	0.000000205	0.000003254
22	0.0	0.0	0.0	0.0	0.0	0.0
23	-0.000000112	0.0	0.0	0.0	0.0	-0.000000023
24	-0.000049574	-0.000082258	-0.000004732	-0.000001758	0.000000074	0.000000483
25	-0.000049595	-0.000081381	-0.000004815	-0.000001747	0.000000064	0.000000772
26	-0.000046177	-0.000003893	-0.000002804	-0.000000785	-0.000000267	0.000011804
28	0.0	0.0	0.0	0.0	0.0	0.0
29	-0.000000017	0.0	0.0	0.0	0.0	-0.000000004
30	-0.000104964	-0.000093572	-0.000030799	-0.000003804	-0.000000644	-0.000002365
32	-0.000092197	-0.000090856	-0.000039480	-0.000003807	-0.000000782	-0.000004702
34	-0.000031699	-0.000008853	-0.000037668	-0.000000233	0.000015618	-0.000001851
35	-0.000030385	0.0	0.0	-0.000000168	-0.000002381	-0.000001567
37	-0.000032407	0.000000512	-0.000001460	0.000000099	0.000006655	0.000000375
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	-0.000000171	-0.000017959	-0.000001798
51	-0.000318058	-0.000036260	0.000029433	0.000005053	-0.000005240	-0.000027944
53	0.0	-0.000037272	0.0	-0.000008379	-0.000030054	0.000104246
54	-0.002278736	-0.000038232	-0.000248581	-0.000006636	-0.000055703	-0.000040022
55	0.0	-0.000028914	0.0	0.000034991	-0.000066035	0.000007703
57	-0.001454663	-0.000054189	0.000705577	0.000054560	-0.000029323	0.000102963
60	-0.001456799	0.000584617	0.000021535	0.000053649	0.000098949	-0.000012465
62	0.0	0.0	0.0	0.0	0.0	0.0
64	-0.001073694	0.0	0.0	0.0	-0.000072389	-0.000055218
67	-0.000003317	0.0	0.0	0.0	-0.000001420	-0.000005573
69	0.0	0.0	0.0	0.0	0.0	0.0
71	-0.000375769	-0.000010463	-0.000048266	0.000005065	-0.000009278	-0.000007071
73	-0.000317740	-0.000007428	-0.000022912	0.000004257	-0.000015560	-0.000012221
75	-0.000213755	-0.000006610	-0.000001038	0.000002077	-0.000022741	-0.000013247
77	0.0	0.0	0.0	0.0	0.0	0.0
78	-0.000737709	-0.000037490	-0.000049596	-0.000011128	-0.000036003	0.000164289
79	-0.001228847	-0.000037534	-0.000083293	-0.000011295	-0.000036666	0.000161222
341	-0.000030120	-0.000001659	0.000008949	-0.000000177	0.000005830	-0.000001743
342	-0.000020197	-0.000005113	-0.000005423	-0.000000179	0.000016910	-0.000001798
343	0.000199727	-0.000002309	-0.000002482	-0.000000172	-0.000001108	-0.000001798
344	-0.000375008	-0.000013286	0.000006697	0.000005657	0.000001357	0.000002314
345	-0.000330254	-0.000042352	-0.000000430	-0.000002689	0.000000145	-0.000019765

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	-0.000317696	-0.000066256	-0.000002110	-0.000002740	0.000000146	-0.000021917
347	-0.000123179	-0.000225674	-0.000026114	-0.000003555	-0.000000137	0.000000339
348	-0.000123032	-0.000223836	-0.000027417	-0.000003570	-0.000000150	0.000002766
349	-0.000106994	-0.000093277	-0.000019987	-0.000003737	-0.000000483	0.000005585
350	-0.000099243	-0.000093572	-0.000035082	-0.000003811	-0.000000705	-0.000003802
351	-0.000089092	-0.000084993	-0.000042038	-0.000003796	-0.000000842	-0.000004842
352	-0.000029927	-0.000005203	-0.000005578	-0.000000180	0.000016556	-0.000001798
353	-0.000033874	0.000000735	-0.000004975	0.000000097	0.000006582	0.000000380
354	-0.000028818	0.000000376	0.000000018	0.000000099	0.000006713	0.000000369
355	-0.000049453	-0.000082743	-0.000004475	-0.000001782	0.000000106	-0.000000392
356	-0.000041686	0.000002751	-0.000001974	-0.000000552	0.000000214	0.000001408
357	-0.000033676	-0.000001340	-0.000000903	-0.000000463	0.000000190	0.000004718
358	-0.000049697	-0.000012394	-0.000003231	-0.000000804	-0.000000271	0.000011878
359	-0.000037759	-0.000000382	-0.000002174	-0.000000767	-0.000000261	0.000011665
360	-0.000378797	-0.000017746	-0.000040833	0.000005050	-0.000009013	-0.000006787
361	-0.000368129	-0.000007335	-0.000046974	0.000005074	-0.000009601	-0.000007376
362	-0.000238171	-0.000007536	-0.000003333	0.000002212	-0.000022413	-0.000013461
363	-0.000183394	-0.000004512	-0.000000146	0.000001945	-0.000022946	-0.000012912
364	-0.000322307	-0.000035957	0.000028604	0.000005069	-0.000005192	-0.000027774
365	-0.000313317	-0.000036364	0.000030303	0.000005036	-0.000005279	-0.000028104
366	-0.000984758	-0.000037512	-0.000066382	-0.000011225	-0.000036335	0.000163352
367	-0.001398729	-0.000074949	0.000670229	0.000054532	-0.000029669	0.000103835
368	-0.001477642	-0.000000648	0.000733020	0.000054581	-0.000029010	0.000102040
369	-0.001478514	0.000603070	0.000073831	0.000053652	0.000098264	-0.000012508
370	-0.001404042	0.000553392	-0.000000275	0.000053633	0.000099602	-0.000012397
371	-0.001047310	0.0	0.0	0.0	-0.000072654	-0.000054935
372	-0.001060233	0.0	0.0	0.0	-0.000072063	-0.000055458
373	-0.000007188	0.0	0.0	0.0	-0.000001659	-0.000006937
374	-0.000001306	0.0	0.0	0.0	-0.000001167	-0.000003874

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	-0.	6.	0.	-1.	0.	0.	1.00	82.	4.	86.
			3	0.	-6.	-0.	1.	-0.	-1.	1.57	82.	6.	88.
2	TEE	1	3	0.	6.	0.	1.	0.	1.	1.57	52.	2.	54.
			344	-0.	-7.	-0.	-2.	-0.	0.	1.57	52.	2.	54.
3	TEE	1	4	-0.	9.	1.	3.	-1.	0.	1.57	52.	5.	57.
			344	0.	-8.	-1.	-5.	1.	-1.	1.57	52.	5.	57.
4	TEE	1	5	-0.	0.	-0.	-1.	-7.	-0.	1.57	52.	10.	63.
			344	-0.	0.	0.	2.	7.	1.	1.57	58.	153.	211.
5	TAN	1	4	-1.	9.	0.	-0.	-1.	-3.	1.57	82.	14.	96.
			6	1.	-9.	-0.	-1.	1.	1.	1.00	82.	4.	86.
6	TAN	1	6	-0.	9.	-0.	1.	-1.	-1.	1.00	82.	4.	86.
			7	0.	-16.	0.	-0.	1.	-2.	1.00	82.	6.	88.
7	TAN	1	7	-0.	16.	-0.	0.	-1.	2.	1.00	82.	6.	88.
			8	0.	-22.	0.	0.	1.	-4.	1.00	82.	14.	96.
8	TAN	1	8	-10.	22.	0.	-0.	-1.	4.	1.00	82.	14.	96.
			345	10.	-23.	-0.	0.	1.	-44.	1.57	82.	211.	293.
9	BEND	1	345	-10.	-0.	23.	-0.	-44.	-1.	1.57	60.	84.	144.
			10	-1.	0.	-25.	0.	47.	1.	1.57	60.	89.	149.
10	BEND	1	10	1.	-0.	25.	-0.	-47.	-1.	1.57	60.	89.	149.
			346	-12.	0.	-23.	1.	42.	0.	1.57	60.	80.	140.
11	TAN	1	346	-12.	23.	-0.	1.	-0.	-42.	1.57	82.	203.	285.
			11	13.	-23.	0.	-0.	0.	-27.	1.00	82.	82.	164.
12	TAN	1	11	-10.	25.	-0.	0.	-1.	27.	1.00	82.	82.	164.
			347	11.	-26.	0.	0.	1.	-75.	1.57	82.	364.	446.
13	BEND	1	347	-11.	0.	26.	-0.	-75.	-1.	1.57	52.	116.	168.
			13	1.	-0.	-28.	0.	79.	0.	1.57	52.	121.	173.
14	BEND	1	13	-1.	0.	28.	-0.	-79.	-0.	1.57	52.	121.	173.
			348	-10.	-0.	-26.	0.	76.	0.	1.57	52.	117.	169.
15	TAN	1	348	-10.	26.	0.	0.	-0.	-76.	1.00	52.	74.	126.
			15	10.	-32.	-0.	-1.	0.	-45.	1.00	52.	44.	96.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	-29.	16.	0.	1.	1.	45.	1.57	52.	69.	121.
			349	30.	-16.	-0.	-1.	-1.	-86.	1.57	52.	85.	137.
17	TEE	1	16	16.	2.	-0.	1.	0.	-14.	1.57	52.	22.	74.
			349	-15.	-1.	0.	-0.	-0.	36.	1.57	52.	35.	87.
18	TEE	1	30	-21.	7.	0.	-0.	-2.	59.	1.57	52.	91.	143.
			349	20.	-7.	-0.	-0.	2.	-122.	1.57	52.	120.	172.
19	TAN	1	30	-22.	0.	-0.	0.	-2.	-59.	1.00	52.	57.	110.
			350	22.	-0.	0.	-0.	2.	34.	1.00	52.	33.	85.
20	BEND	1	350	22.	-0.	0.	-0.	-34.	-2.	1.57	60.	65.	125.
			32	-16.	0.	16.	1.	10.	1.	1.57	60.	19.	79.
21	BEND	1	32	16.	-0.	-16.	-1.	-10.	-1.	1.57	60.	19.	79.
			351	-0.	0.	23.	1.	-0.	0.	1.57	60.	2.	62.
22	TAN	1	351	-0.	-23.	-0.	1.	-0.	0.	1.57	58.	28.	86.
			34	0.	25.	0.	3.	0.	-0.	1.57	58.	62.	120.
23	TEE	1	34	0.	-25.	-0.	-0.	-0.	-3.	1.57	39.	15.	54.
			352	-0.	26.	0.	0.	0.	3.	1.57	39.	11.	50.
24	TEE	1	341	-17.	3.	-0.	0.	-0.	17.	1.57	39.	93.	132.
			352	17.	-3.	0.	-0.	0.	-51.	1.57	39.	176.	215.
25	TEE	1	342	29.	17.	0.	0.	-0.	-39.	1.57	39.	215.	254.
			352	-29.	-17.	-0.	-0.	0.	54.	1.57	117.	17.	134.
26	TAN	1	341	-0.	3.	-17.	17.	-0.	0.	1.57	58.	381.	439.
			35	0.	-2.	17.	-0.	0.	-0.	1.00	58.	3.	62.
27	TAN	1	35	0.	2.	-0.	0.	-0.	0.	1.00	58.	3.	62.
			353	-0.	0.	0.	1.	0.	0.	1.57	58.	18.	76.
28	BEND	1	353	0.	-0.	-0.	0.	1.	-0.	1.57	39.	4.	43.
			37	0.	0.	0.	-0.	-1.	0.	1.57	39.	4.	43.
29	BEND	1	37	-0.	-0.	-0.	0.	1.	-0.	1.57	39.	4.	43.
			354	1.	0.	0.	0.	-0.	0.	1.57	39.	3.	41.
30	TAN	1	354	-1.	-0.	0.	-0.	-0.	-0.	1.57	58.	11.	69.
			39	1.	0.	-0.	-0.	0.	-4.	1.00	58.	51.	109.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	-12.	-10.	-0.	-1.	-0.	-14.	1.00	58.	202.	260.
			17	13.	10.	0.	1.	0.	-19.	1.00	58.	263.	321.
32	TEE	1	17	13.	-10.	0.	1.	-0.	-19.	1.57	52.	29.	81.
			355	-13.	10.	-0.	-1.	0.	44.	1.57	52.	44.	96.
33	TEE	1	18	9.	-18.	0.	0.	-1.	-31.	1.57	52.	47.	99.
			355	-9.	16.	-0.	-1.	1.	57.	1.57	52.	55.	108.
34	TEE	1	24	1.	-2.	-0.	-0.	0.	-9.	1.57	52.	14.	66.
			355	-1.	3.	0.	0.	-0.	12.	1.57	52.	12.	64.
35	TAN	1	18	-9.	-18.	0.	-0.	-1.	-31.	1.57	82.	148.	230.
			356	9.	20.	-0.	-0.	1.	-42.	1.57	82.	203.	285.
36	BEND	1	356	9.	0.	-20.	-0.	42.	-1.	1.57	60.	80.	140.
			20	8.	-0.	20.	1.	-42.	0.	1.57	60.	81.	141.
37	BEND	1	20	-8.	0.	-20.	-1.	42.	-0.	1.57	60.	81.	141.
			357	21.	-0.	9.	1.	-25.	-0.	1.57	60.	47.	107.
38	TAN	1	357	-21.	-9.	-0.	-1.	0.	-25.	1.57	82.	119.	201.
			22	21.	9.	0.	1.	-0.	-49.	1.00	82.	150.	231.
39	TAN	1	22	0.	0.	0.	0.	0.	0.	1.00	82.	1.	83.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	-1.	-2.	-0.	0.	0.	-9.	1.57	39.	12.	51.
			25	1.	1.	0.	-0.	-0.	8.	1.57	35.	13.	48.
41	TAN	1	25	-1.	-1.	-0.	0.	0.	-8.	1.00	62.	58.	119.
			358	1.	-0.	0.	0.	-0.	-1.	1.00	62.	5.	67.
42	BEND	1	358	1.	-0.	0.	0.	1.	0.	1.57	46.	2.	48.
			26	-1.	0.	0.	-0.	-2.	-0.	1.57	46.	6.	52.
43	BEND	1	26	1.	-0.	-0.	0.	2.	0.	1.57	46.	6.	52.
			359	-1.	0.	1.	-0.	-2.	0.	1.57	46.	9.	55.
44	TAN	1	359	-1.	-1.	-0.	-0.	-0.	2.	1.00	62.	19.	81.
			28	2.	1.	0.	0.	0.	-9.	1.00	62.	72.	134.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	0.	6.	0.	1.	0.	0.	1.00	82.	4.	86.
			360	-0.	-1.	-0.	-8.	-0.	8.	1.57	82.	54.	136.
47	BEND	1	360	0.	-0.	1.	8.	8.	0.	1.57	52.	17.	69.
			71	-1.	0.	-0.	-6.	-9.	5.	1.57	52.	19.	71.
48	BEND	1	71	1.	-0.	0.	6.	9.	-5.	1.57	52.	19.	71.
			361	0.	0.	0.	-1.	-10.	8.	1.57	52.	19.	71.
49	TAN	1	361	-0.	-0.	0.	1.	-8.	-10.	1.57	82.	60.	142.
			73	1.	0.	-0.	-2.	8.	7.	1.00	82.	32.	114.
50	TAN	1	73	-1.	-0.	0.	2.	-8.	-7.	1.00	82.	32.	114.
			362	2.	0.	-0.	-4.	8.	-4.	1.57	82.	48.	129.
51	BEND	1	362	0.	-2.	-0.	4.	4.	-8.	1.57	52.	15.	67.
			75	0.	3.	1.	-0.	-4.	10.	1.57	52.	16.	68.
52	BEND	1	75	-0.	-3.	-1.	0.	4.	-10.	1.57	52.	16.	68.
			363	0.	3.	0.	3.	-4.	8.	1.57	52.	15.	67.
53	TAN	1	363	-3.	-0.	-0.	4.	-8.	-3.	1.57	82.	47.	129.
			77	6.	0.	0.	1.	8.	-46.	1.57	82.	225.	307.
54	TAN	2	5	-0.	-0.	0.	-0.	-3.	-6.	1.00	58.	96.	155.
			364	0.	0.	-0.	-1.	3.	5.	1.57	58.	134.	192.
55	BEND	2	364	0.	-0.	-0.	-5.	1.	-3.	1.57	39.	33.	71.
			51	-0.	0.	0.	5.	-1.	2.	1.57	39.	32.	71.
56	BEND	2	51	0.	-0.	-0.	-5.	1.	-2.	1.57	39.	32.	71.
			365	-0.	1.	0.	6.	-1.	1.	1.57	39.	32.	71.
57	TAN	2	365	-1.	-0.	0.	1.	-1.	-6.	1.57	58.	130.	189.
			53	2.	0.	-0.	-1.	1.	-26.	1.00	58.	367.	425.
58	TAN	2	53	5.	-0.	-0.	1.	-1.	26.	1.00	58.	367.	425.
			78	-5.	0.	0.	-0.	1.	0.	1.57	58.	24.	82.
59	TAN	2	78	5.	-0.	-0.	0.	-1.	-0.	1.57	37.	6.	44.
			366	-3.	0.	0.	-0.	1.	6.	1.57	37.	38.	75.
60	TAN	2	366	3.	-0.	-0.	0.	-1.	-6.	1.57	37.	38.	75.
			79	-1.	0.	0.	-0.	1.	9.	1.57	37.	55.	93.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	1.	-0.	-0.	0.	-1.	-9.	1.57	58.	208.	266.
			54	1.	0.	0.	1.	1.	13.	1.00	58.	187.	245.
62	TAN	2	54	-1.	-0.	-0.	-1.	-0.	-13.	1.00	58.	187.	245.
			55	3.	0.	0.	3.	0.	-26.	1.00	58.	375.	433.
63	TAN	2	55	3.	-0.	0.	-3.	2.	26.	1.00	58.	375.	433.
			367	-2.	0.	-0.	0.	-2.	9.	1.57	58.	211.	269.
64	BEND	2	367	2.	-0.	-0.	-0.	9.	2.	1.57	39.	52.	90.
			57	-1.	0.	1.	-2.	-10.	-2.	1.57	39.	56.	95.
65	BEND	2	57	1.	-0.	-1.	2.	10.	2.	1.57	39.	56.	95.
			368	0.	0.	2.	-3.	-10.	0.	1.57	39.	57.	96.
66	TAN	2	368	0.	-2.	-0.	-3.	-0.	10.	1.57	58.	234.	292.
			369	-0.	-1.	0.	7.	0.	0.	1.57	58.	165.	223.
67	BEND	2	369	-0.	0.	1.	-0.	-7.	-0.	1.57	39.	40.	79.
			60	-1.	-0.	-1.	0.	7.	-0.	1.57	39.	40.	79.
68	BEND	2	60	1.	0.	1.	-0.	-7.	0.	1.57	39.	40.	79.
			370	-1.	-0.	-0.	0.	7.	-1.	1.57	39.	37.	76.
69	TAN	2	370	-1.	0.	0.	0.	1.	-7.	1.57	58.	151.	209.
			62	3.	-0.	-0.	-7.	-1.	-24.	1.00	58.	352.	410.
70	TAN	2	62	2.	0.	0.	0.	-3.	16.	1.00	58.	235.	293.
			371	-0.	0.	0.	0.	3.	3.	1.57	58.	87.	145.
71	BEND	2	371	0.	0.	0.	-3.	0.	-3.	1.57	39.	21.	60.
			64	0.	-0.	0.	4.	0.	-0.	1.57	39.	22.	61.
72	BEND	2	64	0.	0.	0.	-4.	0.	0.	1.57	39.	22.	61.
			372	0.	-0.	0.	3.	0.	-3.	1.57	39.	22.	61.
73	TAN	2	372	0.	0.	0.	0.	3.	-3.	1.57	58.	91.	149.
			373	2.	0.	0.	0.	-3.	-14.	1.57	58.	313.	371.
74	BEND	2	373	0.	-2.	0.	14.	0.	3.	1.57	39.	76.	115.
			67	0.	2.	0.	-13.	0.	8.	1.57	39.	82.	121.
75	BEND	2	67	0.	-2.	0.	13.	0.	-8.	1.57	39.	82.	121.
			374	0.	2.	0.	-5.	0.	15.	1.57	39.	86.	125.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	-2.	0.	0.	0.	-15.	5.	1.00	39.	55.	93.
			69	2.	0.	0.	0.	15.	-7.	1.00	39.	58.	97.
77	TAN	3	342	-29.	17.	0.	-0.	-0.	-39.	1.57	0.	19.	19.
			343	44.	-17.	-0.	0.	0.	-544.	1.00	0.	167.	167.
78	TAN	3	343	46.	17.	0.	-0.	-0.	544.	1.00	0.	167.	167.
			40	-34.	-17.	-0.	-0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	54	-0.002278736	-0.000038232	-0.000248581
2	369	-0.001478514	0.000603070	0.000073831
3	368	-0.001477642	-0.000000648	0.000733020

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	26	381.	12	446.
2	62	375.	62	433.
3	77	167.	77	167.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
6	-0.	1.	-0.	0.	0.	-0.
8	-0.	-10.	0.	0.	-0.	0.
22	22.	9.	0.	1.	-0.	-48.
28	2.	1.	0.	0.	0.	-9.
35	0.	0.	-17.	-0.	0.	-0.
39	1.	-0.	-0.	-0.	-4.	-0.
40	-34.	-0.	17.	-0.	0.	-0.
53	8.	0.	0.	0.	0.	-0.
55	6.	0.	-0.	-0.	-0.	-0.
62	5.	-0.	0.	-7.	-8.	3.
69	2.	0.	0.	0.	7.	15.
77	6.	-0.	0.	1.	46.	8.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	0.000135187	0.000333603	0.000310655	-0.000140947	0.000036223	-0.000034725
3	0.000135194	0.000260523	0.000239013	-0.000145966	0.000035063	-0.000037200
4	0.000135213	0.000087763	0.000082516	-0.000146462	0.000034187	-0.000037054
5	0.000203838	0.000473160	0.000151945	-0.000151081	0.000034342	-0.000035437
6	0.000135260	0.0	0.0	-0.000142456	0.000030649	-0.000022214
7	0.000135796	0.000583143	-0.000307481	-0.000096791	-0.000004435	0.000005396
8	0.000136333	0.0	0.0	-0.000051126	-0.000012506	0.000000139
10	0.000133697	0.000061403	0.000049934	-0.000044323	-0.000011548	0.000018288
11	0.000037229	0.000145542	-0.000096315	-0.000036529	-0.000008641	0.000020046
13	-0.000020551	0.000210111	-0.000184387	-0.000029863	-0.000005933	0.000010423
15	-0.000021571	0.000248754	-0.000119460	-0.000025316	-0.000004461	-0.000006384
16	-0.000037983	0.000231992	-0.000060936	-0.000024608	-0.000004278	-0.000008393
17	-0.000036788	0.000228625	-0.000017940	-0.000008477	-0.000000433	0.000005993
18	-0.000024787	0.000200425	-0.000002430	-0.000007665	-0.000000360	0.000010665
20	-0.000021776	0.000007429	-0.000004760	-0.000001911	-0.000000226	0.000012866
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.000000016	0.0	0.0	0.0	0.0
24	-0.000023902	0.000237449	-0.000000502	-0.000007993	-0.000000248	0.000001441
25	-0.000023735	0.000237665	-0.000000224	-0.000007929	-0.000000216	-0.000000019
26	-0.000022470	0.000007352	-0.000005169	-0.000002029	0.000000831	-0.000013126
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.000000003	0.0	0.0	0.0	0.0
30	0.000002820	0.000231133	-0.000160093	-0.000024641	-0.000003850	-0.000013532
32	0.000036966	0.000239218	-0.000215190	-0.000024524	-0.000003490	-0.000018240
34	0.000043034	0.001992709	0.000001031	0.000012325	0.000000067	0.000362759
35	0.000042812	0.0	0.0	0.000012137	0.000000622	0.000377023
37	0.000038330	-0.000032913	0.000001802	-0.000004467	-0.000008221	-0.000067051
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.000071386	-0.000001589	0.000390920
51	0.000357601	0.000750634	-0.000394523	-0.000105486	0.000034363	-0.000009814
53	0.0	0.000780149	0.0	0.000048575	0.000029063	0.000019604
54	-0.000098182	0.000797481	0.000165802	-0.000014387	0.000023578	-0.000006532
55	0.0	0.000801499	0.0	0.000009629	0.000018430	0.000003357
57	-0.000364127	0.000789201	0.000429418	0.000051257	0.000013807	0.000060598
60	-0.000370015	0.002001488	0.000006028	0.000162948	0.000028009	0.000006269
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.000007533	0.000001088	0.000005491	0.0	0.0
67	0.0	0.000002223	0.000000319	-0.000001097	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
71	0.000133256	0.000606744	0.001046838	-0.000088784	0.000030262	0.000004065
73	0.000109715	0.000603869	0.000547245	-0.000080054	0.000022247	0.000003523
75	0.000083114	0.000570232	0.000031747	-0.000072731	0.000013150	0.000002623
77	0.0	0.0	0.0	0.0	0.0	0.0
78	-0.000073161	0.000786065	0.000169652	0.000020683	0.000027791	0.000010030
79	-0.000101814	0.000787026	0.000227654	0.000018160	0.000027649	0.000009118
341	0.000042901	0.000422414	-0.000000727	0.000012691	-0.000000306	0.000405080
342	0.000042421	0.001237487	0.000000194	0.000013048	-0.000001096	0.000390920
343	0.000021166	0.000888734	0.000000089	0.000045391	-0.000001486	0.000390920
344	0.000135197	0.000175787	0.000160426	-0.000147336	0.000034659	-0.000037548
345	0.000136409	0.000049263	0.000048908	-0.000044655	-0.000011618	0.000017829

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	0.000125994	0.000071343	0.000037972	-0.000044013	-0.000011451	0.000018644
347	-0.000017269	0.000204892	-0.000178211	-0.000030055	-0.000006008	0.000010840
348	-0.000021661	0.000215958	-0.000184258	-0.000029664	-0.000005873	0.000009968
349	-0.000029029	0.000241262	-0.000089955	-0.000024904	-0.000004295	-0.000008494
350	0.000018983	0.000231295	-0.000187626	-0.000024580	-0.000003690	-0.000015528
351	0.000045566	0.000260770	-0.000229529	-0.000024467	-0.000003332	-0.000020731
352	0.000042960	0.001241363	0.000000199	0.000012874	-0.000001039	0.000390920
353	0.000040157	-0.000069797	0.000006152	-0.000004333	-0.000008120	-0.000068018
354	0.000033873	-0.000015802	-0.000000031	-0.000004570	-0.000008294	-0.000065882
355	-0.000024383	0.000228196	-0.000001353	-0.000008144	-0.000000348	0.000006118
356	-0.000027715	0.000022999	-0.000005367	-0.000002145	-0.000000259	0.000014625
357	-0.000009681	0.000001835	-0.000002945	-0.000001714	-0.000000190	0.000011007
358	-0.000018497	0.000018085	-0.000005161	-0.000002149	0.000000856	-0.000015284
359	-0.000030288	0.000003634	-0.000004027	-0.000001932	0.000000798	-0.000010970
360	0.000135120	0.000611291	0.001053554	-0.000089497	0.000030644	0.000003986
361	0.000128844	0.000604831	0.000966310	-0.000088192	0.000029802	0.000004059
362	0.000091748	0.000602449	0.000109185	-0.000073037	0.000013559	0.000002646
363	0.000068207	0.000492722	-0.000000308	-0.000072267	0.000012803	0.000002588
364	0.000353969	0.000744269	-0.000377204	-0.000106082	0.000034357	-0.000009962
365	0.000359958	0.000752829	-0.000412646	-0.000104881	0.000034361	-0.000009671
366	-0.000087830	0.000786599	0.000199599	0.000019367	0.000027720	0.000009560
367	-0.000332735	0.000777720	0.000405431	0.000050907	0.000013826	0.000059932
368	-0.000377279	0.000820879	0.000433369	0.000051670	0.000013791	0.000061220
369	-0.000376169	0.002034023	0.000020843	0.000162548	0.000027855	0.000006317
370	-0.000355085	0.001916239	-0.000000144	0.000163246	0.000028152	0.000006250
371	0.0	0.000010530	-0.000000142	0.000005564	0.0	0.0
372	0.0	0.000006304	0.000003989	0.000005391	0.0	0.0
373	0.0	0.000002574	0.000001005	-0.000001154	0.0	0.0
374	0.0	0.000001406	0.000000003	-0.000000928	0.0	0.0

WPPSS OUTLET AND BALANCE LINES

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	0.	1.	4.	-17.	13.	1.00	82.	67.	149.
			3	-2.	-0.	-1.	-6.	17.	-9.	1.57	82.	96.	178.
2	TEE	1	3	1.	0.	-2.	9.	-17.	-6.	1.57	52.	31.	83.
			344	-1.	-0.	3.	-2.	17.	7.	1.57	52.	27.	79.
3	TEE	1	4	-2.	0.	-19.	29.	11.	-10.	1.57	52.	49.	101.
			344	2.	-0.	18.	12.	-11.	5.	1.57	52.	21.	73.
4	TEE	1	5	1.	1.	14.	0.	7.	-1.	1.57	52.	10.	62.
			344	-1.	-1.	-14.	-29.	-7.	2.	1.57	58.	435.	493.
5	TAN	1	4	19.	0.	2.	10.	11.	-29.	1.57	82.	155.	237.
			6	-19.	-0.	-2.	-15.	-11.	76.	1.00	82.	239.	321.
6	TAN	1	6	-7.	0.	-0.	15.	11.	-76.	1.00	82.	239.	321.
			7	0.	-0.	0.	-7.	-11.	-28.	1.00	82.	93.	175.
7	TAN	1	7	-0.	0.	-0.	7.	11.	28.	1.00	82.	93.	175.
			8	-6.	-0.	0.	2.	-11.	56.	1.00	82.	174.	256.
8	TAN	1	8	-9.	0.	-0.	-2.	11.	-56.	1.00	82.	174.	256.
			345	8.	-0.	0.	2.	-11.	22.	1.57	82.	118.	200.
9	BEND	1	345	-8.	0.	0.	-2.	22.	11.	1.57	60.	47.	107.
			10	7.	-0.	-4.	-3.	-17.	-11.	1.57	60.	39.	99.
10	BEND	1	10	-7.	0.	4.	3.	17.	11.	1.57	60.	39.	99.
			346	4.	-0.	-6.	-7.	-13.	-9.	1.57	60.	33.	93.
11	TAN	1	346	4.	6.	0.	-7.	9.	13.	1.57	82.	83.	165.
			11	-4.	-5.	-0.	6.	-9.	8.	1.00	82.	41.	123.
12	TAN	1	11	4.	4.	0.	-5.	9.	-8.	1.00	82.	41.	123.
			347	-3.	-4.	-0.	4.	-9.	26.	1.57	82.	134.	215.
13	BEND	1	347	3.	-0.	4.	-4.	26.	9.	1.57	52.	43.	95.
			13	-4.	0.	-2.	1.	-28.	-10.	1.57	52.	46.	98.
14	BEND	1	13	4.	-0.	2.	-1.	28.	10.	1.57	52.	46.	98.
			348	-5.	0.	-0.	-3.	-30.	-10.	1.57	52.	49.	101.
15	TAN	1	348	-5.	0.	-0.	-3.	10.	30.	1.00	52.	31.	83.
			15	-1.	-0.	0.	5.	-10.	-54.	1.00	52.	54.	106.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	0.	1.	-0.	-10.	3.	54.	1.57	52.	85.	137.
			349	-1.	-1.	0.	11.	-3.	-54.	1.57	52.	54.	106.
17	TEE	1	16	-7.	9.	0.	6.	4.	-8.	1.57	52.	16.	68.
			349	7.	-9.	-0.	-6.	-4.	-2.	1.57	52.	9.	61.
18	TEE	1	30	4.	8.	-0.	-1.	4.	64.	1.57	52.	99.	151.
			349	-4.	-9.	0.	2.	-4.	-51.	1.57	52.	51.	103.
19	TAN	1	30	1.	9.	0.	-2.	4.	-64.	1.00	52.	63.	115.
			350	-1.	-8.	-0.	2.	-4.	65.	1.00	52.	64.	116.
20	BEND	1	350	-1.	0.	8.	2.	-65.	4.	1.57	60.	125.	185.
			32	-5.	-0.	-6.	-4.	63.	-2.	1.57	60.	120.	180.
21	BEND	1	32	5.	0.	6.	4.	-63.	2.	1.57	60.	120.	180.
			351	-7.	-0.	-1.	-4.	55.	1.	1.57	60.	106.	166.
22	TAN	1	351	-7.	1.	0.	-4.	-1.	-55.	1.57	58.	1235.	1293.
			34	5.	-1.	-0.	-3.	1.	-84.	1.57	58.	1878.	1936.
23	TEE	1	34	-0.	1.	-5.	-84.	-1.	3.	1.57	39.	459.	498.
			352	0.	-1.	5.	94.	1.	-4.	1.57	39.	326.	365.
24	TEE	1	341	1.	1.	50.	-5.	0.	-1.	1.57	39.	26.	65.
			352	-1.	-1.	-49.	-94.	-0.	3.	1.57	39.	326.	365.
25	TEE	1	342	-0.	-1.	-53.	29.	0.	7.	1.57	39.	161.	199.
			352	0.	1.	54.	-2.	-0.	-7.	1.57	117.	2.	119.
26	TAN	1	341	50.	1.	1.	-1.	0.	-5.	1.57	58.	108.	166.
			35	-50.	-1.	-1.	1.	-0.	54.	1.00	58.	769.	827.
27	TAN	1	35	-3.	1.	0.	-1.	0.	-54.	1.00	58.	769.	827.
			353	1.	-1.	-0.	-1.	-0.	-10.	1.57	58.	216.	274.
28	BEND	1	353	-0.	1.	1.	-10.	-1.	0.	1.57	39.	53.	92.
			37	-1.	-1.	-1.	7.	1.	-7.	1.57	39.	55.	94.
29	BEND	1	37	1.	1.	1.	-7.	-1.	7.	1.57	39.	55.	94.
			354	-1.	-1.	-0.	0.	1.	-10.	1.57	39.	55.	94.
30	TAN	1	354	1.	0.	-1.	-0.	10.	1.	1.57	58.	226.	284.
			39	-1.	-0.	0.	1.	-10.	4.	1.00	58.	155.	213.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	-2.	12.	0.	-7.	-1.	-8.	1.00	58.	145.	203.
			17	2.	-12.	-0.	6.	1.	4.	1.00	58.	104.	162.
32	TEE	1	17	2.	12.	-0.	6.	-1.	4.	1.57	52.	11.	63.
			355	-2.	-13.	0.	-6.	1.	-1.	1.57	52.	6.	58.
33	TEE	1	18	-9.	8.	-0.	-0.	-4.	43.	1.57	52.	66.	118.
			355	7.	-8.	0.	0.	4.	-66.	1.57	52.	65.	117.
34	TEE	1	24	-7.	9.	0.	1.	1.	47.	1.57	52.	72.	124.
			355	6.	-9.	-0.	-1.	-1.	-66.	1.57	52.	64.	116.
35	TAN	1	18	9.	8.	-0.	0.	-4.	43.	1.57	82.	207.	289.
			356	-10.	-8.	0.	0.	4.	37.	1.57	82.	180.	262.
36	BEND	1	356	-10.	-0.	8.	0.	-37.	-4.	1.57	60.	71.	131.
			20	2.	0.	-13.	3.	45.	3.	1.57	60.	86.	146.
37	BEND	1	20	-2.	-0.	13.	-3.	-45.	-3.	1.57	60.	86.	146.
			357	-8.	0.	-11.	4.	41.	0.	1.57	60.	80.	140.
38	TAN	1	357	8.	11.	0.	-4.	-0.	41.	1.57	82.	201.	283.
			22	-8.	-12.	-0.	4.	0.	-14.	1.00	82.	44.	126.
39	TAN	1	22	0.	-0.	0.	0.	0.	0.	1.00	82.	0.	82.
			23	0.	-0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	7.	9.	0.	-1.	1.	47.	1.57	39.	61.	100.
			25	-8.	-9.	-0.	1.	-1.	-37.	1.57	35.	63.	98.
41	TAN	1	25	8.	9.	0.	-1.	1.	37.	1.00	62.	283.	344.
			358	-9.	-9.	-0.	-0.	-1.	29.	1.00	62.	220.	282.
42	BEND	1	358	-9.	0.	9.	-0.	-29.	1.	1.57	46.	104.	150.
			26	0.	-0.	-13.	-1.	33.	-1.	1.57	46.	117.	163.
43	BEND	1	26	-0.	0.	13.	1.	-33.	1.	1.57	46.	117.	163.
			359	-9.	-0.	-10.	-1.	29.	-0.	1.57	46.	104.	150.
44	TAN	1	359	-9.	10.	0.	-1.	0.	-29.	1.00	62.	219.	281.
			28	9.	-10.	-0.	1.	-0.	-18.	1.00	62.	138.	200.
45	TAN	1	28	0.	-0.	0.	0.	0.	0.	1.00	62.	0.	62.
			29	0.	-0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	-2.	0.	1.	-4.	-17.	13.	1.00	82.	67.	149.
			360	-3.	-0.	-1.	-9.	17.	-4.	1.57	82.	95.	177.
47	BEND	1	360	3.	-1.	0.	9.	-4.	-17.	1.57	52.	30.	82.
			71	-2.	1.	2.	5.	1.	19.	1.57	52.	30.	82.
48	BEND	1	71	2.	-1.	-2.	-5.	-1.	-19.	1.57	52.	30.	82.
			361	-0.	1.	4.	16.	-1.	10.	1.57	52.	29.	81.
49	TAN	1	361	0.	-4.	1.	-16.	-10.	-1.	1.57	82.	91.	173.
			73	-0.	5.	-1.	13.	10.	1.	1.00	82.	50.	132.
50	TAN	1	73	0.	-5.	1.	-13.	-10.	-1.	1.00	82.	50.	132.
			362	-0.	6.	-1.	9.	10.	2.	1.57	82.	65.	147.
51	BEND	1	362	1.	0.	-6.	-2.	-9.	-10.	1.57	52.	21.	73.
			75	4.	-0.	5.	8.	11.	6.	1.57	52.	23.	75.
52	BEND	1	75	-4.	0.	-5.	-8.	-11.	-6.	1.57	52.	23.	75.
			363	7.	-0.	1.	10.	18.	-2.	1.57	52.	32.	84.
53	TAN	1	363	0.	-1.	-7.	-18.	2.	-10.	1.57	82.	101.	183.
			77	-0.	1.	10.	107.	-2.	11.	1.57	82.	519.	601.
54	TAN	2	5	0.	13.	-5.	-0.	2.	6.	1.00	58.	95.	153.
			364	-0.	-13.	5.	21.	-2.	-5.	1.57	58.	492.	550.
55	BEND	2	364	-5.	0.	13.	5.	-21.	2.	1.57	39.	120.	159.
			51	2.	-0.	-13.	-5.	22.	-1.	1.57	39.	123.	162.
56	BEND	2	51	-2.	0.	13.	5.	-22.	1.	1.57	39.	123.	162.
			365	-1.	-0.	-13.	-5.	22.	0.	1.57	39.	123.	162.
57	TAN	2	365	0.	13.	1.	-22.	-0.	5.	1.57	58.	504.	562.
			53	-0.	-11.	-1.	-7.	0.	2.	1.00	58.	98.	156.
58	TAN	2	53	-0.	11.	-0.	7.	-0.	-2.	1.00	58.	98.	156.
			78	0.	-11.	0.	-5.	0.	2.	1.57	58.	122.	180.
59	TAN	2	78	-0.	11.	-0.	5.	-0.	-2.	1.57	37.	32.	70.
			366	0.	-9.	0.	-5.	0.	2.	1.57	37.	30.	67.
60	TAN	2	366	-0.	9.	-0.	5.	-0.	-2.	1.57	37.	30.	67.
			79	0.	-7.	0.	-4.	0.	2.	1.57	37.	27.	65.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	-0.	7.	-0.	4.	-0.	-2.	1.57	58.	103.	161.
			54	0.	-5.	0.	0.	0.	0.	1.00	58.	7.	65.
62	TAN	2	54	-0.	5.	-0.	-0.	-0.	-0.	1.00	58.	7.	65.
			55	0.	-3.	0.	2.	0.	-1.	1.00	58.	39.	97.
63	TAN	2	55	-0.	3.	-0.	-2.	-0.	1.	1.00	58.	39.	97.
			367	0.	-2.	0.	4.	0.	-7.	1.57	58.	179.	237.
64	BEND	2	367	-0.	0.	2.	-4.	-7.	-0.	1.57	39.	44.	82.
			57	-1.	-0.	-1.	3.	7.	-2.	1.57	39.	43.	82.
65	BEND	2	57	1.	0.	1.	-3.	-7.	2.	1.57	39.	43.	82.
			368	-1.	-0.	-0.	0.	6.	-4.	1.57	39.	39.	78.
66	TAN	2	368	-1.	0.	-0.	0.	4.	-6.	1.57	58.	161.	219.
			369	-1.	-0.	0.	2.	-4.	-1.	1.57	58.	91.	149.
67	BEND	2	369	-0.	1.	0.	1.	-2.	4.	1.57	39.	22.	61.
			60	-0.	-1.	-0.	-3.	2.	-2.	1.57	39.	21.	59.
68	BEND	2	60	0.	1.	0.	3.	-2.	2.	1.57	39.	21.	59.
			370	-0.	-1.	-0.	-3.	1.	0.	1.57	39.	17.	56.
69	TAN	2	370	-0.	0.	1.	-3.	-0.	-1.	1.57	58.	69.	127.
			62	0.	-0.	-3.	-28.	0.	-5.	1.00	58.	409.	467.
70	TAN	2	62	0.	-0.	-1.	3.	0.	0.	1.00	58.	44.	102.
			371	0.	0.	-1.	-1.	0.	0.	1.57	58.	13.	71.
71	BEND	2	371	1.	0.	-0.	0.	1.	0.	1.57	39.	3.	42.
			64	-1.	0.	1.	0.	-1.	0.	1.57	39.	5.	44.
72	BEND	2	64	1.	0.	-1.	0.	1.	0.	1.57	39.	5.	44.
			372	0.	0.	1.	0.	-1.	0.	1.57	39.	6.	45.
73	TAN	2	372	0.	-1.	-0.	1.	0.	0.	1.57	58.	25.	83.
			373	0.	3.	0.	0.	0.	0.	1.57	58.	9.	67.
74	BEND	2	373	-0.	0.	-3.	0.	-0.	0.	1.57	39.	2.	41.
			67	2.	0.	2.	0.	1.	0.	1.57	39.	6.	45.
75	BEND	2	67	-2.	0.	-2.	0.	-1.	0.	1.57	39.	6.	45.
			374	3.	0.	-0.	0.	3.	0.	1.57	39.	15.	53.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	0.	-3.	-3.	0.	0.	1.00	39.	9.	48.
			69	0.	-0.	3.	7.	0.	0.	1.00	39.	24.	62.
77	TAN	3	342	0.	-1.	-53.	-29.	0.	7.	1.57	0.	14.	14.
			343	-0.	1.	39.	769.	-0.	-3.	1.00	0.	237.	237.
78	TAN	3	343	0.	-1.	51.	-769.	0.	3.	1.00	0.	237.	237.
			40	-0.	1.	-63.	0.	-0.	-0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	368	-0.000377279	0.000820879	0.000433369
2	369	-0.000376169	0.002034023	0.000020843
3	360	0.000135120	0.000611291	0.001053554

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1878.	22	1936.
2	57	504.	57	562.
3	77	237.	77	237.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-0.	-26.	-2.	-0.	0.	-0.
8	-0.	-15.	0.	-0.	-0.	-0.
22	-8.	-13.	-0.	4.	0.	-14.
28	9.	-11.	-0.	1.	-0.	-18.
35	0.	-53.	1.	0.	-0.	0.
39	-1.	0.	0.	1.	4.	10.
40	-0.	-63.	-1.	0.	-0.	0.
53	-0.	-0.	2.	0.	0.	0.
55	-0.	-0.	-0.	-0.	0.	-0.
62	0.	-4.	0.	-25.	-5.	-0.
69	0.	-3.	-0.	7.	0.	0.
77	-0.	-10.	1.	107.	-11.	-2.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
2	-0.000029484	-0.000308056	-0.000315549	0.000141270	-0.000036708	0.000032580
3	-0.000029444	-0.000239788	-0.000242857	0.000146321	-0.000035610	0.000034574
4	-0.000029422	-0.000079484	-0.000083850	0.000146836	-0.000034739	0.000034134
5	-0.000099265	-0.000459859	-0.000154388	0.000151445	-0.000034938	0.000032933
6	-0.000029405	0.0	0.0	0.000142882	-0.000031144	0.000018553
7	-0.000029216	-0.000720326	0.000312313	0.000097805	0.000004511	-0.000008313
8	-0.000029026	0.0	0.0	0.000052728	0.000012690	0.000015454
10	-0.000028750	0.000019538	-0.000050505	0.000046013	0.000011717	-0.000001469
11	0.000000219	-0.000005476	0.000103071	0.000038311	0.000008811	-0.000009009
13	0.000034116	-0.000043522	0.000196891	0.000031721	0.000006111	-0.000008583
15	0.000035063	-0.000132689	0.000129814	0.000027226	0.000004648	-0.000005874
16	0.000023759	-0.000143822	0.000067094	0.000026504	0.000004467	-0.000005821
17	0.000015753	-0.000142282	0.000020532	0.000009253	0.000000422	-0.000003757
18	0.000008752	-0.000124494	0.000003435	0.000008371	0.000000338	-0.000006767
20	0.000008095	-0.000004408	0.000005295	0.000002105	0.000000192	-0.000007150
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	-0.000000016	0.0	0.0	0.0	0.0
24	0.000008110	-0.000148784	0.000001606	0.000008730	0.000000236	-0.000001208
25	0.000008012	-0.000149376	0.000001341	0.000008661	0.000000205	-0.000000324
26	0.000007791	-0.000005105	0.000006037	0.000002296	-0.000000804	0.000009359
28	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	-0.000000003	0.0	0.0	0.0	0.0
30	0.000049482	-0.000145116	0.000173968	0.000026600	0.000004055	-0.000007687
32	0.000067547	-0.000141140	0.000233466	0.000026515	0.000003704	-0.000009320
34	0.000068403	0.000896299	0.000006036	0.000000668	-0.000003091	0.000158475
35	0.000068069	0.0	0.0	-0.000001291	0.000000957	0.000182407
37	0.000060942	-0.000167910	0.000002864	-0.000036626	-0.000013069	-0.000066468
39	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.000039019	-0.000002342	0.000174117
51	-0.000252514	-0.000737910	0.000393243	0.000105712	-0.000034829	0.000011156
53	0.0	-0.000767434	0.0	-0.000048539	-0.000029571	-0.000014861
54	0.000060512	-0.000784770	-0.000163742	0.000014455	-0.000024132	0.000005613
55	0.0	-0.000788877	0.0	-0.000009936	-0.000018861	-0.000004478
57	0.000372096	-0.000776272	-0.000435142	-0.000051656	-0.000013967	-0.000060965
60	0.000377916	-0.002000730	-0.000006144	-0.000162933	-0.000028555	-0.000006672
62	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	-0.000007533	-0.000001088	-0.000005491	0.0	0.0
67	0.0	-0.000002223	-0.000000319	0.000001097	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
71	-0.000030174	-0.000606750	-0.001047746	0.000088776	-0.000029169	0.000000834
73	-0.000040721	-0.000606039	-0.000547791	0.000080059	-0.000020318	0.000002497
75	-0.000055391	-0.000572313	-0.000031803	0.000072890	-0.000010261	0.000002631
77	0.0	0.0	0.0	0.0	0.0	0.0
78	0.000054252	-0.000773350	-0.000169344	-0.000020601	-0.000028310	-0.000007151
79	0.000074553	-0.000774312	-0.000227093	-0.000018075	-0.000028169	-0.000006422
341	0.000068211	0.000197141	-0.000001274	-0.000000109	-0.000000704	0.000184067
342	0.000067239	0.000566868	0.000000680	0.000000363	-0.000002138	0.000174117
343	0.000031495	0.000481855	0.000000311	0.000021375	-0.000002299	0.000174117
344	-0.000029427	-0.000161115	-0.000163018	0.000147699	-0.000035217	0.000034800
345	-0.000028999	0.000020653	-0.000049615	0.000046341	0.000011787	-0.000000925

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
346	-0.000027911	0.000018418	-0.000037943	0.000045706	0.000011620	-0.000001945
347	0.000031478	-0.000039347	0.000190241	0.000031911	0.000006186	-0.000008674
348	0.000035031	-0.000048321	0.000196860	0.000031524	0.000006051	-0.000008475
349	0.000029305	-0.000138360	0.000098209	0.000026818	0.000004484	-0.000006067
350	0.000058317	-0.000145100	0.000203705	0.000026553	0.000003899	-0.000008354
351	0.000071781	-0.000130564	0.000248913	0.000026478	0.000003548	-0.000010280
352	0.000068304	0.000565704	0.000000700	0.000000282	-0.000002114	0.000174117
353	0.000063847	-0.000211677	0.000009779	-0.000036452	-0.000012908	-0.000067359
354	0.000053857	-0.000133691	-0.000000050	-0.000036706	-0.000013185	-0.000065324
355	0.000008391	-0.000142076	0.000002418	0.000008893	0.000000333	-0.000003915
356	0.000011372	-0.000013293	0.000006028	0.000002359	0.000000223	-0.000008386
357	0.000001740	-0.000001346	0.000003268	0.000001890	0.000000157	-0.000005892
358	0.000004956	-0.000012628	0.000006128	0.000002425	-0.000000829	0.000010650
359	0.000013553	-0.000002419	0.000004701	0.000002190	-0.000000771	0.000008049
360	-0.000029887	-0.000606161	-0.001055595	0.000089496	-0.000029586	0.000000792
361	-0.000031065	-0.000607018	-0.000966749	0.000088178	-0.000028665	0.000000949
362	-0.000057078	-0.000604599	-0.000109402	0.000073185	-0.000010719	0.000002708
363	-0.000045913	-0.000494623	0.000000324	0.000072435	-0.000009883	0.000002534
364	-0.000248635	-0.000731532	0.000375887	0.000106309	-0.000034825	0.000011282
365	-0.000255116	-0.000740109	0.000411404	0.000105106	-0.000034826	0.000011034
366	0.000064676	-0.000773885	-0.000199166	-0.000019283	-0.000028240	-0.000006774
367	0.000340518	-0.000764725	-0.000410978	-0.000051308	-0.000013988	-0.000060297
368	0.000385326	-0.000808139	-0.000439096	-0.000052068	-0.000013949	-0.000061589
369	0.000384190	-0.002033047	-0.000021247	-0.000162535	-0.000028396	-0.000006722
370	0.000362694	-0.001915579	0.000000148	-0.000163230	-0.000028701	-0.000006651
371	0.0	-0.000010530	0.000000142	-0.000005564	0.0	0.0
372	0.0	-0.000006304	-0.000003989	-0.000005391	0.0	0.0
373	0.0	-0.000002574	-0.000001005	0.000001154	0.0	0.0
374	0.0	-0.000001406	-0.000000003	0.000000928	0.0	0.0

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	-2.	0.	-1.	-4.	17.	-11.	1.00	82.	63.	145.
			3	2.	-0.	1.	6.	-17.	7.	1.57	82.	92.	174.
2	TEE	1	3	-1.	0.	2.	-7.	17.	6.	1.57	52.	29.	81.
			344	1.	-0.	-3.	0.	-17.	-7.	1.57	52.	27.	79.
3	TEE	1	4	2.	0.	19.	-31.	-11.	10.	1.57	52.	53.	105.
			344	-2.	-0.	-18.	-9.	11.	-5.	1.57	52.	20.	72.
4	TEE	1	5	-0.	-1.	-14.	-0.	-6.	1.	1.57	52.	9.	61.
			344	0.	1.	14.	29.	6.	-2.	1.57	58.	425.	484.
5	TAN	1	4	-19.	0.	-2.	-10.	-11.	31.	1.57	82.	167.	248.
			6	19.	-0.	2.	15.	11.	-78.	1.00	82.	247.	329.
6	TAN	1	6	7.	0.	0.	-15.	-11.	78.	1.00	82.	247.	329.
			7	-1.	-0.	-0.	7.	11.	31.	1.00	82.	102.	184.
7	TAN	1	7	1.	0.	0.	-7.	-11.	-31.	1.00	82.	102.	184.
			8	6.	-0.	-0.	-2.	11.	-47.	1.00	82.	148.	230.
8	TAN	1	8	6.	0.	0.	2.	-11.	47.	1.00	82.	148.	230.
			345	-5.	-0.	-0.	-2.	11.	-25.	1.57	82.	130.	212.
9	BEND	1	345	5.	-0.	0.	2.	-25.	-11.	1.57	60.	51.	111.
			10	-4.	0.	2.	2.	21.	11.	1.57	60.	46.	106.
10	BEND	1	10	4.	-0.	-2.	-2.	-21.	-11.	1.57	60.	46.	106.
			346	-3.	0.	3.	7.	19.	9.	1.57	60.	42.	102.
11	TAN	1	346	-3.	-3.	-0.	7.	-9.	-19.	1.57	82.	105.	187.
			11	2.	2.	0.	-6.	9.	5.	1.00	82.	35.	117.
12	TAN	1	11	-3.	-2.	-0.	5.	-9.	-5.	1.00	82.	35.	117.
			347	2.	1.	0.	-4.	9.	-5.	1.57	82.	56.	137.
13	BEND	1	347	-2.	0.	-1.	4.	-5.	-9.	1.57	52.	18.	70.
			13	2.	-0.	1.	-1.	6.	10.	1.57	52.	19.	71.
14	BEND	1	13	-2.	0.	-1.	1.	-6.	-10.	1.57	52.	19.	71.
			348	2.	-0.	-0.	3.	7.	10.	1.57	52.	19.	72.
15	TAN	1	348	2.	0.	0.	3.	-10.	-7.	1.00	52.	12.	64.
			15	3.	-0.	-0.	-5.	10.	-3.	1.00	52.	11.	63.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	-3.	-2.	0.	10.	-3.	3.	1.57	52.	17.	69.
			349	3.	3.	-0.	-10.	3.	-7.	1.57	52.	13.	65.
17	TEE	1	16	5.	-3.	-0.	-6.	-4.	-3.	1.57	52.	12.	64.
			349	-5.	2.	0.	6.	4.	10.	1.57	52.	13.	65.
18	TEE	1	30	2.	0.	0.	0.	-4.	21.	1.57	52.	33.	85.
			349	-1.	1.	-0.	-1.	4.	-17.	1.57	52.	17.	70.
19	TAN	1	30	1.	1.	-0.	2.	-4.	-21.	1.00	52.	21.	73.
			350	-1.	-1.	0.	-1.	4.	22.	1.00	52.	22.	74.
20	BEND	1	350	-1.	-0.	1.	-1.	-22.	-4.	1.57	60.	43.	103.
			32.	-0.	0.	-2.	3.	23.	2.	1.57	60.	45.	105.
21	BEND	1	32	0.	-0.	2.	-3.	-23.	-2.	1.57	60.	45.	105.
			351	-2.	0.	-1.	3.	22.	-1.	1.57	60.	43.	103.
22	TAN	1	351	-2.	1.	-0.	3.	1.	-22.	1.57	58.	497.	555.
			34	4.	-1.	0.	3.	-1.	-45.	1.57	58.	1014.	1072.
23	TEE	1	34	0.	1.	-4.	-45.	1.	-3.	1.57	39.	248.	287.
			352	-0.	-1.	5.	54.	-1.	3.	1.57	39.	187.	226.
24	TEE	1	341	2.	1.	22.	9.	1.	-3.	1.57	39.	53.	92.
			352	-2.	-1.	-23.	-54.	-1.	6.	1.57	39.	188.	227.
25	TEE	1	342	-0.	-2.	-27.	14.	0.	3.	1.57	39.	76.	115.
			352	0.	2.	27.	-0.	-0.	-3.	1.57	117.	1.	118.
26	TAN	1	341	22.	1.	2.	-3.	1.	9.	1.57	58.	216.	274.
			35	-22.	-1.	-2.	1.	-1.	13.	1.00	58.	181.	239.
27	TAN	1	35	1.	1.	0.	-1.	1.	-13.	1.00	58.	181.	239.
			353	2.	-1.	-0.	-2.	-1.	-8.	1.57	58.	193.	251.
28	BEND	1	353	-0.	2.	1.	-8.	-2.	1.	1.57	39.	47.	86.
			37	-1.	-2.	-1.	6.	2.	-7.	1.57	39.	53.	92.
29	BEND	1	37	1.	2.	1.	-6.	-2.	7.	1.57	39.	53.	92.
			354	-1.	-2.	-0.	1.	1.	-10.	1.57	39.	55.	94.
30	TAN	1	354	1.	0.	-2.	-1.	10.	1.	1.57	58.	225.	283.
			39	-1.	-0.	3.	14.	-10.	6.	1.00	58.	263.	321.

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	-2.	-5.	-0.	7.	1.	-3.	1.00	58.	110.	168.
			17	2.	6.	0.	-7.	-1.	-1.	1.00	58.	98.	156.
32	TEE	1	17	2.	-6.	0.	-7.	1.	-1.	1.57	52.	11.	63.
			355	-2.	6.	-0.	6.	-1.	4.	1.57	52.	8.	60.
33	TEE	1	18	5.	-7.	0.	0.	5.	-27.	1.57	52.	42.	94.
			355	-4.	7.	-0.	-0.	-5.	41.	1.57	52.	41.	93.
34	TEE	1	24	4.	-5.	-0.	-1.	-2.	-28.	1.57	52.	43.	95.
			355	-2.	5.	0.	1.	2.	37.	1.57	52.	36.	88.
35	TAN	1	18	-5.	-7.	0.	-0.	5.	-27.	1.57	82.	132.	214.
			356	7.	7.	-0.	-0.	-5.	-26.	1.57	82.	129.	211.
36	BEND	1	356	7.	0.	-7.	-0.	26.	5.	1.57	60.	51.	111.
			20	-1.	-0.	11.	-3.	-31.	-4.	1.57	60.	60.	120.
37	BEND	1	20	1.	0.	-11.	3.	31.	4.	1.57	60.	60.	120.
			357	7.	-0.	8.	-5.	-27.	-0.	1.57	60.	53.	113.
38	TAN	1	357	-7.	-8.	-0.	5.	0.	-27.	1.57	82.	133.	215.
			22	7.	9.	0.	-5.	-0.	2.	1.00	82.	16.	98.
39	TAN	1	22	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	-4.	-5.	-0.	1.	-2.	-28.	1.57	39.	36.	75.
			25	5.	5.	0.	-1.	2.	23.	1.57	35.	39.	74.
41	TAN	1	25	-5.	-5.	-0.	1.	-2.	-23.	1.00	62.	173.	234.
			358	6.	5.	0.	0.	2.	-17.	1.00	62.	131.	193.
42	BEND	1	358	6.	-0.	-5.	0.	17.	-2.	1.57	46.	62.	108.
			26	-0.	0.	8.	1.	-20.	1.	1.57	46.	71.	117.
43	BEND	1	26	0.	-0.	-8.	-1.	20.	-1.	1.57	46.	71.	117.
			359	5.	0.	6.	1.	-18.	0.	1.57	46.	63.	109.
44	TAN	1	359	5.	-6.	-0.	1.	-0.	18.	1.00	62.	134.	196.
			28	-5.	7.	0.	-1.	0.	10.	1.00	62.	75.	136.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	0.	-1.	4.	17.	-11.	1.00	82.	63.	145.
			360	3.	-0.	1.	10.	-17.	0.	1.57	82.	96.	178.
47	BEND	1	360	-3.	1.	0.	-10.	0.	17.	1.57	52.	31.	83.
			71	2.	-1.	-3.	-4.	3.	-20.	1.57	52.	31.	83.
48	BEND	1	71	-2.	1.	3.	4.	-3.	20.	1.57	52.	31.	83.
			361	-0.	-1.	-4.	-16.	4.	-11.	1.57	52.	31.	83.
49	TAN	1	361	0.	4.	-1.	16.	11.	4.	1.57	82.	96.	178.
			73	-0.	-5.	1.	-12.	-11.	-2.	1.00	82.	52.	134.
50	TAN	1	73	0.	5.	-1.	12.	11.	2.	1.00	82.	52.	134.
			362	-0.	-6.	1.	-8.	-11.	1.	1.57	82.	68.	150.
51	BEND	1	362	-1.	0.	6.	-1.	8.	11.	1.57	52.	22.	74.
			75	-4.	-0.	-5.	-7.	-11.	-9.	1.57	52.	24.	76.
52	BEND	1	75	4.	0.	5.	7.	11.	9.	1.57	52.	24.	76.
			363	-7.	-0.	-1.	-11.	-18.	-2.	1.57	52.	32.	84.
53	TAN	1	363	0.	1.	7.	18.	2.	11.	1.57	82.	101.	182.
			77	-0.	-1.	-10.	-107.	-2.	-6.	1.57	82.	519.	601.
54	TAN	2	5	-0.	-13.	5.	0.	-2.	-5.	1.00	58.	81.	139.
			364	0.	13.	-5.	-21.	2.	4.	1.57	58.	488.	546.
55	BEND	2	364	5.	-0.	-13.	-4.	21.	-2.	1.57	39.	119.	158.
			51	-2.	0.	13.	4.	-22.	1.	1.57	39.	122.	161.
56	BEND	2	51	2.	-0.	-13.	-4.	22.	-1.	1.57	39.	122.	161.
			365	1.	0.	13.	4.	-22.	-0.	1.57	39.	122.	161.
57	TAN	2	365	-0.	-13.	-1.	22.	0.	-4.	1.57	58.	501.	559.
			53	0.	11.	1.	7.	-0.	-2.	1.00	58.	96.	154.
58	TAN	2	53	0.	-11.	0.	-7.	0.	2.	1.00	58.	96.	154.
			78	-0.	11.	-0.	5.	-0.	-1.	1.57	58.	120.	178.
59	TAN	2	78	0.	-11.	0.	-5.	0.	1.	1.57	37.	32.	69.
			366	-0.	9.	-0.	5.	-0.	-1.	1.57	37.	29.	67.
60	TAN	2	366	0.	-9.	0.	-5.	0.	1.	1.57	37.	29.	67.
			79	-0.	7.	-0.	4.	-0.	-1.	1.57	37.	27.	64.

WPPSS OUTLET AND BALANCE LINES

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	-7.	0.	-4.	0.	1.	1.57	58.	101.	159.
			54	-0.	5.	-0.	-0.	-0.	-0.	1.00	58.	5.	63.
62	TAN	2	54	0.	-5.	0.	0.	0.	0.	1.00	58.	5.	63.
			55	-0.	3.	-0.	-2.	-0.	1.	1.00	58.	38.	96.
63	TAN	2	55	0.	-3.	0.	2.	0.	-1.	1.00	58.	38.	96.
			367	-0.	2.	-0.	-4.	-0.	7.	1.57	58.	179.	237.
64	BEND	2	367	0.	-0.	-2.	4.	7.	0.	1.57	39.	44.	82.
			57	1.	0.	1.	-3.	-7.	2.	1.57	39.	43.	82.
65	BEND	2	57	-1.	-0.	-1.	3.	7.	-2.	1.57	39.	43.	82.
			368	1.	0.	0.	-0.	-6.	4.	1.57	39.	40.	78.
66	TAN	2	368	1.	-0.	0.	-1.	-4.	6.	1.57	58.	162.	220.
			369	1.	0.	-0.	-2.	4.	1.	1.57	58.	92.	150.
67	BEND	2	369	0.	-1.	-0.	-1.	2.	-4.	1.57	39.	22.	61.
			60	0.	1.	0.	3.	-2.	2.	1.57	39.	21.	59.
68	BEND	2	60	-0.	-1.	-0.	-3.	2.	-2.	1.57	39.	21.	59.
			370	0.	1.	0.	3.	-1.	-0.	1.57	39.	17.	56.
69	TAN	2	370	0.	-0.	-1.	3.	0.	1.	1.57	58.	70.	128.
			62	-0.	0.	3.	28.	-0.	5.	1.00	58.	409.	467.
70	TAN	2	62	0.	0.	1.	-3.	0.	0.	1.00	58.	44.	102.
			371	0.	-0.	1.	1.	0.	0.	1.57	58.	13.	71.
71	BEND	2	371	-1.	0.	0.	0.	-1.	0.	1.57	39.	3.	42.
			64	1.	0.	-1.	0.	1.	0.	1.57	39.	5.	44.
72	BEND	2	64	-1.	0.	1.	0.	-1.	0.	1.57	39.	5.	44.
			372	-0.	0.	-1.	0.	1.	0.	1.57	39.	6.	45.
73	TAN	2	372	0.	1.	0.	-1.	0.	0.	1.57	58.	25.	83.
			373	0.	-3.	-0.	-0.	0.	0.	1.57	58.	9.	67.
74	BEND	2	373	0.	0.	3.	0.	0.	0.	1.57	39.	2.	41.
			67	-2.	0.	-2.	0.	-1.	0.	1.57	39.	6.	45.
75	BEND	2	67	2.	0.	2.	0.	1.	0.	1.57	39.	6.	45.
			374	-3.	0.	0.	0.	-3.	0.	1.57	39.	15.	53.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	-0.	3.	3.	0.	0.	1.00	39.	9.	48.
			69	0.	0.	-3.	-7.	0.	0.	1.00	39.	24.	62.
77	TAN	3	342	0.	-2.	-27.	-14.	0.	3.	1.57	0.	7.	7.
			343	-0.	2.	42.	568.	-0.	-1.	1.00	0.	175.	175.
78	TAN	3	343	0.	-2.	48.	-568.	0.	1.	1.00	0.	175.	175.
			40	-0.	2.	-36.	0.	-0.	-0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	368	0.000385326	-0.000808139	-0.000439096
2	369	0.000384190	-0.002033047	-0.000021247
3	360	-0.000029887	-0.000606161	-0.001055595

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1014.	22	1072.
2	57	501.	57	559.
3	77	175.	77	175.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
6	-0.	26.	2.	0.	-0.	0.
8	-0.	12.	-0.	0.	0.	0.
22	7.	10.	0.	-5.	-0.	2.
28	-5.	7.	0.	-1.	0.	10.
35	0.	-21.	2.	0.	-0.	0.
39	-1.	3.	0.	14.	6.	10.
40	-0.	-36.	-2.	0.	-0.	0.
53	0.	0.	-2.	-0.	-0.	-0.
55	0.	0.	0.	0.	-0.	0.
62	-0.	4.	-0.	25.	5.	0.
69	0.	3.	0.	-7.	0.	0.
77	-0.	10.	-1.	-107.	6.	-2.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS   14.20 ** LAST STEP "UPDT" TIME IS   10.60 ** DELTA TIME IS    3.60 *
* ELAPSED SECONDS                           126.3                                 89.9                      36.4 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   14.23 ** LAST STEP "ST3D" TIME IS   14.20 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           126.5                                 126.3                      0.2 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 78
NUMBER OF JOINTS 79
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	1.0400	3	0.8000				
2	1	2.0400	3	0.8000						
3	1	1.0000	2	1.0400	5	0.8000				
4	1	2.0400	5	0.8000						
5	1	1.0000	2	1.0400	4	0.8000				
6	1	2.0400	4	0.8000						
7	1	1.0000	2	1.0400	6	0.8000				
8	1	2.0400	6	0.8000						
9	1	1.0000	2	1.9000	3	1.3000				
10	1	2.9000	3	1.3000						
11	1	1.0000	2	1.9000	5	1.3000				
12	1	2.9000	5	1.3000						
13	1	1.0000	2	1.9000	4	1.3000				
14	1	2.9000	4	1.3000						
15	1	1.0000	2	1.9000	6	1.3000				
16	1	2.9000	6	1.3000						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS   14.56 ** LAST STEP "BEGP" TIME IS   14.23 ** DELTA TIME IS    0.33 *
* ELAPSED SECONDS                           134.6                                126.5                        8.2 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	42.	26.	13.	1.00	82.	156.	238.
			3	2.	2.	9.	57.	26.	11.	1.57	82.	306.	388.
2	TEE	1	3	9.	2.	2.	11.	26.	57.	1.57	52.	98.	150.
			344	11.	2.	2.	10.	26.	76.	1.57	52.	85.	137.
3	TEE	1	4	14.	3.	2.	16.	36.	104.	1.57	52.	171.	223.
			344	12.	3.	2.	18.	36.	75.	1.57	52.	93.	145.
4	TEE	1	5	1.	0.	0.	11.	15.	1.	1.57	52.	28.	81.
			344	0.	1.	0.	12.	15.	2.	1.57	58.	367.	425.
5	TAN	1	4	2.	3.	14.	104.	36.	16.	1.57	82.	536.	618.
			6	2.	4.	15.	140.	36.	13.	1.00	82.	446.	528.
6	TAN	1	6	1.	4.	14.	140.	36.	13.	1.00	82.	446.	528.
			7	1.	9.	1.	75.	36.	15.	1.00	82.	260.	342.
7	TAN	1	7	1.	9.	1.	75.	36.	15.	1.00	82.	260.	342.
			8	1.	14.	13.	96.	36.	31.	1.00	82.	328.	410.
8	TAN	1	8	6.	14.	12.	96.	36.	31.	1.00	82.	328.	410.
			345	6.	15.	10.	53.	36.	17.	1.57	82.	319.	401.
9	BEND	1	345	6.	10.	15.	53.	17.	36.	1.57	60.	126.	186.
			10	11.	9.	12.	57.	12.	11.	1.57	60.	114.	174.
10	BEND	1	10	11.	9.	12.	57.	12.	11.	1.57	60.	114.	174.
			346	14.	9.	7.	51.	6.	13.	1.57	60.	101.	161.
11	TAN	1	346	14.	7.	9.	51.	13.	6.	1.57	82.	255.	337.
			11	15.	8.	6.	11.	13.	84.	1.00	82.	264.	346.
12	TAN	1	11	14.	10.	6.	13.	12.	84.	1.00	82.	264.	346.
			347	15.	10.	4.	10.	12.	152.	1.57	82.	737.	819.
13	BEND	1	347	15.	4.	10.	10.	152.	12.	1.57	52.	235.	287.
			13	11.	3.	15.	7.	159.	15.	1.57	52.	246.	299.
14	BEND	1	13	11.	3.	15.	7.	159.	15.	1.57	52.	246.	299.
			348	6.	3.	18.	3.	164.	17.	1.57	52.	254.	306.
15	TAN	1	348	6.	18.	3.	3.	17.	164.	1.00	52.	161.	213.
			15	6.	22.	8.	30.	17.	233.	1.00	52.	231.	283.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	13.	18.	8.	33.	9.	233.	1.57	52.	363.	415.
			349	13.	18.	9.	46.	9.	219.	1.57	52.	219.	271.
17	TEE	1	16	30.	39.	14.	30.	18.	37.	1.57	52.	78.	130.
			349	30.	39.	13.	11.	18.	79.	1.57	52.	83.	136.
18	TEE	1	30	26.	8.	1.	1.	44.	55.	1.57	52.	109.	161.
			349	27.	8.	4.	9.	44.	139.	1.57	52.	152.	204.
19	TAN	1	30	27.	1.	1.	13.	42.	55.	1.00	52.	69.	121.
			350	27.	1.	0.	13.	42.	25.	1.00	52.	49.	101.
20	BEND	1	350	27.	0.	1.	13.	25.	42.	1.57	60.	97.	157.
			32	18.	1.	19.	38.	5.	21.	1.57	60.	83.	143.
21	BEND	1	32	18.	1.	19.	38.	5.	21.	1.57	60.	83.	143.
			351	1.	2.	26.	40.	14.	11.	1.57	60.	83.	143.
22	TAN	1	351	1.	26.	2.	40.	11.	14.	1.57	58.	972.	1030.
			34	1.	24.	6.	55.	11.	1.	1.57	58.	1259.	1317.
23	TEE	1	34	6.	24.	1.	1.	11.	55.	1.57	39.	308.	346.
			352	7.	24.	1.	2.	11.	69.	1.57	39.	247.	286.
24	TEE	1	341	18.	23.	1.	3.	0.	36.	1.57	39.	199.	237.
			352	18.	22.	1.	2.	0.	67.	1.57	39.	233.	272.
25	TEE	1	342	43.	18.	0.	11.	0.	127.	1.57	39.	698.	736.
			352	44.	18.	0.	12.	0.	108.	1.57	117.	33.	151.
26	TAN	1	341	1.	23.	18.	36.	0.	3.	1.57	58.	812.	870.
			35	1.	23.	18.	30.	0.	4.	1.00	58.	430.	488.
27	TAN	1	35	0.	23.	5.	30.	0.	4.	1.00	58.	430.	488.
			353	0.	25.	4.	41.	0.	1.	1.57	58.	925.	983.
28	BEND	1	353	4.	0.	25.	1.	41.	0.	1.57	39.	226.	265.
			37	17.	0.	21.	1.	38.	1.	1.57	39.	209.	247.
29	BEND	1	37	17.	0.	21.	1.	38.	1.	1.57	39.	209.	247.
			354	25.	0.	5.	0.	26.	1.	1.57	39.	142.	180.
30	TAN	1	354	25.	5.	0.	0.	1.	26.	1.57	58.	580.	638.
			39	25.	6.	0.	1.	1.	113.	1.00	58.	1601.	1660.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	49.	6.	14.	34.	8.	37.	1.00	58.	721.	779.
			17	49.	6.	14.	72.	8.	93.	1.00	58.	1665.	1723.
32	TEE	1	17	49.	6.	14.	72.	8.	93.	1.57	52.	181.	233.
			355	50.	6.	16.	102.	8.	192.	1.57	52.	213.	265.
33	TEE	1	18	9.	34.	14.	73.	88.	35.	1.57	52.	185.	237.
			355	9.	33.	11.	110.	88.	62.	1.57	52.	184.	236.
34	TEE	1	24	15.	18.	8.	82.	14.	84.	1.57	52.	182.	234.
			355	15.	17.	5.	102.	14.	130.	1.57	52.	163.	215.
35	TAN	1	18	9.	34.	14.	73.	88.	35.	1.57	82.	579.	661.
			356	9.	36.	17.	57.	88.	42.	1.57	82.	545.	627.
36	BEND	1	356	9.	17.	36.	57.	42.	88.	1.57	60.	216.	276.
			20	19.	18.	32.	122.	36.	15.	1.57	60.	244.	304.
37	BEND	1	20	19.	18.	32.	122.	36.	15.	1.57	60.	244.	304.
			357	36.	19.	9.	117.	4.	84.	1.57	60.	275.	335.
38	TAN	1	357	36.	9.	19.	117.	84.	4.	1.57	82.	694.	776.
			22	37.	9.	21.	188.	84.	128.	1.00	82.	742.	824.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	15.	18.	8.	82.	14.	84.	1.57	39.	154.	193.
			25	15.	19.	10.	71.	14.	65.	1.57	35.	165.	200.
41	TAN	1	25	15.	19.	10.	71.	14.	65.	1.00	62.	738.	799.
			358	15.	20.	12.	14.	14.	54.	1.00	62.	437.	498.
42	BEND	1	358	15.	12.	20.	14.	54.	14.	1.57	46.	206.	252.
			26	3.	13.	25.	28.	59.	4.	1.57	46.	235.	281.
43	BEND	1	26	3.	13.	25.	28.	59.	4.	1.57	46.	235.	281.
			359	20.	13.	15.	27.	49.	26.	1.57	46.	223.	269.
44	TAN	1	359	20.	15.	13.	27.	26.	49.	1.00	62.	472.	534.
			28	21.	15.	15.	98.	26.	52.	1.00	62.	867.	928.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	42.	26.	13.	1.00	82.	156.	238.
			360	2.	4.	3.	28.	26.	47.	1.57	82.	293.	375.
47	BEND	1	360	2.	3.	4.	28.	47.	26.	1.57	52.	93.	146.
			71	2.	4.	5.	36.	47.	20.	1.57	52.	97.	149.
48	BEND	1	71	2.	4.	5.	36.	47.	20.	1.57	52.	97.	149.
			361	5.	5.	2.	21.	43.	25.	1.57	52.	84.	136.
49	TAN	1	361	5.	2.	5.	21.	25.	43.	1.57	82.	262.	344.
			73	6.	2.	7.	10.	25.	17.	1.00	82.	97.	179.
50	TAN	1	73	6.	2.	7.	10.	25.	17.	1.00	82.	97.	179.
			362	7.	2.	10.	59.	25.	24.	1.57	82.	330.	412.
51	BEND	1	362	10.	7.	2.	24.	59.	25.	1.57	52.	105.	157.
			75	7.	7.	9.	17.	69.	37.	1.57	52.	123.	175.
52	BEND	1	75	7.	7.	9.	17.	69.	37.	1.57	52.	123.	175.
			363	2.	8.	12.	16.	72.	32.	1.57	52.	124.	176.
53	TAN	1	363	8.	12.	2.	72.	32.	16.	1.57	82.	388.	470.
			77	10.	17.	2.	68.	32.	95.	1.57	82.	586.	667.
54	TAN	2	5	1.	0.	0.	10.	6.	15.	1.00	58.	262.	320.
			364	1.	1.	1.	9.	6.	11.	1.57	58.	346.	405.
55	BEND	2	364	1.	1.	1.	11.	9.	6.	1.57	39.	85.	123.
			51	1.	1.	1.	12.	9.	3.	1.57	39.	84.	122.
56	BEND	2	51	1.	1.	1.	12.	9.	3.	1.57	39.	84.	122.
			365	1.	1.	0.	12.	9.	1.	1.57	39.	83.	121.
57	TAN	2	365	1.	0.	1.	9.	1.	12.	1.57	58.	338.	396.
			53	3.	0.	5.	52.	1.	26.	1.00	58.	823.	881.
58	TAN	2	53	5.	0.	11.	52.	1.	26.	1.00	58.	823.	881.
			78	4.	0.	10.	3.	1.	4.	1.57	58.	111.	169.
59	TAN	2	78	4.	0.	10.	3.	1.	4.	1.57	37.	29.	67.
			366	3.	0.	6.	15.	1.	4.	1.57	37.	91.	128.
60	TAN	2	366	3.	0.	6.	15.	1.	4.	1.57	37.	91.	128.
			79	1.	0.	2.	21.	1.	7.	1.57	37.	129.	166.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	1.	0.	2.	21.	1.	7.	1.57	58.	485.	543.
			54	0.	0.	1.	29.	1.	11.	1.00	58.	441.	499.
62	TAN	2	54	0.	0.	1.	29.	1.	11.	1.00	58.	441.	499.
			55	2.	0.	6.	54.	1.	25.	1.00	58.	844.	902.
63	TAN	2	55	3.	1.	5.	54.	2.	25.	1.00	58.	844.	902.
			367	2.	0.	3.	3.	2.	10.	1.57	58.	238.	296.
64	BEND	2	367	2.	3.	0.	3.	10.	2.	1.57	39.	58.	97.
			57	1.	2.	1.	5.	11.	4.	1.57	39.	69.	108.
65	BEND	2	57	1.	2.	1.	5.	11.	4.	1.57	39.	69.	108.
			368	0.	2.	2.	4.	11.	5.	1.57	39.	70.	109.
66	TAN	2	368	0.	2.	2.	5.	5.	11.	1.57	58.	287.	345.
			369	0.	1.	3.	17.	5.	1.	1.57	58.	408.	466.
67	BEND	2	369	3.	0.	1.	1.	17.	5.	1.57	39.	100.	139.
			60	2.	0.	3.	3.	19.	5.	1.57	39.	108.	146.
68	BEND	2	60	2.	0.	3.	3.	19.	5.	1.57	39.	108.	146.
			370	2.	0.	4.	6.	19.	1.	1.57	39.	108.	146.
69	TAN	2	370	2.	4.	0.	6.	1.	19.	1.57	58.	441.	499.
			62	3.	7.	0.	12.	1.	25.	1.00	58.	390.	448.
70	TAN	2	62	2.	6.	0.	2.	2.	13.	1.00	58.	190.	248.
			371	0.	2.	0.	4.	2.	2.	1.57	58.	107.	165.
71	BEND	2	371	0.	0.	2.	2.	4.	2.	1.57	39.	26.	65.
			64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
72	BEND	2	64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
			372	2.	0.	0.	2.	3.	2.	1.57	39.	23.	61.
73	TAN	2	372	0.	0.	2.	3.	2.	2.	1.57	58.	92.	150.
			373	1.	0.	2.	7.	2.	11.	1.57	58.	292.	350.
74	BEND	2	373	2.	1.	0.	11.	7.	2.	1.57	39.	71.	110.
			67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
75	BEND	2	67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
			374	0.	2.	3.	4.	8.	12.	1.57	39.	82.	121.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	2.	3.	0.	8.	12.	4.	1.00	39.	52.	91.
			69	2.	4.	0.	8.	12.	6.	1.00	39.	54.	93.
77	TAN	3	342	-3.	18.	0.	11.	0.	127.	1.57	0.	62.	62.
			343	32.	44.	0.	5.	0.	663.	1.00	0.	204.	204.
78	TAN	3	343	44.	186.	0.	5.	0.	663.	1.00	0.	204.	204.
			40	54.	186.	0.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	31	1665.	31	1723.
2	63	844.	63	902.
3	77	204.	77	204.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-7.	3.	29.	-71.	281.	26.
8	-28.	6.	24.	-71.	192.	62.
22	37.	9.	22.	188.	84.	128.
28	21.	15.	15.	98.	26.	52.
35	45.	1.	-22.	0.	60.	-8.
39	25.	0.	-6.	1.	113.	-1.
40	54.	0.	-186.	0.	0.	-0.
53	7.	-1.	-16.	104.	-2.	-53.
55	5.	-1.	-11.	108.	-2.	-50.
62	4.	1.	-12.	14.	38.	-3.
69	2.	-0.	4.	8.	-6.	12.
77	10.	-2.	17.	68.	-95.	32.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	42.	26.	13.	1.00	82.	156.	238.
			3	2.	1.	9.	57.	26.	11.	1.57	82.	306.	388.
2	TEE	1	3	9.	1.	2.	11.	26.	57.	1.57	52.	98.	150.
			344	11.	2.	2.	10.	26.	76.	1.57	52.	85.	137.
3	TEE	1	4	14.	3.	2.	16.	36.	104.	1.57	52.	171.	223.
			344	12.	2.	2.	18.	36.	75.	1.57	52.	93.	145.
4	TEE	1	5	1.	0.	0.	11.	14.	1.	1.57	52.	28.	80.
			344	0.	1.	0.	12.	14.	2.	1.57	58.	365.	423.
5	TAN	1	4	2.	3.	14.	104.	36.	16.	1.57	82.	536.	618.
			6	2.	4.	15.	140.	36.	13.	1.00	82.	446.	528.
6	TAN	1	6	1.	4.	14.	140.	36.	13.	1.00	82.	446.	528.
			7	1.	9.	1.	75.	36.	15.	1.00	82.	259.	341.
7	TAN	1	7	1.	9.	1.	75.	36.	15.	1.00	82.	259.	341.
			8	1.	14.	13.	96.	36.	31.	1.00	82.	328.	410.
8	TAN	1	8	5.	14.	12.	96.	36.	31.	1.00	82.	328.	410.
			345	5.	15.	10.	53.	36.	17.	1.57	82.	319.	401.
9	BEND	1	345	5.	10.	15.	53.	17.	36.	1.57	60.	126.	186.
			10	11.	9.	12.	57.	12.	11.	1.57	60.	114.	174.
10	BEND	1	10	11.	9.	12.	57.	12.	11.	1.57	60.	114.	174.
			346	14.	9.	7.	51.	6.	13.	1.57	60.	101.	161.
11	TAN	1	346	14.	7.	9.	51.	13.	6.	1.57	82.	255.	336.
			11	15.	8.	6.	11.	13.	84.	1.00	82.	263.	345.
12	TAN	1	11	14.	9.	6.	13.	12.	84.	1.00	82.	263.	345.
			347	15.	10.	4.	10.	12.	151.	1.57	82.	733.	815.
13	BEND	1	347	15.	4.	10.	10.	151.	12.	1.57	52.	234.	286.
			13	11.	3.	15.	7.	158.	15.	1.57	52.	245.	297.
14	BEND	1	13	11.	3.	15.	7.	158.	15.	1.57	52.	245.	297.
			348	5.	3.	18.	3.	163.	17.	1.57	52.	252.	304.
15	TAN	1	348	5.	18.	3.	3.	17.	163.	1.00	52.	160.	212.
			15	5.	22.	8.	30.	17.	231.	1.00	52.	228.	280.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	13.	18.	8.	34.	9.	231.	1.57	52.	359.	412.
			349	13.	18.	9.	46.	9.	216.	1.57	52.	216.	268.
17	TEE	1	16	30.	39.	14.	30.	18.	37.	1.57	52.	78.	130.
			349	30.	38.	13.	11.	18.	79.	1.57	52.	83.	135.
18	TEE	1	30	26.	8.	1.	1.	44.	54.	1.57	52.	108.	160.
			349	27.	8.	4.	9.	44.	137.	1.57	52.	150.	203.
19	TAN	1	30	27.	1.	1.	13.	42.	54.	1.00	52.	69.	121.
			350	26.	1.	0.	13.	42.	25.	1.00	52.	49.	102.
20	BEND	1	350	26.	0.	1.	13.	25.	42.	1.57	60.	97.	157.
			32	18.	1.	19.	38.	5.	21.	1.57	60.	84.	144.
21	BEND	1	32	18.	1.	19.	38.	5.	21.	1.57	60.	84.	144.
			351	1.	2.	26.	40.	14.	11.	1.57	60.	84.	144.
22	TAN	1	351	1.	26.	2.	40.	11.	14.	1.57	58.	977.	1035.
			34	1.	24.	6.	56.	11.	1.	1.57	58.	1269.	1327.
23	TEE	1	34	6.	24.	1.	1.	11.	56.	1.57	39.	310.	349.
			352	7.	24.	1.	2.	11.	69.	1.57	39.	249.	287.
24	TEE	1	341	15.	23.	1.	3.	0.	43.	1.57	39.	236.	275.
			352	16.	23.	1.	2.	0.	73.	1.57	39.	254.	293.
25	TEE	1	342	43.	23.	0.	11.	0.	105.	1.57	39.	575.	614.
			352	43.	23.	0.	11.	0.	85.	1.57	117.	26.	143.
26	TAN	1	341	1.	23.	15.	43.	0.	3.	1.57	58.	966.	1024.
			35	1.	23.	14.	29.	0.	4.	1.00	58.	411.	469.
27	TAN	1	35	0.	23.	4.	29.	0.	4.	1.00	58.	411.	469.
			353	0.	25.	4.	42.	0.	1.	1.57	58.	944.	1002.
28	BEND	1	353	4.	0.	25.	1.	42.	0.	1.57	39.	231.	269.
			37	16.	0.	21.	1.	39.	1.	1.57	39.	213.	252.
29	BEND	1	37	16.	0.	21.	1.	39.	1.	1.57	39.	213.	252.
			354	25.	0.	5.	0.	27.	1.	1.57	39.	145.	184.
30	TAN	1	354	25.	5.	0.	0.	1.	27.	1.57	58.	594.	652.
			39	26.	6.	0.	1.	1.	112.	1.00	58.	1584.	1642.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	49.	6.	14.	34.	8.	37.	1.00	58.	717.	775.
			17	49.	6.	14.	71.	8.	92.	1.00	58.	1655.	1713.
32	TEE	1	17	49.	6.	14.	71.	8.	92.	1.57	52.	180.	232.
			355	50.	6.	16.	102.	8.	191.	1.57	52.	212.	264.
33	TEE	1	18	9.	34.	14.	73.	88.	35.	1.57	52.	184.	236.
			355	9.	33.	11.	110.	88.	62.	1.57	52.	183.	236.
34	TEE	1	24	15.	18.	8.	82.	14.	83.	1.57	52.	181.	233.
			355	15.	17.	5.	102.	14.	129.	1.57	52.	162.	214.
35	TAN	1	18	9.	34.	14.	73.	88.	35.	1.57	82.	578.	660.
			356	9.	35.	17.	57.	88.	42.	1.57	82.	544.	626.
36	BEND	1	356	9.	17.	35.	57.	42.	88.	1.57	60.	215.	275.
			20	19.	18.	32.	121.	36.	15.	1.57	60.	244.	304.
37	BEND	1	20	19.	18.	32.	121.	36.	15.	1.57	60.	244.	304.
			357	36.	19.	9.	116.	4.	84.	1.57	60.	274.	334.
38	TAN	1	357	36.	9.	19.	116.	84.	4.	1.57	82.	692.	774.
			22	37.	9.	21.	187.	84.	127.	1.00	82.	740.	821.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	15.	18.	8.	82.	14.	83.	1.57	39.	154.	193.
			25	15.	19.	10.	71.	14.	64.	1.57	35.	164.	200.
41	TAN	1	25	15.	19.	10.	71.	14.	64.	1.00	62.	734.	796.
			358	15.	19.	12.	14.	14.	54.	1.00	62.	433.	494.
42	BEND	1	358	15.	12.	19.	14.	54.	14.	1.57	46.	204.	250.
			26	3.	13.	25.	28.	59.	4.	1.57	46.	233.	279.
43	BEND	1	26	3.	13.	25.	28.	59.	4.	1.57	46.	233.	279.
			359	20.	13.	15.	27.	49.	26.	1.57	46.	221.	267.
44	TAN	1	359	20.	15.	13.	27.	26.	49.	1.00	62.	469.	531.
			28	20.	15.	15.	98.	26.	52.	1.00	62.	864.	926.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	42.	26.	13.	1.00	82.	156.	238.
			360	2.	4.	3.	28.	26.	47.	1.57	82.	292.	374.
47	BEND	1	360	2.	3.	4.	28.	47.	26.	1.57	52.	93.	145.
			71	2.	4.	5.	36.	47.	20.	1.57	52.	96.	148.
48	BEND	1	71	2.	4.	5.	36.	47.	20.	1.57	52.	96.	148.
			361	5.	5.	2.	21.	43.	25.	1.57	52.	83.	135.
49	TAN	1	361	5.	2.	5.	21.	25.	43.	1.57	82.	261.	343.
			73	6.	2.	7.	10.	25.	17.	1.00	82.	97.	179.
50	TAN	1	73	6.	2.	7.	10.	25.	17.	1.00	82.	97.	179.
			362	7.	2.	10.	59.	25.	24.	1.57	82.	330.	412.
51	BEND	1	362	10.	7.	2.	24.	59.	25.	1.57	52.	105.	157.
			75	7.	7.	9.	17.	69.	37.	1.57	52.	123.	176.
52	BEND	1	75	7.	7.	9.	17.	69.	37.	1.57	52.	123.	176.
			363	2.	8.	12.	16.	72.	33.	1.57	52.	124.	176.
53	TAN	1	363	8.	12.	2.	72.	33.	16.	1.57	82.	388.	470.
			77	9.	17.	2.	68.	33.	95.	1.57	82.	585.	667.
54	TAN	2	5	1.	0.	0.	9.	6.	15.	1.00	58.	261.	319.
			364	1.	1.	1.	9.	6.	11.	1.57	58.	345.	403.
55	BEND	2	364	1.	1.	1.	11.	9.	6.	1.57	39.	84.	123.
			51	1.	1.	1.	12.	9.	3.	1.57	39.	83.	122.
56	BEND	2	51	1.	1.	1.	12.	9.	3.	1.57	39.	83.	122.
			365	1.	1.	0.	12.	9.	1.	1.57	39.	82.	121.
57	TAN	2	365	1.	0.	1.	9.	1.	12.	1.57	58.	337.	395.
			53	3.	0.	5.	52.	1.	26.	1.00	58.	823.	881.
58	TAN	2	53	5.	0.	11.	52.	1.	26.	1.00	58.	823.	881.
			78	4.	0.	10.	3.	1.	4.	1.57	58.	111.	169.
59	TAN	2	78	4.	0.	10.	3.	1.	4.	1.57	37.	29.	67.
			366	3.	0.	6.	15.	1.	4.	1.57	37.	91.	128.
60	TAN	2	366	3.	0.	6.	15.	1.	4.	1.57	37.	91.	128.
			79	1.	0.	2.	21.	1.	6.	1.57	37.	129.	166.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	1.	0.	2.	21.	1.	6.	1.57	58.	484.	543.
			54	0.	0.	1.	29.	1.	11.	1.00	58.	441.	499.
62	TAN	2	54	0.	0.	1.	29.	1.	11.	1.00	58.	441.	499.
			55	2.	0.	6.	54.	1.	25.	1.00	58.	844.	902.
63	TAN	2	55	3.	1.	5.	54.	2.	25.	1.00	58.	844.	902.
			367	2.	0.	3.	3.	2.	10.	1.57	58.	238.	296.
64	BEND	2	367	2.	3.	0.	3.	10.	2.	1.57	39.	58.	97.
			57	1.	2.	1.	5.	11.	4.	1.57	39.	69.	108.
65	BEND	2	57	1.	2.	1.	5.	11.	4.	1.57	39.	69.	108.
			368	0.	2.	2.	4.	11.	5.	1.57	39.	70.	109.
66	TAN	2	368	0.	2.	2.	5.	5.	11.	1.57	58.	287.	345.
			369	0.	1.	3.	17.	5.	1.	1.57	58.	408.	466.
67	BEND	2	369	3.	0.	1.	1.	17.	5.	1.57	39.	100.	139.
			60	2.	0.	3.	3.	19.	5.	1.57	39.	107.	146.
68	BEND	2	60	2.	0.	3.	3.	19.	5.	1.57	39.	107.	146.
			370	2.	0.	4.	6.	19.	1.	1.57	39.	108.	146.
69	TAN	2	370	2.	4.	0.	6.	1.	19.	1.57	58.	441.	499.
			62	3.	7.	0.	12.	1.	25.	1.00	58.	390.	448.
70	TAN	2	62	2.	6.	0.	2.	2.	13.	1.00	58.	190.	248.
			371	0.	2.	0.	4.	2.	2.	1.57	58.	107.	165.
71	BEND	2	371	0.	0.	2.	2.	4.	2.	1.57	39.	26.	65.
			64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
72	BEND	2	64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
			372	2.	0.	0.	2.	3.	2.	1.57	39.	23.	61.
73	TAN	2	372	0.	0.	2.	3.	2.	2.	1.57	58.	92.	150.
			373	1.	0.	2.	7.	2.	11.	1.57	58.	292.	350.
74	BEND	2	373	2.	1.	0.	11.	7.	2.	1.57	39.	71.	110.
			67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
75	BEND	2	67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
			374	0.	2.	3.	4.	8.	12.	1.57	39.	82.	121.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	2.	3.	0.	8.	12.	4.	1.00	39.	52.	91.
			69	2.	4.	0.	8.	12.	6.	1.00	39.	54.	93.
77	TAN	3	342	43.	23.	0.	11.	0.	105.	1.57	0.	51.	51.
			343	31.	53.	0.	5.	0.	653.	1.00	0.	201.	201.
78	TAN	3	343	44.	150.	0.	5.	0.	653.	1.00	0.	201.	201.
			40	53.	125.	0.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	31	1655.	31	1713.
2	62	844.	62	902.
3	77	201.	77	201.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
6	-7.	3.	29.	-71.	281.	26.
8	-28.	6.	24.	-71.	192.	63.
22	37.	9.	22.	188.	84.	127.
28	21.	15.	15.	98.	26.	52.
35	46.	1.	-19.	0.	57.	-8.
39	26.	0.	-6.	1.	112.	-1.
40	53.	0.	-125.	0.	0.	-0.
53	7.	-1.	-16.	104.	-2.	-52.
55	5.	-1.	-11.	108.	-2.	-50.
62	4.	1.	-12.	14.	38.	-3.
69	2.	-0.	4.	8.	-6.	12.
77	9.	-2.	17.	68.	-95.	33.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	43.	39.	15.	1.00	82.	184.	266.
			3	3.	1.	9.	60.	39.	13.	1.57	82.	350.	432.
2	TEE	1	3	9.	1.	3.	13.	39.	60.	1.57	52.	112.	164.
			344	11.	1.	3.	9.	39.	82.	1.57	52.	101.	153.
3	TEE	1	4	15.	1.	16.	28.	44.	110.	1.57	52.	188.	240.
			344	13.	1.	15.	13.	44.	79.	1.57	52.	103.	155.
4	TEE	1	5	1.	1.	11.	10.	8.	1.	1.57	52.	20.	72.
			344	1.	2.	12.	33.	8.	3.	1.57	58.	496.	554.
5	TAN	1	4	16.	1.	15.	110.	44.	28.	1.57	82.	588.	670.
			6	16.	1.	16.	149.	44.	67.	1.00	82.	520.	602.
6	TAN	1	6	6.	1.	14.	149.	44.	67.	1.00	82.	520.	602.
			7	0.	1.	1.	80.	44.	25.	1.00	82.	289.	371.
7	TAN	1	7	0.	1.	1.	80.	44.	25.	1.00	82.	289.	371.
			8	5.	1.	13.	96.	44.	45.	1.00	82.	352.	434.
8	TAN	1	8	8.	1.	12.	96.	44.	45.	1.00	82.	352.	434.
			345	7.	1.	10.	54.	44.	22.	1.57	82.	352.	434.
9	BEND	1	345	7.	10.	1.	54.	22.	44.	1.57	60.	139.	199.
			10	6.	9.	4.	58.	19.	19.	1.57	60.	123.	183.
10	BEND	1	10	6.	9.	4.	58.	19.	19.	1.57	60.	123.	183.
			346	4.	9.	6.	55.	16.	20.	1.57	60.	116.	176.
11	TAN	1	346	4.	6.	9.	55.	20.	16.	1.57	82.	294.	376.
			11	3.	5.	6.	16.	20.	11.	1.00	82.	86.	168.
12	TAN	1	11	3.	5.	6.	16.	19.	11.	1.00	82.	85.	167.
			347	3.	4.	4.	14.	19.	26.	1.57	82.	169.	251.
13	BEND	1	347	3.	4.	4.	14.	26.	19.	1.57	52.	54.	106.
			13	4.	3.	3.	8.	28.	23.	1.57	52.	57.	109.
14	BEND	1	13	4.	3.	3.	8.	28.	23.	1.57	52.	57.	109.
			348	5.	3.	1.	5.	30.	25.	1.57	52.	61.	113.
15	TAN	1	348	5.	1.	3.	5.	25.	30.	1.00	52.	39.	91.
			15	2.	1.	8.	33.	25.	62.	1.00	52.	73.	125.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	2.	1.	8.	41.	11.	62.	1.57	52.	116.	168.
			349	2.	1.	9.	53.	11.	64.	1.57	52.	83.	135.
17	TEE	1	16	7.	10.	14.	34.	21.	7.	1.57	52.	62.	114.
			349	7.	10.	13.	15.	21.	5.	1.57	52.	36.	88.
18	TEE	1	30	6.	7.	1.	2.	46.	59.	1.57	52.	115.	168.
			349	7.	8.	4.	10.	46.	59.	1.57	52.	92.	144.
19	TAN	1	30	4.	7.	1.	14.	44.	59.	1.00	52.	73.	125.
			350	4.	7.	0.	14.	44.	56.	1.00	52.	71.	123.
20	BEND	1	350	4.	0.	7.	14.	56.	44.	1.57	60.	139.	199.
			32	6.	1.	7.	40.	51.	21.	1.57	60.	130.	190.
21	BEND	1	32	6.	1.	7.	40.	51.	21.	1.57	60.	130.	190.
			351	6.	2.	4.	41.	45.	13.	1.57	60.	119.	179.
22	TAN	1	351	6.	4.	2.	41.	13.	45.	1.57	58.	1391.	1449.
			34	4.	4.	6.	55.	13.	68.	1.57	58.	1973.	2031.
23	TEE	1	34	6.	4.	4.	68.	13.	55.	1.57	39.	482.	521.
			352	7.	4.	4.	76.	13.	69.	1.57	39.	362.	401.
24	TEE	1	341	9.	2.	40.	4.	0.	13.	1.57	39.	72.	110.
			352	9.	2.	40.	76.	0.	25.	1.57	39.	277.	316.
25	TEE	1	342	2.	9.	43.	34.	0.	65.	1.57	39.	401.	440.
			352	2.	9.	43.	13.	0.	66.	1.57	117.	21.	138.
26	TAN	1	341	40.	2.	9.	13.	0.	4.	1.57	58.	293.	351.
			35	40.	2.	9.	15.	0.	44.	1.00	58.	660.	718.
27	TAN	1	35	3.	2.	3.	15.	0.	44.	1.00	58.	660.	718.
			353	1.	2.	3.	10.	0.	8.	1.57	58.	283.	341.
28	BEND	1	353	3.	1.	2.	8.	10.	0.	1.57	39.	69.	108.
			37	2.	1.	3.	6.	11.	6.	1.57	39.	75.	113.
29	BEND	1	37	2.	1.	3.	6.	11.	6.	1.57	39.	75.	113.
			354	2.	0.	3.	0.	11.	8.	1.57	39.	73.	112.
30	TAN	1	354	2.	3.	0.	0.	8.	11.	1.57	58.	299.	357.
			39	2.	4.	0.	1.	8.	6.	1.00	58.	148.	206.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	4.	11.	14.	39.	9.	7.	1.00	58.	574.	632.
			17	4.	11.	15.	76.	9.	8.	1.00	58.	1086.	1144.
32	TEE	1	17	4.	11.	15.	76.	9.	8.	1.57	52.	118.	170.
			355	4.	11.	16.	106.	9.	10.	1.57	52.	105.	157.
33	TEE	1	18	7.	7.	14.	73.	91.	34.	1.57	52.	187.	240.
			355	6.	7.	11.	110.	91.	54.	1.57	52.	184.	236.
34	TEE	1	24	7.	9.	8.	83.	15.	43.	1.57	52.	146.	198.
			355	6.	9.	5.	102.	15.	62.	1.57	52.	119.	171.
35	TAN	1	18	7.	7.	14.	73.	91.	34.	1.57	82.	587.	669.
			356	8.	7.	17.	57.	91.	30.	1.57	82.	538.	619.
36	BEND	1	356	8.	17.	7.	57.	30.	91.	1.57	60.	213.	273.
			20	2.	18.	12.	123.	36.	17.	1.57	60.	247.	307.
37	BEND	1	20	2.	18.	12.	123.	36.	17.	1.57	60.	247.	307.
			357	7.	19.	9.	119.	35.	84.	1.57	60.	286.	346.
38	TAN	1	357	7.	9.	19.	119.	84.	35.	1.57	82.	723.	805.
			22	7.	10.	21.	190.	84.	16.	1.00	82.	638.	720.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	7.	9.	8.	83.	15.	43.	1.57	39.	123.	162.
			25	7.	9.	10.	72.	15.	34.	1.57	35.	137.	173.
41	TAN	1	25	7.	9.	10.	72.	15.	34.	1.00	62.	613.	675.
			358	8.	9.	12.	14.	15.	27.	1.00	62.	256.	317.
42	BEND	1	358	8.	12.	9.	14.	27.	15.	1.57	46.	121.	167.
			26	0.	13.	12.	29.	30.	5.	1.57	46.	151.	197.
43	BEND	1	26	0.	13.	12.	29.	30.	5.	1.57	46.	151.	197.
			359	9.	14.	9.	28.	27.	27.	1.57	46.	167.	213.
44	TAN	1	359	9.	9.	14.	28.	27.	27.	1.00	62.	354.	416.
			28	9.	9.	15.	98.	27.	17.	1.00	62.	782.	844.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	43.	39.	15.	1.00	82.	184.	266.
			360	3.	1.	3.	21.	39.	13.	1.57	82.	225.	307.
47	BEND	1	360	3.	3.	1.	21.	13.	39.	1.57	52.	72.	124.
			71	2.	4.	3.	29.	11.	25.	1.57	52.	61.	113.
48	BEND	1	71	2.	4.	3.	29.	11.	25.	1.57	52.	61.	113.
			361	1.	5.	4.	33.	11.	18.	1.57	52.	60.	112.
49	TAN	1	361	1.	4.	5.	33.	18.	11.	1.57	82.	189.	271.
			73	1.	5.	7.	17.	18.	7.	1.00	82.	78.	159.
50	TAN	1	73	1.	5.	7.	17.	18.	7.	1.00	82.	78.	159.
			362	1.	6.	10.	59.	18.	4.	1.57	82.	299.	380.
51	BEND	1	362	10.	1.	6.	4.	59.	18.	1.57	52.	95.	147.
			75	10.	1.	12.	12.	71.	13.	1.57	52.	113.	165.
52	BEND	1	75	10.	1.	12.	12.	71.	13.	1.57	52.	113.	165.
			363	6.	1.	12.	19.	81.	3.	1.57	52.	128.	180.
53	TAN	1	363	1.	12.	6.	81.	3.	19.	1.57	82.	400.	482.
			77	1.	17.	8.	144.	3.	27.	1.57	82.	708.	790.
54	TAN	2	5	1.	10.	4.	10.	3.	9.	1.00	58.	189.	247.
			364	1.	10.	4.	26.	3.	6.	1.57	58.	594.	652.
55	BEND	2	364	4.	1.	10.	6.	26.	3.	1.57	39.	145.	184.
			51	2.	1.	11.	7.	26.	1.	1.57	39.	147.	186.
56	BEND	2	51	2.	1.	11.	7.	26.	1.	1.57	39.	147.	186.
			365	2.	1.	11.	7.	26.	0.	1.57	39.	146.	185.
57	TAN	2	365	1.	11.	2.	26.	0.	7.	1.57	58.	598.	656.
			53	1.	9.	6.	56.	0.	4.	1.00	58.	802.	860.
58	TAN	2	53	0.	9.	11.	56.	0.	4.	1.00	58.	802.	860.
			78	0.	9.	10.	6.	0.	3.	1.57	58.	159.	217.
59	TAN	2	78	0.	9.	10.	6.	0.	3.	1.57	37.	42.	80.
			366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
60	TAN	2	366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
			79	0.	6.	2.	24.	0.	3.	1.57	37.	143.	180.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	6.	2.	24.	0.	3.	1.57	58.	539.	597.
			54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
62	TAN	2	54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
			55	0.	3.	6.	54.	0.	6.	1.00	58.	764.	822.
63	TAN	2	55	1.	3.	5.	54.	0.	6.	1.00	58.	764.	822.
			367	1.	2.	3.	6.	0.	8.	1.57	58.	234.	292.
64	BEND	2	367	1.	3.	2.	6.	8.	0.	1.57	39.	57.	96.
			57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
65	BEND	2	57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
			368	1.	2.	1.	2.	8.	8.	1.57	39.	63.	102.
66	TAN	2	368	1.	1.	2.	2.	8.	8.	1.57	58.	259.	317.
			369	1.	1.	3.	13.	8.	2.	1.57	58.	336.	394.
67	BEND	2	369	3.	1.	1.	2.	13.	8.	1.57	39.	82.	121.
			60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
68	BEND	2	60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
			370	1.	1.	4.	7.	14.	1.	1.57	39.	89.	127.
69	TAN	2	370	1.	4.	1.	7.	1.	14.	1.57	58.	362.	420.
			62	1.	7.	2.	29.	1.	9.	1.00	58.	433.	491.
70	TAN	2	62	0.	6.	1.	4.	0.	0.	1.00	58.	62.	121.
			371	0.	2.	1.	4.	0.	0.	1.57	58.	92.	150.
71	BEND	2	371	1.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
72	BEND	2	64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			372	2.	0.	1.	0.	3.	0.	1.57	39.	19.	57.
73	TAN	2	372	0.	1.	2.	3.	0.	0.	1.57	58.	76.	134.
			373	0.	3.	2.	7.	0.	0.	1.57	58.	158.	216.
74	BEND	2	373	2.	0.	3.	0.	7.	0.	1.57	39.	39.	77.
			67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
75	BEND	2	67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
			374	3.	0.	3.	0.	10.	0.	1.57	39.	57.	95.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	3.	3.	10.	0.	0.	1.00	39.	36.	75.
			69	0.	4.	3.	13.	0.	0.	1.00	39.	46.	85.
77	TAN	3	342	2.	9.	43.	34.	0.	65.	1.57	0.	36.	36.
			343	2.	35.	32.	621.	0.	30.	1.00	0.	191.	191.
78	TAN	3	343	2.	177.	41.	621.	0.	30.	1.00	0.	191.	191.
			40	2.	177.	51.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1973.	22	2031.
2	57	802.	57	860.
3	77	191.	77	191.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
6	-3.	22.	31.	-87.	299.	134.
8	-3.	13.	24.	-87.	193.	90.
22	7.	10.	22.	190.	84.	16.
28	9.	10.	15.	98.	27.	17.
35	4.	43.	-12.	1.	31.	-88.
39	2.	0.	-4.	1.	6.	-8.
40	2.	51.	-177.	0.	0.	-0.
53	1.	-18.	-17.	113.	-1.	-9.
55	1.	-5.	-11.	107.	-1.	-12.
62	1.	3.	-12.	34.	9.	-1.
69	0.	-3.	4.	13.	0.	0.
77	1.	-8.	17.	144.	-27.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	43.	39.	15.	1.00	82.	184.	266.
			3	3.	1.	9.	60.	39.	13.	1.57	82.	350.	432.
2	TEE	1	3	9.	1.	3.	13.	39.	60.	1.57	52.	112.	164.
			344	11.	1.	3.	9.	39.	82.	1.57	52.	101.	153.
3	TEE	1	4	15.	1.	16.	28.	44.	110.	1.57	52.	188.	240.
			344	13.	1.	15.	14.	44.	79.	1.57	52.	103.	155.
4	TEE	1	5	1.	1.	11.	10.	8.	1.	1.57	52.	20.	72.
			344	1.	2.	12.	33.	8.	3.	1.57	58.	495.	553.
5	TAN	1	4	16.	1.	15.	110.	44.	28.	1.57	82.	588.	670.
			6	16.	1.	16.	149.	44.	67.	1.00	82.	520.	602.
6	TAN	1	6	6.	1.	14.	149.	44.	67.	1.00	82.	520.	602.
			7	0.	1.	1.	80.	44.	25.	1.00	82.	289.	371.
7	TAN	1	7	0.	1.	1.	80.	44.	25.	1.00	82.	289.	371.
			8	5.	1.	13.	96.	44.	45.	1.00	82.	352.	434.
8	TAN	1	8	8.	1.	12.	96.	44.	45.	1.00	82.	352.	434.
			345	7.	1.	10.	54.	44.	22.	1.57	82.	352.	434.
9	BEND	1	345	7.	10.	1.	54.	22.	44.	1.57	60.	139.	199.
			10	6.	9.	4.	58.	18.	19.	1.57	60.	122.	182.
10	BEND	1	10	6.	9.	4.	58.	18.	19.	1.57	60.	122.	182.
			346	4.	9.	6.	55.	16.	20.	1.57	60.	116.	176.
11	TAN	1	346	4.	6.	9.	55.	20.	16.	1.57	82.	294.	376.
			11	3.	5.	6.	16.	20.	11.	1.00	82.	85.	167.
12	TAN	1	11	3.	5.	6.	16.	19.	11.	1.00	82.	84.	166.
			347	3.	4.	4.	14.	19.	25.	1.57	82.	166.	248.
13	BEND	1	347	3.	4.	4.	14.	25.	19.	1.57	52.	53.	105.
			13	4.	3.	3.	7.	27.	23.	1.57	52.	56.	108.
14	BEND	1	13	4.	3.	3.	7.	27.	23.	1.57	52.	56.	108.
			348	5.	3.	1.	5.	29.	25.	1.57	52.	60.	112.
15	TAN	1	348	5.	1.	3.	5.	25.	29.	1.00	52.	38.	90.
			15	1.	1.	8.	33.	25.	60.	1.00	52.	71.	123.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	1.	1.	8.	41.	12.	60.	1.57	52.	113.	165.
			349	2.	1.	9.	53.	12.	61.	1.57	52.	81.	133.
17	TEE	1	16	7.	10.	14.	34.	21.	7.	1.57	52.	62.	114.
			349	6.	9.	13.	15.	21.	4.	1.57	52.	36.	88.
18	TEE	1	30	6.	7.	1.	2.	46.	58.	1.57	52.	115.	167.
			349	6.	8.	4.	10.	46.	57.	1.57	52.	91.	143.
19	TAN	1	30	4.	7.	1.	14.	44.	58.	1.00	52.	73.	125.
			350	4.	7.	0.	14.	44.	56.	1.00	52.	71.	123.
20	BEND	1	350	4.	0.	7.	14.	56.	44.	1.57	60.	139.	199.
			32	6.	1.	7.	40.	51.	22.	1.57	60.	131.	191.
21	BEND	1	32	6.	1.	7.	40.	51.	22.	1.57	60.	131.	191.
			351	6.	2.	4.	42.	45.	12.	1.57	60.	119.	179.
22	TAN	1	351	6.	4.	2.	42.	12.	45.	1.57	58.	1393.	1451.
			34	4.	4.	6.	56.	12.	68.	1.57	58.	1980.	2038.
23	TEE	1	34	6.	4.	4.	68.	12.	56.	1.57	39.	484.	523.
			352	7.	4.	4.	76.	12.	70.	1.57	39.	363.	402.
24	TEE	1	341	6.	2.	40.	4.	0.	19.	1.57	39.	108.	147.
			352	7.	2.	40.	76.	0.	32.	1.57	39.	285.	323.
25	TEE	1	342	1.	14.	43.	34.	0.	43.	1.57	39.	297.	336.
			352	1.	14.	43.	13.	0.	43.	1.57	117.	14.	131.
26	TAN	1	341	40.	2.	6.	19.	0.	4.	1.57	58.	442.	500.
			35	40.	2.	5.	14.	0.	44.	1.00	58.	653.	712.
27	TAN	1	35	3.	2.	3.	14.	0.	44.	1.00	58.	653.	712.
			353	1.	2.	3.	11.	0.	8.	1.57	58.	298.	356.
28	BEND	1	353	3.	1.	2.	8.	11.	0.	1.57	39.	73.	112.
			37	1.	1.	4.	6.	12.	6.	1.57	39.	78.	117.
29	BEND	1	37	1.	1.	4.	6.	12.	6.	1.57	39.	78.	117.
			354	2.	0.	3.	0.	11.	8.	1.57	39.	76.	115.
30	TAN	1	354	2.	3.	0.	0.	8.	11.	1.57	58.	310.	368.
			39	2.	4.	0.	1.	8.	5.	1.00	58.	138.	196.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	3.	10.	14.	39.	9.	7.	1.00	58.	571.	629.
			17	3.	11.	15.	75.	9.	7.	1.00	58.	1081.	1139.
32	TEE	1	17	3.	11.	15.	75.	9.	7.	1.57	52.	118.	170.
			355	3.	11.	16.	106.	9.	9.	1.57	52.	105.	157.
33	TEE	1	18	7.	7.	13.	73.	91.	34.	1.57	52.	187.	239.
			355	6.	7.	11.	109.	91.	53.	1.57	52.	184.	236.
34	TEE	1	24	7.	9.	8.	83.	15.	43.	1.57	52.	145.	197.
			355	6.	9.	5.	102.	15.	61.	1.57	52.	119.	171.
35	TAN	1	18	7.	7.	13.	73.	91.	34.	1.57	82.	586.	668.
			356	8.	7.	17.	57.	91.	30.	1.57	82.	536.	618.
36	BEND	1	356	8.	17.	7.	57.	30.	91.	1.57	60.	212.	272.
			20	2.	18.	11.	123.	36.	17.	1.57	60.	247.	307.
37	BEND	1	20	2.	18.	11.	123.	36.	17.	1.57	60.	247.	307.
			357	7.	19.	9.	119.	34.	84.	1.57	60.	286.	346.
38	TAN	1	357	7.	9.	19.	119.	84.	34.	1.57	82.	722.	804.
			22	7.	10.	21.	189.	84.	16.	1.00	82.	637.	719.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	7.	9.	8.	83.	15.	43.	1.57	39.	123.	162.
			25	7.	9.	10.	71.	15.	34.	1.57	35.	137.	172.
41	TAN	1	25	7.	9.	10.	71.	15.	34.	1.00	62.	611.	673.
			358	8.	9.	12.	14.	15.	26.	1.00	62.	252.	314.
42	BEND	1	358	8.	12.	9.	14.	26.	15.	1.57	46.	119.	165.
			26	0.	13.	12.	29.	30.	5.	1.57	46.	149.	195.
43	BEND	1	26	0.	13.	12.	29.	30.	5.	1.57	46.	149.	195.
			359	9.	14.	9.	28.	26.	27.	1.57	46.	166.	212.
44	TAN	1	359	9.	9.	14.	28.	27.	26.	1.00	62.	352.	414.
			28	9.	9.	15.	98.	27.	17.	1.00	62.	781.	842.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	43.	39.	15.	1.00	82.	184.	266.
			360	3.	1.	3.	21.	39.	13.	1.57	82.	225.	307.
47	BEND	1	360	3.	3.	1.	21.	13.	39.	1.57	52.	72.	124.
			71	2.	4.	3.	29.	11.	24.	1.57	52.	61.	113.
48	BEND	1	71	2.	4.	3.	29.	11.	24.	1.57	52.	61.	113.
			361	1.	5.	4.	33.	10.	18.	1.57	52.	60.	112.
49	TAN	1	361	1.	4.	5.	33.	18.	10.	1.57	82.	189.	270.
			73	1.	5.	7.	17.	18.	7.	1.00	82.	78.	160.
50	TAN	1	73	1.	5.	7.	17.	18.	7.	1.00	82.	78.	160.
			362	1.	6.	10.	59.	18.	4.	1.57	82.	299.	381.
51	BEND	1	362	10.	1.	6.	4.	59.	18.	1.57	52.	95.	147.
			75	10.	1.	12.	12.	71.	13.	1.57	52.	113.	165.
52	BEND	1	75	10.	1.	12.	12.	71.	13.	1.57	52.	113.	165.
			363	6.	1.	12.	19.	81.	3.	1.57	52.	128.	180.
53	TAN	1	363	1.	12.	6.	81.	3.	19.	1.57	82.	400.	482.
			77	1.	17.	8.	144.	3.	26.	1.57	82.	709.	791.
54	TAN	2	5	1.	10.	4.	10.	3.	9.	1.00	58.	188.	246.
			364	1.	10.	4.	26.	3.	6.	1.57	58.	593.	651.
55	BEND	2	364	4.	1.	10.	6.	26.	3.	1.57	39.	145.	184.
			51	2.	1.	11.	7.	26.	1.	1.57	39.	147.	185.
56	BEND	2	51	2.	1.	11.	7.	26.	1.	1.57	39.	147.	185.
			365	2.	1.	11.	7.	26.	0.	1.57	39.	146.	185.
57	TAN	2	365	1.	11.	2.	26.	0.	7.	1.57	58.	597.	655.
			53	1.	9.	6.	56.	0.	4.	1.00	58.	802.	860.
58	TAN	2	53	0.	9.	11.	56.	0.	4.	1.00	58.	802.	860.
			78	0.	9.	10.	6.	0.	3.	1.57	58.	159.	217.
59	TAN	2	78	0.	9.	10.	6.	0.	3.	1.57	37.	42.	80.
			366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
60	TAN	2	366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
			79	0.	6.	2.	24.	0.	3.	1.57	37.	143.	180.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	6.	2.	24.	0.	3.	1.57	58.	539.	597.
			54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
62	TAN	2	54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
			55	0.	3.	6.	54.	0.	6.	1.00	58.	764.	822.
63	TAN	2	55	1.	3.	5.	54.	0.	6.	1.00	58.	764.	822.
			367	1.	2.	3.	6.	0.	8.	1.57	58.	234.	292.
64	BEND	2	367	1.	3.	2.	6.	8.	0.	1.57	39.	57.	96.
			57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
65	BEND	2	57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
			368	1.	2.	1.	2.	8.	8.	1.57	39.	63.	102.
66	TAN	2	368	1.	1.	2.	2.	8.	8.	1.57	58.	259.	317.
			369	1.	1.	3.	13.	8.	2.	1.57	58.	336.	394.
67	BEND	2	369	3.	1.	1.	2.	13.	8.	1.57	39.	82.	121.
			60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
68	BEND	2	60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
			370	1.	1.	4.	7.	14.	1.	1.57	39.	89.	127.
69	TAN	2	370	1.	4.	1.	7.	1.	14.	1.57	58.	362.	420.
			62	1.	7.	2.	29.	1.	9.	1.00	58.	433.	491.
70	TAN	2	62	0.	6.	1.	4.	0.	0.	1.00	58.	62.	121.
			371	0.	2.	1.	4.	0.	0.	1.57	58.	92.	150.
71	BEND	2	371	1.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
72	BEND	2	64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			372	2.	0.	1.	0.	3.	0.	1.57	39.	19.	57.
73	TAN	2	372	0.	1.	2.	3.	0.	0.	1.57	58.	76.	134.
			373	0.	3.	2.	7.	0.	0.	1.57	58.	158.	216.
74	BEND	2	373	2.	0.	3.	0.	7.	0.	1.57	39.	39.	77.
			67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
75	BEND	2	67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
			374	3.	0.	3.	0.	10.	0.	1.57	39.	57.	95.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	3.	3.	10.	0.	0.	1.00	39.	36.	75.
			69 .	0.	4.	3.	13.	0.	0.	1.00	39.	46.	85.
77	TAN	3	342	1.	14.	43.	34.	0.	43.	1.57	0.	26.	26.
			343	1.	44.	32.	621.	0.	19.	1.00	0.	191.	191.
78	TAN	3	343	1.	141.	41.	621.	0.	19.	1:00	0.	191.	191.
			40	1.	116.	51.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1980.	22	2038.
2	57	802.	57	860.
3	77	191.	77	191.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-3.	22.	31.	-87.	299.	134.
8	-3.	13.	24.	-87.	193.	91.
22	7.	10.	22.	190.	84.	16.
28	9.	9.	15.	98.	27.	17.
35	5.	43.	-8.	1.	28.	-88.
39	2.	0.	-4.	1.	5.	-8.
40	1.	51.	-116.	0.	0.	-0.
53	1.	-18.	-17.	113.	-1.	-9.
55	1.	-5.	-11.	107.	-1.	-12.
62	1.	3.	-12.	34.	9.	-1.
69	0.	-3.	4.	13.	0.	0.
77	1.	-8.	17.	144.	-26.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	1.	5.	8.	40.	26.	5.	1.00	82.	147.	229.
			3	1.	6.	9.	55.	26.	7.	1.57	82.	297.	379.
2	TEE	1	3	9.	6.	1.	7.	26.	55.	1.57	52.	95.	147.
			344	11.	6.	1.	9.	26.	76.	1.57	52.	85.	137.
3	TEE	1	4	14.	8.	1.	7.	36.	102.	1.57	52.	168.	220.
			344	12.	7.	1.	7.	36.	75.	1.57	52.	92.	144.
4	TEE	1	5	0.	0.	0.	11.	8.	1.	1.57	52.	20.	73.
			344	1.	1.	0.	11.	8.	2.	1.57	58.	239.	297.
5	TAN	1	4	1.	8.	14.	102.	36.	7.	1.57	82.	525.	607.
			6	1.	8.	15.	138.	36.	7.	1.00	82.	438.	520.
6	TAN	1	6	0.	8.	14.	138.	36.	7.	1.00	82.	438.	520.
			7	0.	13.	1.	75.	36.	4.	1.00	82.	254.	335.
7	TAN	1	7	0.	13.	1.	75.	36.	4.	1.00	82.	254.	335.
			8	0.	19.	13.	95.	36.	4.	1.00	82.	312.	394.
8	TAN	1	8	9.	19.	12.	95.	36.	4.	1.00	82.	312.	394.
			345	9.	19.	10.	52.	36.	40.	1.57	82.	361.	443.
9	BEND	1	345	9.	10.	19.	52.	40.	36.	1.57	60.	143.	203.
			10	2.	9.	22.	57.	42.	11.	1.57	60.	137.	197.
10	BEND	1	10	2.	9.	22.	57.	42.	11.	1.57	60.	137.	197.
			346	10.	9.	19.	50.	39.	14.	1.57	60.	124.	184.
11	TAN	1	346	10.	19.	9.	50.	14.	39.	1.57	82.	314.	396.
			11	11.	20.	6.	11.	14.	26.	1.00	82.	97.	179.
12	TAN	1	11	8.	21.	6.	13.	12.	26.	1.00	82.	97.	179.
			347	9.	22.	4.	10.	12.	66.	1.57	82.	326.	408.
13	BEND	1	347	9.	4.	22.	10.	66.	12.	1.57	52.	104.	156.
			13	1.	3.	24.	7.	68.	16.	1.57	52.	109.	161.
14	BEND	1	13	1.	3.	24.	7.	68.	16.	1.57	52.	109.	161.
			348	9.	3.	22.	3.	67.	17.	1.57	52.	106.	159.
15	TAN	1	348	9.	22.	3.	3.	17.	67.	1.00	52.	68.	120.
			15	9.	26.	8.	30.	17.	54.	1.00	52.	63.	115.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	25.	12.	8.	34.	9.	54.	1.57	52.	100.	152.
			349	25.	13.	9.	46.	9.	90.	1.57	52.	100.	152.
17	TEE	1	16	13.	4.	14.	30.	18.	13.	1.57	52.	57.	109.
			349	13.	4.	13.	11.	18.	31.	1.57	52.	43.	95.
18	TEE	1	30	20.	7.	1.	1.	44.	55.	1.57	52.	108.	160.
			349	19.	6.	4.	9.	44.	116.	1.57	52.	132.	184.
19	TAN	1	30	21.	0.	1.	12.	42.	55.	1.00	52.	69.	121.
			350	21.	0.	0.	13.	42.	32.	1.00	52.	53.	105.
20	BEND	1	350	21.	0.	0.	13.	32.	42.	1.57	60.	103.	163.
			32	15.	1.	15.	38.	9.	21.	1.57	60.	84.	144.
21	BEND	1	32	15.	1.	15.	38.	9.	21.	1.57	60.	84.	144.
			351	0.	2.	22.	40.	1.	12.	1.57	60.	79.	139.
22	TAN	1	351	0.	22.	2.	40.	12.	1.	1.57	58.	921.	979.
			34	0.	24.	6.	55.	12.	1.	1.57	58.	1254.	1312.
23	TEE	1	34	6.	24.	0.	1.	12.	55.	1.57	39.	307.	345.
			352	7.	24.	0.	1.	12.	69.	1.57	39.	246.	285.
24	TEE	1	341	22.	3.	0.	0.	0.	25.	1.57	39.	137.	175.
			352	22.	4.	0.	1.	0.	64.	1.57	39.	220.	259.
25	TEE	1	342	25.	21.	0.	11.	0.	91.	1.57	39.	501.	540.
			352	25.	21.	0.	12.	0.	104.	1.57	117.	32.	149.
26	TAN	1	341	0.	3.	22.	25.	0.	0.	1.57	58.	559.	617.
			35	0.	3.	22.	15.	0.	1.	1.00	58.	214.	272.
27	TAN	1	35	0.	3.	3.	15.	0.	1.	1.00	58.	214.	272.
			353	0.	2.	3.	10.	0.	0.	1.57	58.	216.	274.
28	BEND	1	353	3.	0.	2.	0.	10.	0.	1.57	39.	53.	92.
			37	1.	0.	3.	0.	11.	0.	1.57	39.	59.	97.
29	BEND	1	37	1.	0.	3.	0.	11.	0.	1.57	39.	59.	97.
			354	2.	0.	3.	0.	11.	0.	1.57	39.	57.	96.
30	TAN	1	354	2.	3.	0.	0.	0.	11.	1.57	58.	235.	293.
			39	2.	4.	0.	0.	0.	6.	1.00	58.	85.	143.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	12.	9.	14.	34.	8.	13.	1.00	58.	526.	584.
			17	12.	9.	14.	71.	8.	20.	1.00	58.	1057.	1115.
32	TEE	1	17	12.	9.	14.	71.	8.	20.	1.57	52.	115.	167.
			355	13.	9.	16.	102.	8.	45.	1.57	52.	110.	162.
33	TEE	1	18	7.	15.	14.	73.	88.	25.	1.57	52.	181.	233.
			355	7.	14.	11.	110.	88.	46.	1.57	52.	179.	231.
34	TEE	1	24	2.	3.	8.	82.	14.	13.	1.57	52.	130.	182.
			355	2.	4.	5.	102.	14.	19.	1.57	52.	103.	156.
35	TAN	1	18	7.	15.	14.	73.	88.	25.	1.57	82.	566.	648.
			356	7.	17.	17.	57.	88.	34.	1.57	82.	532.	614.
36	BEND	1	356	7.	17.	17.	57.	34.	88.	1.57	60.	211.	271.
			20	7.	18.	17.	122.	34.	14.	1.57	60.	243.	303.
37	BEND	1	20	7.	18.	17.	122.	34.	14.	1.57	60.	243.	303.
			357	18.	19.	7.	116.	21.	84.	1.57	60.	277.	337.
38	TAN	1	357	18.	7.	19.	116.	84.	21.	1.57	82.	700.	782.
			22	18.	7.	21.	187.	84.	44.	1.00	82.	644.	726.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	2.	3.	8.	82.	14.	13.	1.57	39.	110.	149.
			25	2.	2.	10.	71.	14.	11.	1.57	35.	125.	160.
41	TAN	1	25	2.	2.	10.	71.	14.	11.	1.00	62.	556.	618.
			358	2.	2.	12.	14.	14.	4.	1.00	62.	152.	214.
42	BEND	1	358	2.	12.	2.	14.	4.	14.	1.57	46.	72.	118.
			26	1.	13.	2.	28.	5.	4.	1.57	46.	105.	151.
43	BEND	1	26	1.	13.	2.	28.	5.	4.	1.57	46.	105.	151.
			359	2.	13.	2.	27.	5.	26.	1.57	46.	136.	182.
44	TAN	1	359	2.	2.	13.	27.	26.	5.	1.00	62.	289.	351.
			28	3.	2.	15.	98.	26.	10.	1.00	62.	774.	835.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	1.	5.	8.	40.	26.	5.	1.00	82.	147.	229.
			360	1.	1.	2.	20.	26.	17.	1.57	82.	177.	259.
47	BEND	1	360	1.	2.	1.	20.	17.	26.	1.57	52.	57.	109.
			71	1.	3.	1.	30.	18.	14.	1.57	52.	57.	110.
48	BEND	1	71	1.	3.	1.	30.	18.	14.	1.57	52.	57.	110.
			361	1.	4.	1.	21.	18.	16.	1.57	52.	49.	101.
49	TAN	1	361	1.	1.	4.	21.	16.	18.	1.57	82.	153.	235.
			73	2.	1.	7.	8.	16.	12.	1.00	82.	66.	147.
50	TAN	1	73	2.	1.	7.	8.	16.	12.	1.00	82.	66.	147.
			362	3.	1.	10.	55.	16.	6.	1.57	82.	279.	361.
51	BEND	1	362	10.	3.	1.	6.	55.	16.	1.57	52.	89.	141.
			75	7.	3.	8.	6.	66.	16.	1.57	52.	104.	156.
52	BEND	1	75	7.	3.	8.	6.	66.	16.	1.57	52.	104.	156.
			363	1.	3.	12.	13.	69.	8.	1.57	52.	109.	161.
53	TAN	1	363	3.	12.	1.	69.	8.	13.	1.57	82.	342.	424.
			77	5.	16.	1.	59.	8.	55.	1.57	82.	391.	473.
54	TAN	2	5	0.	0.	0.	10.	4.	8.	1.00	58.	188.	246.
			364	1.	1.	1.	9.	4.	7.	1.57	58.	262.	320.
55	BEND	2	364	1.	1.	1.	7.	9.	4.	1.57	39.	64.	103.
			51	1.	1.	1.	7.	9.	2.	1.57	39.	63.	102.
56	BEND	2	51	1.	1.	1.	7.	9.	2.	1.57	39.	63.	102.
			365	1.	1.	0.	7.	9.	1.	1.57	39.	63.	101.
57	TAN	2	365	1.	0.	1.	9.	1.	7.	1.57	58.	256.	314.
			53	2.	0.	5.	52.	1.	23.	1.00	58.	805.	863.
58	TAN	2	53	5.	0.	11.	52.	1.	23.	1.00	58.	805.	863.
			78	4.	0.	10.	3.	1.	2.	1.57	58.	76.	134.
59	TAN	2	78	4.	0.	10.	3.	1.	2.	1.57	37.	20.	58.
			366	3.	0.	6.	15.	1.	7.	1.57	37.	96.	133.
60	TAN	2	366	3.	0.	6.	15.	1.	7.	1.57	37.	96.	133.
			79	1.	0.	2.	21.	1.	9.	1.57	37.	133.	171.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	1.	0.	2.	21.	1.	9.	1.57	58.	502.	561.
			54	1.	0.	1.	29.	1.	12.	1.00	58.	445.	503.
62	TAN	2	54	1.	0.	1.	29.	1.	12.	1.00	58.	445.	503.
			55	2.	0.	6.	54.	1.	26.	1.00	58.	847.	905.
63	TAN	2	55	3.	1.	5.	54.	2.	26.	1.00	58.	847.	905.
			367	2.	0.	3.	4.	2.	10.	1.57	58.	241.	299.
64	BEND	2	367	2.	3.	0.	4.	10.	2.	1.57	39.	59.	98.
			57	1.	2.	1.	5.	11.	4.	1.57	39.	70.	109.
65	BEND	2	57	1.	2.	1.	5.	11.	4.	1.57	39.	70.	109.
			368	0.	2.	2.	4.	11.	5.	1.57	39.	71.	109.
66	TAN	2	368	0.	2.	2.	5.	5.	11.	1.57	58.	289.	347.
			369	0.	1.	3.	17.	5.	1.	1.57	58.	401.	459.
67	BEND	2	369	3.	0.	1.	1.	17.	5.	1.57	39.	98.	137.
			60	2.	0.	3.	3.	19.	5.	1.57	39.	106.	145.
68	BEND	2	60	2.	0.	3.	3.	19.	5.	1.57	39.	106.	145.
			370	1.	0.	4.	6.	19.	1.	1.57	39.	106.	145.
69	TAN	2	370	1.	4.	0.	6.	1.	19.	1.57	58.	434.	492.
			62	3.	7.	0.	12.	1.	24.	1.00	58.	380.	439.
70	TAN	2	62	2.	6.	0.	2.	2.	13.	1.00	58.	190.	248.
			371	0.	2.	0.	4.	2.	2.	1.57	58.	107.	165.
71	BEND	2	371	0.	0.	2.	2.	4.	2.	1.57	39.	26.	65.
			64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
72	BEND	2	64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
			372	2.	0.	0.	2.	3.	2.	1.57	39.	23.	61.
73	TAN	2	372	0.	0.	2.	3.	2.	2.	1.57	58.	92.	150.
			373	1.	0.	2.	7.	2.	11.	1.57	58.	292.	350.
74	BEND	2	373	2.	1.	0.	11.	7.	2.	1.57	39.	71.	110.
			67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
75	BEND	2	67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
			374	0.	2.	3.	4.	8.	12.	1.57	39.	82.	121.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	2.	3.	0.	8.	12.	4.	1.00	39.	52.	91.
			69	2.	4.	0.	8.	12.	6.	1.00	39.	54.	93.
77	TAN	3	342	25.	21.	0.	11.	0.	91.	1.57	0.	45.	45.
			343	37.	48.	0.	5.	0.	462.	1.00	0.	142.	142.
78	TAN	3	343	39.	189.	0.	5.	0.	462.	1.00	0.	142.	142.
			40	29.	190.	0.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1254.	22	1312.
2	63	847.	63	905.
3	77	142.	77	142.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-16.	1.	29.	-71.	276.	14.
8	-37.	9.	24.	-71.	191.	8.
22	19.	7.	22.	188.	84.	45.
28	3.	2.	15.	98.	26.	11.
35	7.	0.	-25.	0.	30.	-1.
39	2.	0.	-4.	0.	6.	-0.
40	29.	0.	-190.	0.	0.	-0.
53	7.	-1.	-16.	104.	-2.	-47.
55	5.	-1.	-11.	108.	-2.	-52.
62	4.	1.	-12.	14.	37.	-4.
69	2.	-0.	4.	8.	-6.	12.
77	5.	-1.	16.	59.	-55.	8.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	1.	5.	8.	40.	26.	5.	1.00	82.	147.	229.
			3	1.	6.	9.	55.	26.	7.	1.57	82.	297.	379.
2	TEE	1	3	9.	6.	1.	7.	26.	55.	1.57	52.	95.	147.
			344	11.	6.	1.	9.	26.	76.	1.57	52.	85.	137.
3	TEE	1	4	14.	8.	1.	7.	36.	102.	1.57	52.	168.	220.
			344	12.	7.	1.	7.	36.	75.	1.57	52.	92.	144.
4	TEE	1	5	0.	0.	0.	11.	8.	1.	1.57	52.	20.	72.
			344	1.	1.	0.	11.	8.	2.	1.57	58.	238.	296.
5	TAN	1	4	1.	8.	14.	102.	36.	7.	1.57	82.	525.	607.
			6	1.	8.	15.	138.	36.	7.	1.00	82.	438.	520.
6	TAN	1	6	0.	8.	14.	138.	36.	7.	1.00	82.	438.	520.
			7	0.	13.	1.	74.	36.	4.	1.00	82.	253.	335.
7	TAN	1	7	0.	13.	1.	74.	36.	4.	1.00	82.	253.	335.
			8	0.	19.	13.	95.	36.	4.	1.00	82.	312.	394.
8	TAN	1	8	9.	19.	12.	95.	36.	4.	1.00	82.	312.	394.
			345	9.	19.	10.	52.	36.	39.	1.57	82.	361.	442.
9	BEND	1	345	9.	10.	19.	52.	39.	36.	1.57	60.	143.	203.
			10	1.	9.	21.	57.	42.	11.	1.57	60.	137.	197.
10	BEND	1	10	1.	9.	21.	57.	42.	11.	1.57	60.	137.	197.
			346	10.	9.	19.	50.	39.	14.	1.57	60.	124.	184.
11	TAN	1	346	10.	19.	9.	50.	14.	39.	1.57	82.	313.	395.
			11	11.	20.	6.	11.	14.	26.	1.00	82.	96.	177.
12	TAN	1	11	8.	21.	6.	13.	12.	26.	1.00	82.	95.	177.
			347	9.	22.	4.	10.	12.	65.	1.57	82.	322.	404.
13	BEND	1	347	9.	4.	22.	10.	65.	12.	1.57	52.	103.	155.
			13	1.	3.	24.	7.	68.	16.	1.57	52.	107.	159.
14	BEND	1	13	1.	3.	24.	7.	68.	16.	1.57	52.	107.	159.
			348	9.	3.	22.	3.	66.	17.	1.57	52.	105.	157.
15	TAN	1	348	9.	22.	3.	3.	17.	66.	1.00	52.	67.	119.
			15	9.	26.	8.	30.	17.	52.	1.00	52.	61.	113.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	25.	12.	8.	34.	9.	52.	1.57	52.	97.	149.
			349	25.	13.	9.	46.	9.	87.	1.57	52.	97.	150.
17	TEE	1	16	13.	4.	14.	30.	18.	12.	1.57	52.	57.	109.
			349	13.	3.	13.	11.	18.	31.	1.57	52.	42.	95.
18	TEE	1	30	19.	6.	1.	1.	44.	54.	1.57	52.	108.	160.
			349	18.	6.	4.	9.	44.	114.	1.57	52.	131.	183.
19	TAN	1	30	20.	0.	1.	12.	42.	54.	1.00	52.	68.	120.
			350	21.	0.	0.	13.	42.	31.	1.00	52.	53.	105.
20	BEND	1	350	21.	0.	0.	13.	31.	42.	1.57	60.	103.	163.
			32	15.	1.	15.	38.	9.	21.	1.57	60.	85.	145.
21	BEND	1	32	15.	1.	15.	38.	9.	21.	1.57	60.	85.	145.
			351	0.	2.	22.	40.	1.	12.	1.57	60.	79.	139.
22	TAN	1	351	0.	22.	2.	40.	12.	1.	1.57	58.	927.	985.
			34	0.	23.	6.	55.	12.	1.	1.57	58.	1264.	1322.
23	TEE	1	34	6.	23.	0.	1.	12.	55.	1.57	39.	309.	348.
			352	7.	24.	0.	1.	12.	69.	1.57	39.	248.	287.
24	TEE	1	341	18.	4.	0.	0.	0.	32.	1.57	39.	174.	213.
			352	19.	4.	0.	1.	0.	70.	1.57	39.	241.	280.
25	TEE	1	342	25.	27.	0.	11.	0.	69.	1.57	39.	379.	418.
			352	24.	27.	0.	11.	0.	81.	1.57	117.	25.	142.
26	TAN	1	341	0.	4.	18.	32.	0.	0.	1.57	58.	713.	771.
			35	0.	4.	18.	14.	0.	1.	1.00	58.	194.	252.
27	TAN	1	35	0.	4.	3.	14.	0.	1.	1.00	58.	194.	252.
			353	0.	2.	3.	11.	0.	0.	1.57	58.	235.	293.
28	BEND	1	353	3.	0.	2.	0.	11.	0.	1.57	39.	57.	96.
			37	1.	0.	3.	0.	12.	0.	1.57	39.	63.	102.
29	BEND	1	37	1.	0.	3.	0.	12.	0.	1.57	39.	63.	102.
			354	2.	0.	3.	0.	11.	0.	1.57	39.	61.	100.
30	TAN	1	354	2.	3.	0.	0.	0.	11.	1.57	58.	249.	307.
			39	2.	4.	0.	0.	0.	5.	1.00	58.	68.	126.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	12.	9.	14.	34.	8.	12.	1.00	58.	522.	580.
			17	12.	9.	14.	71.	8.	19.	1.00	58.	1051.	1109.
32	TEE	1	17	12.	9.	14.	71.	8.	19.	1.57	52.	114.	166.
			355	13.	9.	16.	102.	8.	44.	1.57	52.	109.	161.
33	TEE	1	18	7.	15.	14.	73.	88.	25.	1.57	52.	180.	232.
			355	7.	14.	11.	110.	88.	46.	1.57	52.	179.	231.
34	TEE	1	24	2.	2.	8.	82.	14.	12.	1.57	52.	130.	182.
			355	2.	3.	5.	102.	14.	18.	1.57	52.	103.	155.
35	TAN	1	18	7.	15.	14.	73.	88.	25.	1.57	82.	565.	647.
			356	7.	17.	17.	57.	88.	34.	1.57	82.	531.	613.
36	BEND	1	356	7.	17.	17.	57.	34.	88.	1.57	60.	210.	270.
			20	7.	18.	17.	121.	34.	14.	1.57	60.	243.	303.
37	BEND	1	20	7.	18.	17.	121.	34.	14.	1.57	60.	243.	303.
			357	17.	19.	7.	116.	21.	84.	1.57	60.	277.	337.
38	TAN	1	357	17.	7.	19.	116.	84.	21.	1.57	82.	699.	781.
			22	18.	7.	21.	187.	84.	44.	1.00	82.	643.	725.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	2.	2.	8.	82.	14.	12.	1.57	39.	110.	149.
			25	2.	2.	10.	71.	14.	10.	1.57	35.	124.	160.
41	TAN	1	25	2.	2.	10.	71.	14.	10.	1.00	62.	555.	616.
			358	2.	1.	12.	14.	14.	4.	1.00	62.	151.	213.
42	BEND	1	358	2.	12.	1.	14.	4.	14.	1.57	46.	71.	117.
			26	1.	13.	2.	28.	5.	4.	1.57	46.	104.	150.
43	BEND	1	26	1.	13.	2.	28.	5.	4.	1.57	46.	104.	150.
			359	2.	13.	2.	27.	5.	26.	1.57	46.	136.	182.
44	TAN	1	359	2.	2.	13.	27.	26.	5.	1.00	62.	288.	350.
			28	2.	2.	15.	98.	26.	10.	1.00	62.	773.	834.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	1.	5.	8.	40.	26.	5.	1.00	82.	147.	229.
			360	1.	1.	2.	20.	26.	16.	1.57	82.	177.	259.
47	BEND	1	360	1.	2.	1.	20.	16.	26.	1.57	52.	56.	108.
			71	1.	3.	1.	30.	17.	14.	1.57	52.	57.	109.
48	BEND	1	71	1.	3.	1.	30.	17.	14.	1.57	52.	57.	109.
			361	1.	4.	1.	21.	17.	16.	1.57	52.	49.	101.
49	TAN	1	361	1.	1.	4.	21.	16.	17.	1.57	82.	152.	234.
			73	2.	1.	7.	8.	16.	12.	1.00	82.	66.	148.
50	TAN	1	73	2.	1.	7.	8.	16.	12.	1.00	82.	66.	148.
			362	3.	1.	10.	55.	16.	6.	1.57	82.	280.	361.
51	BEND	1	362	10.	3.	1.	6.	55.	16.	1.57	52.	89.	141.
			75	7.	3.	8.	6.	66.	16.	1.57	52.	104.	156.
52	BEND	1	75	7.	3.	8.	6.	66.	16.	1.57	52.	104.	156.
			363	1.	3.	12.	13.	69.	8.	1.57	52.	109.	161.
53	TAN	1	363	3.	12.	1.	69.	8.	13.	1.57	82.	343.	424.
			77	5.	16.	1.	59.	8.	54.	1.57	82.	390.	472.
54	TAN	2	5	0.	0.	0.	9.	4.	8.	1.00	58.	187.	245.
			364	1.	1.	1.	9.	4.	6.	1.57	58.	261.	319.
55	BEND	2	364	1.	1.	1.	6.	9.	4.	1.57	39.	64.	103.
			51	1.	1.	1.	7.	9.	2.	1.57	39.	63.	102.
56	BEND	2	51	1.	1.	1.	7.	9.	2.	1.57	39.	63.	102.
			365	1.	1.	0.	7.	9.	1.	1.57	39.	62.	101.
57	TAN	2	365	1.	0.	1.	9.	1.	7.	1.57	58.	255.	313.
			53	2.	0.	5.	52.	1.	23.	1.00	58.	805.	863.
58	TAN	2	53	5.	0.	11.	52.	1.	23.	1.00	58.	805.	863.
			78	4.	0.	10.	3.	1.	2.	1.57	58.	76.	134.
59	TAN	2	78	4.	0.	10.	3.	1.	2.	1.57	37.	20.	58.
			366	3.	0.	6.	15.	1.	7.	1.57	37.	95.	133.
60	TAN	2	366	3.	0.	6.	15.	1.	7.	1.57	37.	95.	133.
			79	1.	0.	2.	21.	1.	9.	1.57	37.	133.	171.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	1.	0.	2.	21.	1.	9.	1.57	58.	502.	560.
			54	1.	0.	1.	29.	1.	12.	1.00	58.	445.	503.
62	TAN	2	54	1.	0.	1.	29.	1.	12.	1.00	58.	445.	503.
			55	2.	0.	6.	54.	1.	26.	1.00	58.	847.	905.
63	TAN	2	55	3.	1.	5.	54.	2.	26.	1.00	58.	847.	905.
			367	2.	0.	3.	4.	2.	10.	1.57	58.	241.	299.
64	BEND	2	367	2.	3.	0.	4.	10.	2.	1.57	39.	59.	98.
			57	1.	2.	1.	5.	11.	4.	1.57	39.	70.	109.
65	BEND	2	57	1.	2.	1.	5.	11.	4.	1.57	39.	70.	109.
			368	0.	2.	2.	4.	11.	5.	1.57	39.	71.	109.
66	TAN	2	368	0.	2.	2.	5.	5.	11.	1.57	58.	289.	347.
			369	0.	1.	3.	17.	5.	1.	1.57	58.	401.	459.
67	BEND	2	369	3.	0.	1.	1.	17.	5.	1.57	39.	98.	137.
			60	2.	0.	3.	3.	19.	5.	1.57	39.	106.	145.
68	BEND	2	60	2.	0.	3.	3.	19.	5.	1.57	39.	106.	145.
			370	1.	0.	4.	6.	19.	1.	1.57	39.	106.	145.
69	TAN	2	370	1.	4.	0.	6.	1.	19.	1.57	58.	434.	492.
			62	3.	7.	0.	12.	1.	24.	1.00	58.	381.	439.
70	TAN	2	62	2.	6.	0.	2.	2.	13.	1.00	58.	190.	248.
			371	0.	2.	0.	4.	2.	2.	1.57	58.	107.	165.
71	BEND	2	371	0.	0.	2.	2.	4.	2.	1.57	39.	26.	65.
			64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
72	BEND	2	64	1.	0.	2.	3.	3.	0.	1.57	39.	25.	64.
			372	2.	0.	0.	2.	3.	2.	1.57	39.	23.	61.
73	TAN	2	372	0.	0.	2.	3.	2.	2.	1.57	58.	92.	150.
			373	1.	0.	2.	7.	2.	11.	1.57	58.	292.	350.
74	BEND	2	373	2.	1.	0.	11.	7.	2.	1.57	39.	71.	110.
			67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
75	BEND	2	67	1.	2.	2.	10.	8.	6.	1.57	39.	78.	117.
			374	0.	2.	3.	4.	8.	12.	1.57	39.	82.	121.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	2.	3.	0.	8.	12.	4.	1.00	39.	52.	91.
			69	2.	4.	0.	8.	12.	6.	1.00	39.	54.	93.
77	TAN	3	342	25.	27.	0.	11.	0.	69.	1.57	0.	34.	34.
			343	36.	57.	0.	5.	0.	452.	1.00	0.	139.	139.
78	TAN	3	343	38.	154.	0.	5.	0.	452.	1.00	0.	139.	139.
			40	29.	129.	0.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1264.	22	1322.
2	62	847.	62	905.
3	77	139.	77	139.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-16.	1.	29.	-71.	276.	14.
8	-37.	9.	24.	-71.	191.	9.
22	18.	7.	22.	188.	84.	44.
28	3.	2.	15.	98.	26.	10.
35	7.	0.	-21.	0.	27.	-1.
39	2.	0.	-4.	0.	5.	-0.
40	29.	0.	-129.	0.	0.	-0.
53	7.	-1.	-16.	104.	-2.	-47.
55	5.	-1.	-11.	108.	-2.	-52.
62	4.	1.	-12.	14.	37.	-4.
69	2.	-0.	4.	8.	-6.	12.
77	5.	-1.	16.	59.	-54.	8.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	42.	39.	13.	1.00	82.	182.	264.
			3	3.	1.	9.	59.	39.	11.	1.57	82.	348.	430.
2	TEE	1	3	9.	1.	3.	11.	39.	59.	1.57	52.	111.	163.
			344	11.	1.	3.	8.	39.	82.	1.57	52.	101.	153.
3	TEE	1	4	15.	1.	15.	30.	43.	110.	1.57	52.	189.	241.
			344	13.	1.	15.	11.	43.	79.	1.57	52.	103.	155.
4	TEE	1	5	1.	1.	11.	10.	7.	1.	1.57	52.	19.	71.
			344	1.	2.	12.	32.	7.	3.	1.57	58.	488.	546.
5	TAN	1	4	15.	1.	15.	110.	43.	30.	1.57	82.	591.	673.
			6	16.	1.	16.	150.	43.	69.	1.00	82.	523.	605.
6	TAN	1	6	6.	1.	14.	150.	43.	69.	1.00	82.	523.	605.
			7	1.	1.	1.	80.	43.	28.	1.00	82.	291.	373.
7	TAN	1	7	1.	1.	1.	80.	43.	28.	1.00	82.	291.	373.
			8	5.	1.	13.	96.	43.	38.	1.00	82.	345.	427.
8	TAN	1	8	6.	1.	12.	96.	43.	38.	1.00	82.	345.	427.
			345	5.	1.	10.	54.	43.	24.	1.57	82.	355.	437.
9	BEND	1	345	5.	10.	1.	54.	24.	43.	1.57	60.	141.	201.
			10	4.	9.	3.	58.	22.	19.	1.57	60.	125.	185.
10	BEND	1	10	4.	9.	3.	58.	22.	19.	1.57	60.	125.	185.
			346	2.	9.	4.	55.	20.	20.	1.57	60.	119.	179.
11	TAN	1	346	2.	4.	9.	55.	20.	20.	1.57	82.	300.	382.
			11	2.	3.	6.	16.	20.	9.	1.00	82.	82.	164.
12	TAN	1	11	2.	3.	6.	16.	19.	9.	1.00	82.	82.	164.
			347	1.	3.	4.	14.	19.	10.	1.57	82.	123.	205.
13	BEND	1	347	1.	4.	3.	14.	10.	19.	1.57	52.	39.	91.
			13	2.	3.	2.	8.	11.	23.	1.57	52.	41.	93.
14	BEND	1	13	2.	3.	2.	8.	11.	23.	1.57	52.	41.	93.
			348	2.	3.	1.	5.	12.	25.	1.57	52.	43.	95.
15	TAN	1	348	2.	1.	3.	5.	25.	12.	1.00	52.	27.	79.
			15	4.	1.	8.	33.	25.	21.	1.00	52.	45.	97.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	3.	2.	8.	41.	11.	21.	1.57	52.	73.	125.
			349	4.	2.	9.	53.	11.	26.	1.57	52.	60.	113.
17	TEE	1	16	5.	5.	14.	34.	21.	4.	1.57	52.	62.	114.
			349	5.	4.	13.	15.	21.	10.	1.57	52.	37.	89.
18	TEE	1	30	4.	1.	1.	2.	46.	25.	1.57	52.	80.	132.
			349	4.	2.	4.	9.	46.	31.	1.57	52.	77.	130.
19	TAN	1	30	4.	0.	1.	14.	44.	25.	1.00	52.	51.	103.
			350	4.	1.	0.	14.	44.	22.	1.00	52.	50.	102.
20	BEND	1	350	4.	0.	1.	14.	22.	44.	1.57	60.	97.	157.
			32	2.	1.	4.	40.	19.	21.	1.57	60.	94.	154.
21	BEND	1	32	2.	1.	4.	40.	19.	21.	1.57	60.	94.	154.
			351	2.	2.	4.	41.	18.	12.	1.57	60.	89.	149.
22	TAN	1	351	2.	4.	2.	41.	12.	18.	1.57	58.	1045.	1103.
			34	3.	4.	6.	55.	12.	37.	1.57	58.	1502.	1560.
23	TEE	1	34	6.	4.	3.	37.	12.	55.	1.57	39.	367.	406.
			352	7.	4.	4.	44.	12.	69.	1.57	39.	290.	329.
24	TEE	1	341	10.	2.	18.	8.	1.	14.	1.57	39.	85.	123.
			352	10.	2.	18.	44.	1.	28.	1.57	39.	180.	218.
25	TEE	1	342	2.	10.	22.	22.	0.	62.	1.57	39.	359.	397.
			352	2.	10.	22.	11.	0.	63.	1.57	117.	20.	137.
26	TAN	1	341	18.	2.	10.	14.	1.	8.	1.57	58.	347.	405.
			35	18.	2.	10.	16.	1.	11.	1.00	58.	269.	327.
27	TAN	1	35	1.	2.	3.	16.	1.	11.	1.00	58.	269.	327.
			353	2.	2.	3.	10.	1.	7.	1.57	58.	281.	339.
28	BEND	1	353	3.	2.	2.	7.	10.	1.	1.57	39.	69.	107.
			37	2.	2.	4.	5.	11.	6.	1.57	39.	76.	114.
29	BEND	1	37	2.	2.	4.	5.	11.	6.	1.57	39.	76.	114.
			354	2.	2.	3.	1.	11.	8.	1.57	39.	74.	113.
30	TAN	1	354	2.	3.	2.	1.	8.	11.	1.57	58.	303.	361.
			39	2.	4.	2.	12.	8.	8.	1.00	58.	231.	289.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	4.	5.	14.	39.	9.	4.	1.00	58.	571.	629.
			17	4.	6.	15.	76.	9.	6.	1.00	58.	1089.	1147.
32	TEE	1	17	4.	6.	15.	76.	9.	6.	1.57	52.	118.	170.
			355	4.	6.	16.	106.	9.	13.	1.57	52.	106.	158.
33	TEE	1	18	4.	7.	13.	73.	91.	22.	1.57	52.	183.	235.
			355	3.	7.	11.	110.	91.	33.	1.57	52.	180.	232.
34	TEE	1	24	4.	6.	8.	83.	15.	28.	1.57	52.	137.	189.
			355	3.	6.	5.	102.	15.	39.	1.57	52.	110.	162.
35	TAN	1	18	4.	7.	13.	73.	91.	22.	1.57	82.	574.	656.
			356	6.	7.	17.	57.	91.	21.	1.57	82.	529.	611.
36	BEND	1	356	6.	17.	7.	57.	21.	91.	1.57	60.	209.	269.
			20	1.	18.	9.	123.	25.	17.	1.57	60.	243.	303.
37	BEND	1	20	1.	18.	9.	123.	25.	17.	1.57	60.	243.	303.
			357	7.	19.	7.	119.	23.	84.	1.57	60.	282.	342.
38	TAN	1	357	7.	7.	19.	119.	84.	23.	1.57	82.	713.	795.
			22	7.	7.	21.	190.	84.	7.	1.00	82.	638.	719.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	4.	6.	8.	83.	15.	28.	1.57	39.	116.	155.
			25	5.	6.	10.	72.	15.	23.	1.57	35.	130.	165.
41	TAN	1	25	5.	6.	10.	72.	15.	23.	1.00	62.	581.	643.
			358	6.	6.	12.	14.	15.	17.	1.00	62.	204.	265.
42	BEND	1	358	6.	12.	6.	14.	17.	15.	1.57	46.	96.	142.
			26	0.	13.	8.	29.	20.	5.	1.57	46.	127.	173.
43	BEND	1	26	0.	13.	8.	29.	20.	5.	1.57	46.	127.	173.
			359	6.	14.	6.	28.	18.	27.	1.57	46.	151.	197.
44	TAN	1	359	6.	6.	14.	28.	27.	18.	1.00	62.	321.	383.
			28	6.	7.	15.	98.	27.	11.	1.00	62.	776.	837.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	42.	39.	13.	1.00	82.	182.	264.
			360	3.	1.	3.	22.	39.	10.	1.57	82.	224.	306.
47	BEND	1	360	3.	3.	1.	22.	10.	39.	1.57	52.	71.	123.
			71	2.	4.	3.	28.	13.	25.	1.57	52.	62.	114.
48	BEND	1	71	2.	4.	3.	28.	13.	25.	1.57	52.	62.	114.
			361	1.	5.	4.	33.	13.	18.	1.57	52.	62.	114.
49	TAN	1	361	1.	4.	5.	33.	18.	13.	1.57	82.	194.	276.
			73	1.	5.	7.	17.	18.	8.	1.00	82.	80.	161.
50	TAN	1	73	1.	5.	7.	17.	18.	8.	1.00	82.	80.	161.
			362	1.	6.	10.	59.	18.	3.	1.57	82.	298.	380.
51	BEND	1	362	10.	1.	6.	3.	59.	18.	1.57	52.	95.	147.
			75	10.	1.	12.	11.	71.	15.	1.57	52.	113.	165.
52	BEND	1	75	10.	1.	12.	11.	71.	15.	1.57	52.	113.	165.
			363	7.	1.	12.	19.	80.	3.	1.57	52.	127.	179.
53	TAN	1	363	1.	12.	7.	80.	3.	19.	1.57	82.	399.	481.
			77	1.	17.	8.	145.	3.	23.	1.57	82.	707.	789.
54	TAN	2	5	0.	10.	4.	10.	2.	8.	1.00	58.	182.	240.
			364	0.	10.	4.	26.	2.	6.	1.57	58.	591.	649.
55	BEND	2	364	4.	0.	10.	6.	26.	2.	1.57	39.	144.	183.
			51	2.	0.	11.	6.	26.	1.	1.57	39.	146.	185.
56	BEND	2	51	2.	0.	11.	6.	26.	1.	1.57	39.	146.	185.
			365	2.	0.	11.	6.	26.	0.	1.57	39.	145.	184.
57	TAN	2	365	0.	11.	2.	26.	0.	6.	1.57	58.	595.	653.
			53	0.	9.	6.	56.	0.	4.	1.00	58.	802.	860.
58	TAN	2	53	0.	9.	11.	56.	0.	4.	1.00	58.	802.	860.
			78	0.	9.	10.	6.	0.	3.	1.57	58.	157.	215.
59	TAN	2	78	0.	9.	10.	6.	0.	3.	1.57	37.	42.	79.
			366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
60	TAN	2	366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
			79	0.	6.	2.	24.	0.	2.	1.57	37.	143.	180.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	6.	2.	24.	0.	2.	1.57	58.	538.	596.
			54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
62	TAN	2	54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
			55	0.	3.	6.	54.	0.	6.	1.00	58.	764.	822.
63	TAN	2	55	1.	3.	5.	54.	0.	6.	1.00	58.	764.	822.
			367	1.	2.	3.	6.	0.	8.	1.57	58.	234.	292.
64	BEND	2	367	1.	3.	2.	6.	8.	0.	1.57	39.	57.	96.
			57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
65	BEND	2	57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
			368	1.	2.	1.	2.	8.	8.	1.57	39.	63.	102.
66	TAN	2	368	1.	1.	2.	2.	8.	8.	1.57	58.	259.	317.
			369	1.	1.	3.	13.	8.	2.	1.57	58.	337.	395.
67	BEND	2	369	3.	1.	1.	2.	13.	8.	1.57	39.	82.	121.
			60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
68	BEND	2	60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
			370	1.	1.	4.	7.	14.	1.	1.57	39.	89.	127.
69	TAN	2	370	1.	4.	1.	7.	1.	14.	1.57	58.	363.	421.
			62	1.	7.	2.	29.	1.	9.	1.00	58.	433.	492.
70	TAN	2	62	0.	6.	1.	4.	0.	0.	1.00	58.	62.	121.
			371	0.	2.	1.	4.	0.	0.	1.57	58.	92.	150.
71	BEND	2	371	1.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
72	BEND	2	64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			372	2.	0.	1.	0.	3.	0.	1.57	39.	19.	57.
73	TAN	2	372	0.	1.	2.	3.	0.	0.	1.57	58.	76.	134.
			373	0.	3.	2.	7.	0.	0.	1.57	58.	158.	216.
74	BEND	2	373	2.	0.	3.	0.	7.	0.	1.57	39.	39.	77.
			67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
75	BEND	2	67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
			374	3.	0.	3.	0.	10.	0.	1.57	39.	57.	95.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	3.	3.	10.	0.	0.	1.00	39.	36.	75.
			69	0.	4.	3.	13.	0.	0.	1.00	39.	46.	85.
77	TAN	3	342	2.	10.	22.	22.	0.	62.	1.57	0.	32.	32.
			343	2.	37.	34.	460.	0.	28.	1.00	0.	142.	142.
78	TAN	3	343	2.	178.	39.	460.	0.	28.	1.00	0.	142.	142.
			40	2.	178.	29.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1502.	22	1560.
2	57	802.	57	860.
3	77	142.	77	142.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-2.	22.	31.	-87.	299.	138.
8	-2.	11.	24.	-87.	193.	77.
22	7.	8.	22.	191.	84.	7.
28	6.	7.	15.	98.	27.	11.
35	5.	18.	-13.	2.	31.	-22.
39	2.	2.	-4.	12.	8.	-8.
40	2.	29.	-178.	0.	0.	-0.
53	1.	-18.	-17.	113.	-1.	-8.
55	1.	-5.	-11.	107.	-1.	-11.
62	1.	3.	-12.	34.	9.	-1.
69	0.	-3.	4.	13.	0.	0.
77	1.	-8.	17.	145.	-23.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

WPPSS OUTLET AND BALANCE LINES
GROUP-7D

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	1.	8.	42.	39.	13.	1.00	82.	182.	264.
			3	3.	1.	9.	59.	39.	11.	1.57	82.	348.	430.
2	TEE	1	3	9.	1.	3.	11.	39.	59.	1.57	52.	111.	163.
			344	11.	1.	3.	8.	39.	82.	1.57	52.	100.	153.
3	TEE	1	4	15.	1.	15.	30.	43.	110.	1.57	52.	189.	241.
			344	13.	1.	15.	11.	43.	79.	1.57	52.	103.	155.
4	TEE	1	5	1.	1.	11.	10.	7.	1.	1.57	52.	19.	71.
			344	1.	2.	12.	32.	7.	3.	1.57	58.	487.	545.
5	TAN	1	4	15.	1.	15.	110.	43.	30.	1.57	82.	591.	673.
			6	16.	1.	16.	150.	43.	69.	1.00	82.	523.	605.
6	TAN	1	6	6.	1.	14.	150.	43.	69.	1.00	82.	523.	605.
			7	1.	1.	1.	80.	43.	27.	1.00	82.	291.	373.
7	TAN	1	7	1.	1.	1.	80.	43.	27.	1.00	82.	291.	373.
			8	5.	1.	13.	96.	43.	39.	1.00	82.	345.	427.
8	TAN	1	8	6.	1.	12.	96.	43.	39.	1.00	82.	345.	427.
			345	5.	1.	10.	54.	43.	24.	1.57	82.	355.	437.
9	BEND	1	345	5.	10.	1.	54.	24.	43.	1.57	60.	140.	200.
			10	4.	9.	3.	58.	22.	19.	1.57	60.	124.	184.
10	BEND	1	10	4.	9.	3.	58.	22.	19.	1.57	60.	124.	184.
			346	3.	9.	4.	55.	20.	20.	1.57	60.	119.	179.
11	TAN	1	346	3.	4.	9.	55.	20.	20.	1.57	82.	300.	381.
			11	2.	3.	6.	16.	20.	8.	1.00	82.	82.	164.
12	TAN	1	11	2.	3.	6.	16.	19.	8.	1.00	82.	81.	163.
			347	1.	2.	4.	14.	19.	9.	1.57	82.	122.	204.
13	BEND	1	347	1.	4.	2.	14.	9.	19.	1.57	52.	39.	91.
			13	2.	3.	2.	7.	10.	23.	1.57	52.	41.	93.
14	BEND	1	13	2.	3.	2.	7.	10.	23.	1.57	52.	41.	93.
			348	2.	3.	1.	5.	11.	25.	1.57	52.	42.	95.
15	TAN	1	348	2.	1.	3.	5.	25.	11.	1.00	52.	27.	79.
			15	4.	1.	8.	33.	25.	19.	1.00	52.	45.	97.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	3.	2.	8.	41.	11.	19.	1.57	52.	72.	124.
			349	4.	2.	9.	53.	11.	24.	1.57	52.	60.	112.
17	TEE	1	16	5.	4.	14.	34.	21.	3.	1.57	52.	62.	114.
			349	4.	4.	13.	15.	21.	10.	1.57	52.	37.	89.
18	TEE	1	30	4.	1.	1.	2.	46.	24.	1.57	52.	80.	132.
			349	4.	2.	4.	9.	46.	29.	1.57	52.	77.	129.
19	TAN	1	30	4.	0.	1.	14.	44.	24.	1.00	52.	51.	103.
			350	4.	1.	0.	14.	44.	22.	1.00	52.	50.	102.
20	BEND	1	350	4.	0.	1.	14.	22.	44.	1.57	60.	98.	158.
			32	2.	1.	4.	40.	19.	22.	1.57	60.	95.	155.
21	BEND	1	32	2.	1.	4.	40.	19.	22.	1.57	60.	95.	155.
			351	2.	2.	4.	42.	18.	12.	1.57	60.	90.	150.
22	TAN	1	351	2.	4.	2.	42.	12.	18.	1.57	58.	1050.	1108.
			34	3.	4.	6.	55.	12.	37.	1.57	58.	1511.	1569.
23	TEE	1	34	6.	4.	3.	37.	12.	55.	1.57	39.	369.	408.
			352	7.	4.	4.	44.	12.	69.	1.57	39.	292.	330.
24	TEE	1	341	6.	3.	18.	8.	1.	20.	1.57	39.	119.	158.
			352	7.	3.	18.	44.	1.	34.	1.57	39.	192.	231.
25	TEE	1	342	1.	15.	22.	22.	0.	39.	1.57	39.	246.	285.
			352	1.	15.	22.	11.	0.	40.	1.57	117.	13.	130.
26	TAN	1	341	18.	3.	6.	20.	1.	8.	1.57	58.	487.	545.
			35	18.	3.	6.	14.	1.	11.	1.00	58.	253.	311.
27	TAN	1	35	1.	3.	3.	14.	1.	11.	1.00	58.	253.	311.
			353	2.	3.	3.	11.	1.	7.	1.57	58.	296.	355.
28	BEND	1	353	3.	2.	3.	7.	11.	1.	1.57	39.	72.	111.
			37	2.	2.	4.	5.	12.	6.	1.57	39.	79.	118.
29	BEND	1	37	2.	2.	4.	5.	12.	6.	1.57	39.	79.	118.
			354	3.	2.	3.	1.	11.	8.	1.57	39.	77.	116.
30	TAN	1	354	3.	3.	2.	1.	8.	11.	1.57	58.	315.	373.
			39	3.	4.	2.	12.	8.	7.	1.00	58.	223.	281.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	3.	5.	14.	39.	9.	3.	1.00	58.	568.	626.
			17	3.	5.	15.	76.	9.	5.	1.00	58.	1084.	1142.
32	TEE	1	17	3.	5.	15.	76.	9.	5.	1.57	52.	118.	170.
			355	3.	6.	16.	106.	9.	12.	1.57	52.	105.	157.
33	TEE	1	18	4.	7.	13.	73.	91.	22.	1.57	52.	183.	235.
			355	3.	7.	11.	109.	91.	33.	1.57	52.	180.	232.
34	TEE	1	24	4.	5.	8.	83.	15.	28.	1.57	52.	136.	188.
			355	3.	5.	5.	102.	15.	38.	1.57	52.	109.	161.
35	TAN	1	18	4.	7.	13.	73.	91.	22.	1.57	82.	573.	655.
			356	6.	7.	17.	57.	91.	21.	1.57	82.	528.	610.
36	BEND	1	356	6.	17.	7.	57.	21.	91.	1.57	60.	209.	269.
			20	1.	18.	9.	123.	25.	17.	1.57	60.	243.	303.
37	BEND	1	20	1.	18.	9.	123.	25.	17.	1.57	60.	243.	303.
			357	7.	19.	7.	119.	23.	84.	1.57	60.	282.	342.
38	TAN	1	357	7.	7.	19.	119.	84.	23.	1.57	82.	712.	794.
			22	7.	7.	21.	190.	84.	7.	1.00	82.	636.	718.
39	TAN	1	22	0.	0.	1.	1.	0.	0.	1.00	82.	2.	84.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	4.	5.	8.	83.	15.	28.	1.57	39.	115.	154.
			25	5.	5.	10.	71.	15.	22.	1.57	35.	130.	165.
41	TAN	1	25	5.	5.	10.	71.	15.	22.	1.00	62.	580.	641.
			358	5.	5.	12.	14.	15.	17.	1.00	62.	201.	263.
42	BEND	1	358	5.	12.	5.	14.	17.	15.	1.57	46.	95.	141.
			26	0.	13.	8.	29.	19.	5.	1.57	46.	126.	172.
43	BEND	1	26	0.	13.	8.	29.	19.	5.	1.57	46.	126.	172.
			359	5.	14.	6.	28.	17.	27.	1.57	46.	151.	197.
44	TAN	1	359	5.	6.	14.	28.	27.	17.	1.00	62.	319.	381.
			28	5.	7.	15.	98.	27.	10.	1.00	62.	775.	836.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	1.	8.	42.	39.	13.	1.00	82.	182.	264.
			360	3.	1.	3.	22.	39.	10.	1.57	82.	223.	305.
47	BEND	1	360	3.	3.	1.	22.	10.	39.	1.57	52.	71.	123.
			71	2.	4.	3.	28.	12.	25.	1.57	52.	61.	114.
48	BEND	1	71	2.	4.	3.	28.	12.	25.	1.57	52.	61.	114.
			361	1.	5.	4.	33.	13.	19.	1.57	52.	62.	114.
49	TAN	1	361	1.	4.	5.	33.	19.	13.	1.57	82.	194.	276.
			73	1.	5.	7.	17.	19.	8.	1.00	82.	80.	162.
50	TAN	1	73	1.	5.	7.	17.	19.	8.	1.00	82.	80.	162.
			362	1.	6.	10.	59.	19.	3.	1.57	82.	299.	381.
51	BEND	1	362	10.	1.	6.	3.	59.	19.	1.57	52.	95.	147.
			75	10.	1.	12.	11.	71.	15.	1.57	52.	113.	165.
52	BEND	1	75	10.	1.	12.	11.	71.	15.	1.57	52.	113.	165.
			363	7.	1.	12.	19.	80.	3.	1.57	52.	127.	179.
53	TAN	1	363	1.	12.	7.	80.	3.	19.	1.57	82.	399.	481.
			77	1.	17.	8.	145.	3.	22.	1.57	82.	707.	789.
54	TAN	2	5	0.	10.	4.	10.	2.	8.	1.00	58.	181.	239.
			364	0.	10.	4.	26.	2.	6.	1.57	58.	590.	648.
55	BEND	2	364	4.	0.	10.	6.	26.	2.	1.57	39.	144.	183.
			51	2.	0.	11.	6.	26.	1.	1.57	39.	146.	185.
56	BEND	2	51	2.	0.	11.	6.	26.	1.	1.57	39.	146.	185.
			365	2.	0.	11.	6.	26.	0.	1.57	39.	145.	184.
57	TAN	2	365	0.	11.	2.	26.	0.	6.	1.57	58.	594.	652.
			53	0.	9.	6.	56.	0.	4.	1.00	58.	802.	860.
58	TAN	2	53	0.	9.	11.	56.	0.	4.	1.00	58.	802.	860.
			78	0.	9.	10.	6.	0.	3.	1.57	58.	156.	214.
59	TAN	2	78	0.	9.	10.	6.	0.	3.	1.57	37.	41.	79.
			366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
60	TAN	2	366	0.	7.	6.	18.	0.	3.	1.57	37.	109.	147.
			79	0.	6.	2.	24.	0.	2.	1.57	37.	143.	180.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	6.	2.	24.	0.	2.	1.57	58.	538.	596.
			54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
62	TAN	2	54	0.	4.	1.	29.	0.	1.	1.00	58.	405.	463.
			55	0.	3.	6.	54.	0.	6.	1.00	58.	764.	822.
63	TAN	2	55	1.	3.	5.	54.	0.	6.	1.00	58.	764.	822.
			367	1.	2.	3.	6.	0.	8.	1.57	58.	234.	292.
64	BEND	2	367	1.	3.	2.	6.	8.	0.	1.57	39.	57.	96.
			57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
65	BEND	2	57	1.	2.	1.	6.	9.	5.	1.57	39.	63.	101.
			368	1.	2.	1.	2.	8.	8.	1.57	39.	63.	102.
66	TAN	2	368	1.	1.	2.	2.	8.	8.	1.57	58.	259.	317.
			369	1.	1.	3.	13.	8.	2.	1.57	58.	337.	395.
67	BEND	2	369	3.	1.	1.	2.	13.	8.	1.57	39.	82.	121.
			60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
68	BEND	2	60	2.	1.	3.	5.	14.	6.	1.57	39.	88.	127.
			370	1.	1.	4.	7.	14.	1.	1.57	39.	89.	127.
69	TAN	2	370	1.	4.	1.	7.	1.	14.	1.57	58.	363.	421.
			62	1.	7.	2.	29.	1.	9.	1.00	58.	433.	492.
70	TAN	2	62	0.	6.	1.	4.	0.	0.	1.00	58.	62.	121.
			371	0.	2.	1.	4.	0.	0.	1.57	58.	92.	150.
71	BEND	2	371	1.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
72	BEND	2	64	2.	0.	2.	0.	4.	0.	1.57	39.	23.	61.
			372	2.	0.	1.	0.	3.	0.	1.57	39.	19.	57.
73	TAN	2	372	0.	1.	2.	3.	0.	0.	1.57	58.	76.	134.
			373	0.	3.	2.	7.	0.	0.	1.57	58.	158.	216.
74	BEND	2	373	2.	0.	3.	0.	7.	0.	1.57	39.	39.	77.
			67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
75	BEND	2	67	3.	0.	4.	0.	9.	0.	1.57	39.	48.	86.
			374	3.	0.	3.	0.	10.	0.	1.57	39.	57.	95.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	3.	3.	10.	0.	0.	1.00	39.	36.	75.
			69	0.	4.	3.	13.	0.	0.	1.00	39.	46.	85.
77	TAN	3	342	1.	15.	22.	22.	0.	39.	1.57	0.	22.	22.
			343	1.	45.	34.	460.	0.	18.	1.00	0.	142.	142.
78	TAN	3	343	1.	142.	39.	460.	0.	18.	1.00	0.	142.	142.
			40.	1.	117.	29.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1511.	22	1569.
2	57	802.	57	860.
3	77	142.	77	142.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-2.	22.	31.	-87.	299.	138.
8	-2.	11.	24.	-87.	193.	77.
22	7.	8.	22.	191.	84.	7.
28	5.	7.	15.	98.	27.	10.
35	6.	18.	-9.	2.	28.	-21.
39	3.	2.	-4.	12.	7.	-8.
40	1.	29.	-117.	0.	0.	-0.
53	1.	-18.	-17.	113.	-1.	-8.
55	1.	-5.	-11.	107.	-1.	-11.
62	1.	3.	-12.	34.	9.	-1.
69	0.	-3.	4.	13.	0.	0.
77	1.	-8.	17.	145.	-22.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	2.	11.	60.	37.	20.	1.00	82.	225.	307.
			3	3.	2.	13.	81.	37.	17.	1.57	82.	438.	519.
2	TEE	1	3	13.	2.	3.	17.	37.	81.	1.57	52.	140.	192.
			344	15.	4.	3.	14.	37.	109.	1.57	52.	121.	173.
3	TEE	1	4	20.	5.	4.	24.	51.	148.	1.57	52.	244.	296.
			344	17.	4.	4.	28.	51.	106.	1.57	52.	133.	185.
4	TEE	1	5	1.	0.	1.	17.	23.	2.	1.57	52.	44.	96.
			344	1.	2.	1.	17.	23.	3.	1.57	58.	573.	631.
5	TAN	1	4	4.	5.	20.	148.	51.	24.	1.57	82.	765.	847.
			6	4.	6.	22.	200.	51.	19.	1.00	82.	636.	718.
6	TAN	1	6	1.	6.	20.	200.	51.	19.	1.00	82.	636.	718.
			7	1.	14.	1.	107.	51.	24.	1.00	82.	371.	453.
7	TAN	1	7	1.	14.	1.	107.	51.	24.	1.00	82.	371.	453.
			8	1.	23.	18.	137.	51.	50.	1.00	82.	473.	555.
8	TAN	1	8	9.	23.	16.	137.	51.	50.	1.00	82.	473.	555.
			345	9.	24.	14.	76.	51.	26.	1.57	82.	458.	540.
9	BEND	1	345	9.	14.	24.	76.	26.	51.	1.57	60.	181.	241.
			10	17.	13.	20.	81.	19.	16.	1.57	60.	163.	223.
10	BEND	1	10	17.	13.	20.	81.	19.	16.	1.57	60.	163.	223.
			346	23.	12.	11.	72.	10.	19.	1.57	60.	144.	204.
11	TAN	1	346	23.	11.	12.	72.	19.	10.	1.57	82.	363.	445.
			11	24.	12.	9.	16.	19.	136.	1.00	82.	425.	507.
12	TAN	1	11	23.	15.	9.	18.	17.	136.	1.00	82.	425.	507.
			347	24.	16.	5.	15.	17.	246.	1.57	82.	1192.	1274.
13	BEND	1	347	24.	5.	16.	15.	246.	17.	1.57	52.	380.	433.
			13	18.	5.	24.	10.	258.	22.	1.57	52.	399.	451.
14	BEND	1	13	18.	5.	24.	10.	258.	22.	1.57	52.	399.	451.
			348	9.	4.	29.	4.	265.	24.	1.57	52.	411.	463.
15	TAN	1	348	9.	29.	4.	4.	24.	265.	1.00	52.	261.	313.
			15	9.	35.	11.	43.	24.	376.	1.00	52.	371.	423.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	21.	29.	11.	48.	13.	376.	1.57	52.	584.	636.
			349	21.	30.	13.	65.	13.	352.	1.57	52.	351.	403.
17	TEE	1	16	49.	63.	20.	43.	26.	60.	1.57	52.	120.	172.
			349	49.	63.	18.	16.	26.	129.	1.57	52.	133.	185.
18	TEE	1	30	42.	13.	2.	2.	62.	89.	1.57	52.	167.	219.
			349	43.	13.	5.	13.	62.	223.	1.57	52.	239.	291.
19	TAN	1	30	44.	1.	2.	18.	60.	89.	1.00	52.	106.	158.
			350	43.	1.	0.	18.	60.	40.	1.00	52.	73.	125.
20	BEND	1	350	43.	0.	1.	18.	40.	60.	1.57	60.	142.	202.
			32	29.	2.	31.	54.	7.	30.	1.57	60.	119.	179.
21	BEND	1	32	29.	2.	31.	54.	7.	30.	1.57	60.	119.	179.
			351	1.	3.	42.	56.	22.	16.	1.57	60.	120.	180.
22	TAN	1	351	1.	42.	3.	56.	16.	22.	1.57	58.	1404.	1463.
			34	1.	39.	9.	79.	16.	2.	1.57	58.	1797.	1855.
23	TEE	1	34	9.	39.	1.	2.	16.	79.	1.57	39.	439.	478.
			352	10.	39.	1.	4.	16.	98.	1.57	39.	352.	391.
24	TEE	1	341	29.	36.	2.	5.	0.	54.	1.57	39.	295.	333.
			352	28.	36.	2.	4.	0.	102.	1.57	39.	354.	393.
25	TEE	1	342	70.	25.	1.	16.	0.	204.	1.57	39.	1116.	1155.
			352	71.	25.	1.	16.	0.	172.	1.57	117.	53.	170.
26	TAN	1	341	2.	36.	29.	54.	0.	5.	1.57	58.	1206.	1264.
			35	2.	36.	29.	46.	0.	7.	1.00	58.	664.	722.
27	TAN	1	35	0.	36.	7.	46.	0.	7.	1.00	58.	664.	722.
			353	0.	40.	6.	65.	0.	2.	1.57	58.	1454.	1512.
28	BEND	1	353	6.	0.	40.	2.	65.	0.	1.57	39.	355.	394.
			37	27.	0.	33.	1.	60.	2.	1.57	39.	326.	365.
29	BEND	1	37	27.	0.	33.	1.	60.	2.	1.57	39.	326.	365.
			354	40.	0.	7.	0.	40.	2.	1.57	39.	218.	256.
30	TAN	1	354	40.	7.	0.	0.	2.	40.	1.57	58.	890.	948.
			39	41.	8.	0.	1.	2.	183.	1.00	58.	2601.	2659.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	80.	10.	20.	49.	12.	60.	1.00	58.	1105.	1163.
			17	80.	10.	21.	102.	12.	150.	1.00	58.	2577.	2635.
32	TEE	1	17	80.	10.	21.	102.	12.	150.	1.57	52.	280.	332.
			355	81.	10.	23.	146.	12.	311.	1.57	52.	336.	388.
33	TEE	1	18	15.	55.	19.	104.	126.	57.	1.57	52.	266.	318.
			355	15.	54.	16.	156.	126.	101.	1.57	52.	266.	318.
34	TEE	1	24	25.	29.	11.	117.	20.	135.	1.57	52.	277.	329.
			355	25.	27.	7.	145.	20.	210.	1.57	52.	251.	303.
35	TAN	1	18	15.	55.	19.	104.	126.	57.	1.57	82.	835.	917.
			356	15.	58.	25.	81.	126.	68.	1.57	82.	793.	874.
36	BEND	1	356	15.	25.	58.	81.	68.	126.	1.57	60.	314.	374.
			20	31.	26.	52.	173.	59.	21.	1.57	60.	352.	412.
37	BEND	1	20	31.	26.	52.	173.	59.	21.	1.57	60.	352.	412.
			357	59.	28.	15.	166.	6.	119.	1.57	60.	391.	451.
38	TAN	1	357	59.	15.	28.	166.	119.	6.	1.57	82.	988.	1070.
			22	60.	15.	30.	267.	119.	207.	1.00	82.	1098.	1180.
39	TAN	1	22	1.	0.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	25.	29.	11.	117.	20.	135.	1.57	39.	235.	274.
			25	25.	30.	14.	101.	20.	105.	1.57	35.	250.	285.
41	TAN	1	25	25.	30.	14.	101.	20.	105.	1.00	62.	1114.	1176.
			358	25.	32.	17.	20.	20.	87.	1.00	62.	696.	757.
42	BEND	1	358	25.	17.	32.	20.	87.	20.	1.57	46.	328.	374.
			26	5.	18.	40.	41.	95.	5.	1.57	46.	372.	418.
43	BEND	1	26	5.	18.	40.	41.	95.	5.	1.57	46.	372.	418.
			359	32.	19.	25.	38.	80.	38.	1.57	46.	345.	391.
44	TAN	1	359	32.	25.	19.	38.	38.	80.	1.00	62.	731.	792.
			28	33.	25.	21.	139.	38.	85.	1.00	62.	1270.	1332.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	63.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	2.	11.	60.	37.	20.	1.00	82.	225.	307.
			360	3.	6.	4.	43.	37.	75.	1.57	82.	452.	534.
47	BEND	1	360	3.	4.	6.	43.	75.	37.	1.57	52.	144.	196.
			71	3.	5.	7.	53.	75.	30.	1.57	52.	149.	201.
48	BEND	1	71	3.	5.	7.	53.	75.	30.	1.57	52.	149.	201.
			361	8.	7.	3.	31.	69.	38.	1.57	52.	130.	182.
49	TAN	1	361	8.	3.	7.	31.	38.	69.	1.57	82.	407.	489.
			73	9.	3.	10.	15.	38.	26.	1.00	82.	149.	231.
50	TAN	1	73	9.	3.	10.	15.	38.	26.	1.00	82.	149.	231.
			362	11.	3.	14.	85.	38.	38.	1.57	82.	488.	569.
51	BEND	1	362	14.	11.	3.	38.	85.	38.	1.57	52.	156.	208.
			75	11.	12.	13.	26.	100.	58.	1.57	52.	182.	234.
52	BEND	1	75	11.	12.	13.	26.	100.	58.	1.57	52.	182.	234.
			363	3.	12.	17.	23.	103.	52.	1.57	52.	182.	234.
53	TAN	1	363	12.	17.	3.	103.	52.	23.	1.57	82.	570.	652.
			77	15.	24.	3.	98.	52.	151.	1.57	82.	906.	988.
54	TAN	2	5	1.	0.	1.	14.	10.	23.	1.00	58.	404.	462.
			364	2.	1.	1.	13.	10.	18.	1.57	58.	531.	589.
55	BEND	2	364	1.	2.	1.	18.	13.	10.	1.57	39.	130.	169.
			51	1.	2.	1.	19.	13.	5.	1.57	39.	128.	167.
56	BEND	2	51	1.	2.	1.	19.	13.	5.	1.57	39.	128.	167.
			365	1.	2.	1.	19.	13.	2.	1.57	39.	127.	165.
57	TAN	2	365	2.	1.	1.	13.	2.	19.	1.57	58.	518.	576.
			53	4.	1.	7.	74.	2.	42.	1.00	58.	1204.	1263.
58	TAN	2	53	7.	1.	16.	74.	2.	42.	1.00	58.	1204.	1263.
			78	7.	1.	15.	4.	2.	6.	1.57	58.	169.	227.
59	TAN	2	78	7.	1.	15.	4.	2.	6.	1.57	37.	45.	82.
			366	4.	1.	9.	21.	2.	7.	1.57	37.	130.	167.
60	TAN	2	366	4.	1.	9.	21.	2.	7.	1.57	37.	130.	167.
			79	2.	1.	3.	29.	2.	10.	1.57	37.	185.	222.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	2.	1.	3.	29.	2.	10.	1.57	58.	697.	755.
			54	1.	1.	2.	42.	2.	17.	1.00	58.	638.	696.
62	TAN	2	54	1.	1.	2.	42.	1.	17.	1.00	58.	638.	696.
			55	4.	1.	8.	77.	1.	39.	1.00	58.	1232.	1290.
63	TAN	2	55	5.	1.	8.	77.	3.	39.	1.00	58.	1232.	1290.
			367	3.	1.	4.	5.	3.	16.	1.57	58.	371.	429.
64	BEND	2	367	3.	4.	1.	5.	16.	3.	1.57	39.	91.	129.
			57	2.	3.	2.	8.	17.	6.	1.57	39.	107.	146.
65	BEND	2	57	2.	3.	2.	8.	17.	6.	1.57	39.	107.	146.
			368	1.	3.	3.	6.	17.	8.	1.57	39.	108.	147.
66	TAN	2	368	1.	3.	3.	7.	8.	17.	1.57	58.	442.	500.
			369	1.	2.	4.	26.	8.	2.	1.57	58.	608.	666.
67	BEND	2	369	4.	1.	2.	2.	26.	8.	1.57	39.	149.	187.
			60	4.	1.	5.	5.	28.	6.	1.57	39.	159.	198.
68	BEND	2	60	4.	1.	5.	5.	28.	6.	1.57	39.	159.	198.
			370	2.	1.	5.	8.	28.	2.	1.57	39.	159.	198.
69	TAN	2	370	2.	5.	1.	8.	2.	28.	1.57	58.	652.	710.
			62	4.	10.	1.	18.	2.	39.	1.00	58.	613.	671.
70	TAN	2	62	3.	8.	0.	3.	3.	21.	1.00	58.	308.	366.
			371	0.	3.	0.	5.	3.	4.	1.57	58.	162.	220.
71	BEND	2	371	0.	0.	3.	4.	5.	3.	1.57	39.	40.	78.
			64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
72	BEND	2	64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
			372	2.	0.	0.	4.	4.	4.	1.57	39.	35.	74.
73	TAN	2	372	0.	0.	2.	4.	4.	4.	1.57	58.	143.	201.
			373	2.	0.	3.	10.	4.	18.	1.57	58.	460.	518.
74	BEND	2	373	3.	2.	0.	18.	10.	4.	1.57	39.	112.	151.
			67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
75	BEND	2	67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
			374	0.	3.	4.	6.	12.	20.	1.57	39.	129.	168.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	3.	4.	0.	12.	20.	6.	1.00	39.	82.	120.
			69	3.	5.	0.	11.	20.	10.	1.00	39.	85.	124.
77	TAN	3	342	70.	25.	1.	16.	0.	204.	1.57	0.	99.	99.
			343	52.	62.	1.	7.	0.	1076.	1.00	0.	331.	331.
78	TAN	3	343	72.	280.	1.	7.	0.	1076.	1.00	0.	331.	331.
			40	88.	291.	1.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	30	2601.	30	2659.
2	62	1232.	62	1290.
3	77	331.	77	331.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-12.	5.	42.	-102.	400.	39.
8	-46.	10.	35.	-102.	273.	101.
22	61.	15.	31.	268.	119.	207.
28	34.	25.	21.	139.	38.	85.
35	73.	2.	-36.	1.	93.	-13.
39	41.	0.	-8.	1.	183.	-2.
40	88.	1.	-291.	0.	0.	-0.
53	12.	-1.	-23.	148.	-3.	-84.
55	8.	-1.	-16.	155.	-3.	-79.
62	7.	1.	-18.	21.	61.	-5.
69	3.	-0.	5.	11.	-10.	20.
77	15.	-3.	24.	98.	-151.	52.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	2.	11.	60.	37.	20.	1.00	82.	225.	307.
			3	3.	2.	13.	81.	37.	17.	1.57	82.	437.	519.
2	TEE	1	3	13.	2.	3.	17.	37.	81.	1.57	52.	140.	192.
			344	16.	3.	3.	14.	37.	109.	1.57	52.	121.	173.
3	TEE	1	4	20.	5.	4.	24.	51.	148.	1.57	52.	244.	296.
			344	17.	4.	4.	29.	51.	106.	1.57	52.	133.	185.
4	TEE	1	5	1.	0.	1.	17.	23.	2.	1.57	52.	44.	96.
			344	1.	2.	1.	17.	23.	3.	1.57	58.	571.	629.
5	TAN	1	4	4.	5.	20.	148.	51.	24.	1.57	82.	765.	847.
			6	4.	6.	22.	200.	51.	19.	1.00	82.	636.	718.
6	TAN	1	6	1.	6.	20.	200.	51.	19.	1.00	82.	636.	718.
			7	1.	14.	1.	107.	51.	24.	1.00	82.	371.	453.
7	TAN	1	7	1.	14.	1.	107.	51.	24.	1.00	82.	371.	453.
			8	1.	23.	18.	137.	51.	51.	1.00	82.	473.	555.
8	TAN	1	8	9.	23.	16.	137.	51.	51.	1.00	82.	473.	555.
			345	9.	24.	14.	76.	51.	26.	1.57	82.	457.	539.
9	BEND	1	345	9.	14.	24.	76.	26.	51.	1.57	60.	181.	241.
			10	17.	13.	19.	81.	19.	15.	1.57	60.	162.	222.
10	BEND	1	10	17.	13.	19.	81.	19.	15.	1.57	60.	162.	222.
			346	23.	12.	11.	72.	9.	19.	1.57	60.	144.	204.
11	TAN	1	346	23.	11.	12.	72.	19.	9.	1.57	82.	363.	445.
			11	24.	12.	9.	16.	19.	135.	1.00	82.	422.	504.
12	TAN	1	11	23.	15.	9.	18.	17.	135.	1.00	82.	422.	504.
			347	24.	16.	5.	15.	17.	244.	1.57	82.	1185.	1267.
13	BEND	1	347	24.	5.	16.	15.	244.	17.	1.57	52.	378.	430.
			13	17.	5.	24.	10.	256.	22.	1.57	52.	396.	448.
14	BEND	1	13	17.	5.	24.	10.	256.	22.	1.57	52.	396.	448.
			348	9.	4.	28.	4.	264.	24.	1.57	52.	408.	460.
15	TAN	1	348	9.	28.	4.	4.	24.	264.	1.00	52.	259.	311.
			15	9.	35.	11.	43.	24.	372.	1.00	52.	367.	419.

LOAD NUMBER 10 . LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	21.	29.	11.	48.	14.	372.	1.57	52.	578.	630.
			349	21.	30.	13.	65.	14.	347.	1.57	52.	346.	398.
17	TEE	1	16	49.	63.	20.	43.	26.	59.	1.57	52.	119.	171.
			349	48.	62.	18.	16.	26.	128.	1.57	52.	132.	184.
18	TEE	1	30	41.	13.	1.	2.	63.	87.	1.57	52.	165.	217.
			349	43.	13.	5.	13.	63.	219.	1.57	52.	236.	288.
19	TAN	1	30	43.	1.	1.	18.	60.	87.	1.00	52.	105.	157.
			350	42.	1.	0.	18.	60.	39.	1.00	52.	73.	125.
20	BEND	1	350	42.	0.	1.	18.	39.	60.	1.57	60.	142.	202.
			32	29.	2.	30.	54.	7.	30.	1.57	60.	120.	180.
21	BEND	1	32	29.	2.	30.	54.	7.	30.	1.57	60.	120.	180.
			351	1.	3.	41.	57.	22.	16.	1.57	60.	121.	181.
22	TAN	1	351	1.	41.	3.	57.	16.	22.	1.57	58.	1413.	1471.
			34	1.	38.	9.	80.	16.	2.	1.57	58.	1815.	1873.
23	TEE	1	34	9.	38.	1.	2.	16.	80.	1.57	39.	444.	482.
			352	11.	38.	1.	4.	16.	99.	1.57	39.	355.	394.
24	TEE	1	341	23.	37.	2.	5.	0.	66.	1.57	39.	363.	402.
			352	24.	36.	2.	4.	0.	113.	1.57	39.	392.	431.
25	TEE	1	342	69.	35.	1.	16.	0.	163.	1.57	39.	892.	931.
			352	69.	34.	1.	16.	0.	130.	1.57	117.	40.	158.
26	TAN	1	341	2.	37.	23.	66.	0.	5.	1.57	58.	1486.	1544.
			35	2.	37.	22.	44.	0.	7.	1.00	58.	629.	687.
27	TAN	1	35	0.	37.	7.	44.	0.	7.	1.00	58.	629.	687.
			353	0.	41.	6.	67.	0.	2.	1.57	58.	1488.	1546.
28	BEND	1	353	6.	0.	41.	2.	67.	0.	1.57	39.	364.	403.
			37	27.	0.	34.	1.	61.	1.	1.57	39.	334.	373.
29	BEND	1	37	27.	0.	34.	1.	61.	1.	1.57	39.	334.	373.
			354	41.	0.	7.	0.	41.	2.	1.57	39.	224.	263.
30	TAN	1	354	41.	7.	0.	0.	2.	41.	1.57	58.	916.	974.
			39	42.	9.	0.	1.	2.	181.	1.00	58.	2568.	2626.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	79.	10.	20.	49.	12.	59.	1.00	58.	1097.	1155.
			17	79.	10.	21.	102.	12.	149.	1.00	58.	2558.	2616.
32	TEE	1	17	79.	10.	21.	102.	12.	149.	1.57	52.	278.	330.
			355	80.	10.	23.	145.	12.	308.	1.57	52.	334.	386.
33	TEE	1	18	15.	55.	19.	104.	126.	56.	1.57	52.	266.	318.
			355	15.	53.	16.	156.	126.	101.	1.57	52.	265.	317.
34	TEE	1	24	24.	29.	11.	117.	20.	134.	1.57	52.	275.	327.
			355	24.	27.	7.	144.	20.	207.	1.57	52.	249.	301.
35	TAN	1	18	15.	55.	19.	104.	126.	56.	1.57	82.	833.	914.
			356	15.	57.	25.	81.	126.	68.	1.57	82.	790.	872.
36	BEND	1	356	15.	25.	57.	81.	68.	126.	1.57	60.	313.	373.
			20	31.	26.	52.	173.	59.	21.	1.57	60.	351.	411.
37	BEND	1	20	31.	26.	52.	173.	59.	21.	1.57	60.	351.	411.
			357	59.	28.	15.	165.	6.	119.	1.57	60.	390.	450.
38	TAN	1	357	59.	15.	28.	165.	119.	6.	1.57	82.	985.	1067.
			22	60.	15.	30.	266.	119.	205.	1.00	82.	1094.	1176.
39	TAN	1	22	1.	0.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	24.	29.	11.	117.	20.	134.	1.57	39.	233.	272.
			25	24.	30.	14.	101.	20.	103.	1.57	35.	248.	283.
41	TAN	1	25	24.	30.	14.	101.	20.	103.	1.00	62.	1107.	1169.
			358	24.	31.	17.	20.	20.	86.	1.00	62.	689.	751.
42	BEND	1	358	24.	17.	31.	20.	86.	20.	1.57	46.	325.	371.
			26	5.	18.	40.	40.	94.	6.	1.57	46.	368.	414.
43	BEND	1	26	5.	18.	40.	40.	94.	6.	1.57	46.	368.	414.
			359	32.	19.	24.	38.	79.	38.	1.57	46.	342.	388.
44	TAN	1	359	32.	24.	19.	38.	38.	79.	1.00	62.	725.	786.
			28	33.	24.	21.	139.	38.	84.	1.00	62.	1266.	1328.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	63.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	2.	11.	60.	37.	20.	1.00	82.	225.	307.
			360	3.	6.	4.	43.	37.	74.	1.57	82.	450.	532.
47	BEND	1	360	3.	4.	6.	43.	74.	37.	1.57	52.	144.	196.
			71	3.	5.	7.	53.	74.	30.	1.57	52.	149.	201.
48	BEND	1	71	3.	5.	7.	53.	74.	30.	1.57	52.	149.	201.
			361	8.	7.	3.	31.	68.	38.	1.57	52.	129.	181.
49	TAN	1	361	8.	3.	7.	31.	38.	68.	1.57	82.	405.	487.
			73	9.	3.	10.	15.	38.	26.	1.00	82.	150.	231.
50	TAN	1	73	9.	3.	10.	15.	38.	26.	1.00	82.	150.	231.
			362	11.	3.	14.	85.	38.	39.	1.57	82.	488.	570.
51	BEND	1	362	14.	11.	3.	39.	85.	38.	1.57	52.	156.	208.
			75	11.	11.	13.	26.	100.	58.	1.57	52.	182.	234.
52	BEND	1	75	11.	11.	13.	26.	100.	58.	1.57	52.	182.	234.
			363	3.	12.	17.	24.	103.	53.	1.57	52.	182.	234.
53	TAN	1	363	12.	17.	3.	103.	53.	24.	1.57	82.	571.	653.
			77	15.	24.	3.	99.	53.	150.	1.57	82.	905.	987.
54	TAN	2	5	1.	0.	1.	14.	10.	23.	1.00	58.	402.	460.
			364	2.	1.	1.	13.	10.	17.	1.57	58.	529.	587.
55	BEND	2	364	1.	2.	1.	17.	13.	10.	1.57	39.	129.	168.
			51	1.	2.	1.	19.	13.	5.	1.57	39.	128.	167.
56	BEND	2	51	1.	2.	1.	19.	13.	5.	1.57	39.	128.	167.
			365	1.	2.	1.	19.	13.	2.	1.57	39.	126.	165.
57	TAN	2	365	2.	1.	1.	13.	2.	19.	1.57	58.	516.	574.
			53	4.	1.	7.	74.	2.	42.	1.00	58.	1204.	1262.
58	TAN	2	53	7.	1.	16.	74.	2.	42.	1.00	58.	1204.	1262.
			78	7.	1.	15.	4.	2.	6.	1.57	58.	168.	226.
59	TAN	2	78	7.	1.	15.	4.	2.	6.	1.57	37.	45.	82.
			366	4.	1.	9.	21.	2.	7.	1.57	37.	130.	167.
60	TAN	2	366	4.	1.	9.	21.	2.	7.	1.57	37.	130.	167.
			79	2.	1.	3.	29.	2.	10.	1.57	37.	185.	222.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	2.	1.	3.	29.	2.	10.	1.57	58.	697.	755.
			54	1.	1.	2.	42.	2.	17.	1.00	58.	638.	697.
62	TAN	2	54	1.	1.	2.	42.	1.	17.	1.00	58.	638.	696.
			55	4.	1.	8.	77.	1.	39.	1.00	58.	1232.	1290.
63	TAN	2	55	5.	1.	8.	77.	3.	39.	1.00	58.	1232.	1290.
			367	3.	1.	4.	5.	3.	16.	1.57	58.	371.	429.
64	BEND	2	367	3.	4.	1.	5.	16.	3.	1.57	39.	91.	129.
			57	2.	3.	2.	8.	17.	6.	1.57	39.	107.	146.
65	BEND	2	57	2.	3.	2.	8.	17.	6.	1.57	39.	107.	146.
			368	1.	3.	3.	6.	17.	8.	1.57	39.	108.	147.
66	TAN	2	368	1.	3.	3.	7.	8.	17.	1.57	58.	442.	500.
			369	1.	2.	4.	26.	8.	2.	1.57	58.	608.	666.
67	BEND	2	369	4.	1.	2.	2.	26.	8.	1.57	39.	149.	187.
			60	4.	1.	5.	5.	28.	6.	1.57	39.	159.	198.
68	BEND	2	60	4.	1.	5.	5.	28.	6.	1.57	39.	159.	198.
			370	2.	1.	5.	8.	28.	2.	1.57	39.	159.	198.
69	TAN	2	370	2.	5.	1.	8.	2.	28.	1.57	58.	652.	710.
			62	4.	10.	1.	18.	2.	39.	1.00	58.	613.	671.
70	TAN	2	62	3.	8.	0.	3.	3.	21.	1.00	58.	308.	366.
			371	0.	3.	0.	5.	3.	4.	1.57	58.	162.	220.
71	BEND	2	371	0.	0.	3.	4.	5.	3.	1.57	39.	40.	78.
			64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
72	BEND	2	64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
			372	2.	0.	0.	4.	4.	4.	1.57	39.	35.	74.
73	TAN	2	372	0.	0.	2.	4.	4.	4.	1.57	58.	143.	201.
			373	2.	0.	3.	10.	4.	18.	1.57	58.	460.	518.
74	BEND	2	373	3.	2.	0.	18.	10.	4.	1.57	39.	112.	151.
			67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
75	BEND	2	67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
			374	0.	3.	4.	6.	12.	20.	1.57	39.	129.	168.

LOAD NUMBER 10 LOAD.TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	3.	4.	0.	12.	20.	6.	1.00	39.	82.	120.
			69	3.	5.	0.	11.	20.	10.	1.00	39.	85.	124.
77	TAN	3	342	69.	35.	1.	16.	0.	163.	1.57	0.	79.	79.
			343	50.	77.	1.	7.	0.	1058.	1.00	0.	326.	326.
78	TAN	3	343	70.	215.	1.	7.	0.	1058.	1.00	0.	326.	326.
			40	86.	180.	1.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	30	2568.	30	2626.
2	62	1232.	62	1290.
3	77	326.	77	326.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-12.	5.	42.	-102.	400.	39.
8	-46.	10.	35.	-102.	273.	102.
22	60.	15.	31.	267.	119.	206.
28	33.	24.	21.	139.	38.	84.
35	74.	2.	-29.	1.	88.	-13.
39	42.	0.	-9.	1.	181.	-2.
40	86.	1.	-180.	0.	0.	-0.
53	12.	-1.	-23.	148.	-3.	-84.
55	8.	-1.	-16.	155.	-3.	-79.
62	7.	1.	-18.	21.	61.	-5.
69	3.	-0.	5.	11.	-10.	20.
77	15.	-3.	24.	99.	-150.	53.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	1.	11.	61.	59.	23.	1.00	82.	270.	352.
			3	4.	1.	13.	86.	59.	19.	1.57	82.	510.	592.
2	TEE	1	3	13.	1.	4.	19.	59.	86.	1.57	52.	163.	215.
			344	15.	1.	5.	13.	59.	117.	1.57	52.	147.	199.
3	TEE	1	4	22.	2.	25.	44.	64.	158.	1.57	52.	272.	324.
			344	19.	2.	24.	21.	64.	113.	1.57	52.	149.	201.
4	TEE	1	5	1.	2.	18.	14.	12.	2.	1.57	52.	29.	81.
			344	1.	3.	19.	51.	12.	5.	1.57	58.	776.	835.
5	TAN	1	4	25.	2.	22.	158.	64.	44.	1.57	82.	852.	934.
			6	26.	2.	23.	215.	64.	108.	1.00	82.	762.	844.
6	TAN	1	6	9.	2.	20.	215.	64.	108.	1.00	82.	762.	844.
			7	1.	2.	1.	114.	64.	40.	1.00	82.	420.	502.
7	TAN	1	7	1.	2.	1.	114.	64.	40.	1.00	82.	420.	502.
			8	8.	2.	18.	137.	64.	73.	1.00	82.	515.	597.
8	TAN	1	8	13.	2.	17.	137.	64.	73.	1.00	82.	515.	597.
			345	12.	2.	14.	77.	64.	35.	1.57	82.	513.	594.
9	BEND	1	345	12.	14.	2.	77.	35.	64.	1.57	60.	203.	263.
			10	9.	13.	7.	83.	30.	29.	1.57	60.	178.	238.
10	BEND	1	10	9.	13.	7.	83.	30.	29.	1.57	60.	178.	238.
			346	6.	12.	10.	80.	25.	30.	1.57	60.	170.	230.
11	TAN	1	346	6.	10.	12.	80.	30.	25.	1.57	82.	428.	510.
			11	5.	9.	9.	23.	30.	18.	1.00	82.	128.	210.
12	TAN	1	11	6.	8.	9.	24.	29.	18.	1.00	82.	127.	209.
			347	5.	7.	5.	20.	29.	41.	1.57	82.	262.	344.
13	BEND	1	347	5.	5.	7.	20.	41.	29.	1.57	52.	84.	136.
			13	6.	5.	5.	11.	44.	35.	1.57	52.	89.	141.
14	BEND	1	13	6.	5.	5.	11.	44.	35.	1.57	52.	89.	141.
			348	7.	4.	2.	8.	48.	37.	1.57	52.	95.	147.
15	TAN	1	348	7.	2.	4.	8.	37.	48.	1.00	52.	60.	112.
			15	2.	2.	11.	48.	37.	98.	1.00	52.	113.	165.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	2.	1.	11.	60.	17.	98.	1.57	52.	179.	231.
			349	3.	2.	13.	77.	17.	100.	1.57	52.	126.	178.
17	TEE	1	16	11.	16.	20.	49.	31.	12.	1.57	52.	91.	143.
			349	10.	15.	18.	23.	31.	7.	1.57	52.	52.	105.
18	TEE	1	30	10.	12.	2.	3.	66.	95.	1.57	52.	178.	230.
			349	10.	14.	6.	14.	66.	93.	1.57	52.	137.	189.
19	TAN	1	30	6.	11.	2.	20.	63.	95.	1.00	52.	113.	165.
			350	6.	11.	0.	20.	63.	91.	1.00	52.	110.	162.
20	BEND	1	350	6.	0.	11.	20.	91.	63.	1.57	60.	215.	275.
			32	10.	2.	12.	57.	83.	30.	1.57	60.	201.	261.
21	BEND	1	32	10.	2.	12.	57.	83.	30.	1.57	60.	201.	261.
			351	9.	3.	6.	59.	73.	18.	1.57	60.	183.	243.
22	TAN	1	351	9.	6.	3.	59.	18.	73.	1.57	58.	2134.	2192.
			34	7.	6.	9.	79.	18.	110.	1.57	58.	3050.	3109.
23	TEE	1	34	9.	6.	7.	110.	18.	79.	1.57	39.	746.	784.
			352	11.	6.	6.	123.	18.	99.	1.57	39.	555.	594.
24	TEE	1	341	14.	3.	65.	6.	1.	15.	1.57	39.	90.	129.
			352	14.	3.	64.	123.	1.	34.	1.57	39.	443.	481.
25	TEE	1	342	3.	10.	70.	53.	0.	103.	1.57	39.	632.	670.
			352	3.	10.	71.	19.	0.	105.	1.57	117.	33.	150.
26	TAN	1	341	65.	3.	14.	15.	1.	6.	1.57	58.	368.	426.
			35	65.	3.	14.	22.	1.	71.	1.00	58.	1060.	1118.
27	TAN	1	35	5.	3.	4.	22.	1.	71.	1.00	58.	1060.	1118.
			353	1.	3.	4.	14.	1.	13.	1.57	58.	422.	480.
28	BEND	1	353	4.	1.	3.	13.	14.	1.	1.57	39.	103.	142.
			37	2.	1.	5.	9.	15.	10.	1.57	39.	111.	150.
29	BEND	1	37	2.	1.	5.	9.	15.	10.	1.57	39.	111.	150.
			354	3.	1.	5.	0.	15.	13.	1.57	39.	109.	148.
30	TAN	1	354	3.	5.	1.	0.	13.	15.	1.57	58.	447.	505.
			39	3.	6.	0.	2.	13.	10.	1.00	58.	239.	297.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	5.	17.	20.	56.	13.	12.	1.00	58.	836.	894.
			17	5.	17.	21.	109.	13.	12.	1.00	58.	1561.	1619.
32	TEE	1	17	5.	17.	21.	109.	13.	12.	1.57	52.	170.	222.
			355	5.	18.	23.	152.	13.	16.	1.57	52.	150.	202.
33	TEE	1	18	11.	12.	19.	104.	130.	56.	1.57	52.	271.	323.
			355	10.	12.	16.	156.	130.	87.	1.57	52.	266.	318.
34	TEE	1	24	11.	14.	11.	118.	21.	70.	1.57	52.	213.	265.
			355	9.	14.	8.	146.	21.	99.	1.57	52.	176.	228.
35	TAN	1	18	11.	12.	19.	104.	130.	56.	1.57	82.	848.	930.
			356	14.	12.	25.	81.	130.	48.	1.57	82.	776.	858.
36	BEND	1	356	14.	25.	12.	81.	48.	130.	1.57	60.	307.	367.
			20	4.	26.	19.	176.	59.	25.	1.57	60.	357.	417.
37	BEND	1	20	4.	26.	19.	176.	59.	25.	1.57	60.	357.	417.
			357	12.	28.	15.	170.	56.	119.	1.57	60.	411.	471.
38	TAN	1	357	12.	15.	28.	170.	119.	56.	1.57	82.	1039.	1121.
			22	12.	16.	30.	271.	119.	26.	1.00	82.	910.	992.
39	TAN	1	22	0.	1.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	11.	14.	11.	118.	21.	70.	1.57	39.	181.	220.
			25	12.	14.	14.	102.	21.	55.	1.57	35.	201.	236.
41	TAN	1	25	12.	14.	14.	102.	21.	55.	1.00	62.	895.	957.
			358	13.	14.	17.	20.	21.	43.	1.00	62.	395.	456.
42	BEND	1	358	13.	17.	14.	20.	43.	21.	1.57	46.	186.	232.
			26	0.	18.	20.	41.	48.	7.	1.57	46.	229.	275.
43	BEND	1	26	0.	18.	20.	41.	48.	7.	1.57	46.	229.	275.
			359	14.	19.	14.	40.	43.	38.	1.57	46.	249.	295.
44	TAN	1	359	14.	14.	19.	40.	38.	43.	1.00	62.	527.	589.
			28	14.	15.	21.	139.	38.	28.	1.00	62.	1117.	1179.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	1.	11.	61.	59.	23.	1.00	82.	270.	352.
			360	5.	1.	4.	32.	59.	20.	1.57	82.	336.	417.
47	BEND	1	360	5.	4.	1.	32.	20.	59.	1.57	52.	107.	159.
			71	3.	5.	4.	42.	16.	38.	1.57	52.	91.	143.
48	BEND	1	71	3.	5.	4.	42.	16.	38.	1.57	52.	91.	143.
			361	1.	7.	6.	50.	15.	27.	1.57	52.	90.	142.
49	TAN	1	361	1.	6.	7.	50.	27.	15.	1.57	82.	283.	365.
			73	1.	7.	10.	26.	27.	11.	1.00	82.	118.	200.
50	TAN	1	73	1.	7.	10.	26.	27.	11.	1.00	82.	118.	200.
			362	1.	9.	14.	86.	27.	5.	1.57	82.	433.	515.
51	BEND	1	362	14.	1.	9.	5.	86.	27.	1.57	52.	138.	190.
			75	15.	1.	18.	19.	103.	19.	1.57	52.	164.	216.
52	BEND	1	75	15.	1.	18.	19.	103.	19.	1.57	52.	164.	216.
			363	10.	1.	17.	28.	118.	4.	1.57	52.	186.	238.
53	TAN	1	363	1.	17.	10.	118.	4.	28.	1.57	82.	584.	666.
			77	1.	24.	14.	222.	4.	40.	1.57	82.	1091.	1173.
54	TAN	2	5	1.	17.	7.	14.	4.	14.	1.00	58.	281.	339.
			364	1.	17.	7.	40.	4.	10.	1.57	58.	925.	983.
55	BEND	2	364	7.	1.	17.	10.	40.	4.	1.57	39.	226.	265.
			51	3.	1.	18.	11.	41.	2.	1.57	39.	229.	268.
56	BEND	2	51	3.	1.	18.	11.	41.	2.	1.57	39.	229.	268.
			365	3.	1.	17.	11.	40.	1.	1.57	39.	228.	267.
57	TAN	2	365	1.	17.	3.	40.	1.	11.	1.57	58.	932.	990.
			53	1.	15.	9.	81.	1.	7.	1.00	58.	1156.	1214.
58	TAN	2	53	0.	15.	16.	81.	1.	7.	1.00	58.	1156.	1214.
			78	0.	14.	15.	10.	1.	5.	1.57	58.	246.	304.
59	TAN	2	78	0.	14.	15.	10.	1.	5.	1.57	37.	65.	103.
			366	0.	12.	9.	27.	1.	5.	1.57	37.	160.	198.
60	TAN	2	366	0.	12.	9.	27.	1.	5.	1.57	37.	160.	198.
			79	0.	9.	3.	35.	1.	4.	1.57	37.	208.	245.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	9.	3.	35.	1.	4.	1.57	58.	782.	840.
			54	0.	7.	2.	41.	1.	2.	1.00	58.	576.	635.
62	TAN	2	54	0.	7.	2.	41.	1.	2.	1.00	58.	576.	635.
			55	0.	4.	8.	77.	1.	8.	1.00	58.	1092.	1150.
63	TAN	2	55	1.	4.	8.	77.	0.	8.	1.00	58.	1092.	1150.
			367	1.	3.	4.	10.	0.	13.	1.57	58.	361.	419.
64	BEND	2	367	1.	4.	3.	10.	13.	0.	1.57	39.	88.	127.
			57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	134.
65	BEND	2	57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	134.
			368	2.	3.	1.	3.	13.	12.	1.57	39.	96.	135.
66	TAN	2	368	2.	1.	3.	4.	12.	12.	1.57	58.	393.	451.
			369	1.	1.	4.	18.	12.	3.	1.57	58.	490.	548.
67	BEND	2	369	4.	1.	1.	3.	18.	12.	1.57	39.	120.	159.
			60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
68	BEND	2	60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
			370	1.	2.	5.	11.	21.	2.	1.57	39.	128.	167.
69	TAN	2	370	1.	5.	2.	11.	2.	21.	1.57	58.	524.	582.
			62	1.	10.	4.	46.	2.	14.	1.00	58.	682.	740.
70	TAN	2	62	0.	8.	2.	7.	0.	0.	1.00	58.	96.	154.
			371	0.	3.	1.	6.	0.	0.	1.57	58.	133.	191.
71	BEND	2	371	1.	0.	3.	0.	6.	0.	1.57	39.	33.	71.
			64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
72	BEND	2	64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
			372	2.	0.	2.	0.	5.	0.	1.57	39.	27.	66.
73	TAN	2	372	0.	2.	2.	5.	0.	0.	1.57	58.	112.	170.
			373	0.	4.	3.	10.	0.	0.	1.57	58.	226.	284.
74	BEND	2	373	3.	0.	4.	0.	10.	0.	1.57	39.	55.	94.
			67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
75	BEND	2	67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
			374	5.	0.	4.	0.	15.	0.	1.57	39.	83.	122.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	4.	5.	15.	0.	0.	1.00	39.	53.	91.
			69	0.	5.	5.	20.	0.	0.	1.00	39.	69.	108.
77	TAN	3	342	3.	10.	70.	53.	0.	103.	1.57	0.	56.	56.
			343	3.	47.	51.	1007.	0.	47.	1.00	0.	310.	310.
78	TAN	3	343	3.	266.	67.	1007.	0.	47.	1.00	0.	310.	310.
			40	3.	277.	83.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	3050.	22	3109.
2	57	1156.	57	1214.
3	77	310.	77	310.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-4.	35.	44.	-128.	430.	216.
8	-4.	21.	35.	-128.	274.	146.
22	12.	17.	31.	272.	119.	26.
28	14.	15.	22.	139.	38.	28.
35	6.	70.	-19.	1.	45.	-143.
39	3.	0.	-6.	2.	10.	-13.
40	3.	83.	-277.	0.	0.	-0.
53	1.	-30.	-25.	163.	-1.	-13.
55	2.	-9.	-16.	153.	-1.	-17.
62	1.	5.	-18.	53.	14.	-2.
69	0.	-5.	5.	20.	0.	0.
77	1.	-14.	24.	222.	-40.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	1.	11.	61.	59.	23.	1.00	82.	270.	352.
			3	4.	1.	13.	86.	59.	19.	1.57	82.	510.	591.
2	TEE	1	3	13.	1.	4.	19.	59.	86.	1.57	52.	163.	215.
			344	15.	1.	5.	13.	59.	117.	1.57	52.	147.	199.
3	TEE	1	4	22.	2.	25.	44.	64.	158.	1.57	52.	272.	324.
			344	19.	2.	24.	21.	64.	113.	1.57	52.	149.	201.
4	TEE	1	5	1.	2.	18.	14.	12.	2.	1.57	52.	29.	81.
			344	1.	3.	19.	51.	12.	5.	1.57	58.	775.	833.
5	TAN	1	4	25.	2.	22.	158.	64.	44.	1.57	82.	852.	934.
			6	26.	2.	23.	215.	64.	108.	1.00	82.	763.	844.
6	TAN	1	6	9.	2.	20.	215.	64.	108.	1.00	82.	763.	844.
			7	1.	2.	1.	114.	64.	40.	1.00	82.	419.	501.
7	TAN	1	7	1.	2.	1.	114.	64.	40.	1.00	82.	419.	501.
			8	8.	2.	18.	137.	64.	73.	1.00	82.	515.	597.
8	TAN	1	8	13.	2.	16.	137.	64.	73.	1.00	82.	515.	597.
			345	12.	2.	14.	77.	64.	35.	1.57	82.	512.	594.
9	BEND	1	345	12.	14.	2.	77.	35.	64.	1.57	60.	203.	263.
			10	9.	13.	6.	83.	29.	29.	1.57	60.	177.	237.
10	BEND	1	10	9.	13.	6.	83.	29.	29.	1.57	60.	177.	237.
			346	6.	12.	10.	80.	24.	30.	1.57	60.	169.	229.
11	TAN	1	346	6.	10.	12.	80.	30.	24.	1.57	82.	427.	509.
			11	5.	8.	9.	23.	30.	17.	1.00	82.	127.	209.
12	TAN	1	11	5.	8.	9.	24.	29.	17.	1.00	82.	126.	208.
			347	4.	7.	5.	20.	29.	40.	1.57	82.	257.	339.
13	BEND	1	347	4.	5.	7.	20.	40.	29.	1.57	52.	82.	134.
			13	6.	5.	4.	11.	43.	35.	1.57	52.	87.	139.
14	BEND	1	13	6.	5.	4.	11.	43.	35.	1.57	52.	87.	139.
			348	7.	4.	2.	8.	47.	37.	1.57	52.	92.	145.
15	TAN	1	348	7.	2.	4.	8.	37.	47.	1.00	52.	59.	111.
			15	2.	2.	11.	48.	37.	94.	1.00	52.	109.	161.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	2.	1.	11.	60.	17.	94.	1.57	52.	173.	225.
			349	3.	2.	13.	77.	17.	95.	1.57	52.	123.	175.
17	TEE	1	16	11.	15.	20.	49.	30.	11.	1.57	52.	90.	142.
			349	10.	15.	18.	22.	30.	6.	1.57	52.	52.	104.
18	TEE	1	30	9.	12.	2.	3.	67.	93.	1.57	52.	176.	229.
			349	9.	13.	5.	14.	67.	89.	1.57	52.	135.	187.
19	TAN	1	30	6.	11.	2.	20.	63.	93.	1.00	52.	112.	164.
			350	6.	11.	1.	20.	63.	90.	1.00	52.	110.	162.
20	BEND	1	350	6.	1.	11.	20.	90.	63.	1.57	60.	214.	274.
			32	9.	2.	11.	58.	83.	31.	1.57	60.	202.	262.
21	BEND	1	32	9.	2.	11.	58.	83.	31.	1.57	60.	202.	262.
			351	9.	3.	6.	60.	72.	18.	1.57	60.	183.	243.
22	TAN	1	351	9.	6.	3.	60.	18.	72.	1.57	58.	2137.	2195.
			34	7.	6.	9.	80.	18.	110.	1.57	58.	3061.	3119.
23	TEE	1	34	9.	6.	7.	110.	18.	80.	1.57	39.	748.	787.
			352	11.	6.	6.	123.	18.	100.	1.57	39.	558.	596.
24	TEE	1	341	8.	3.	65.	6.	1.	28.	1.57	39.	156.	195.
			352	10.	3.	64.	123.	1.	45.	1.57	39.	455.	493.
25	TEE	1	342	2.	20.	70.	53.	0.	62.	1.57	39.	444.	483.
			352	2.	19.	71.	18.	0.	63.	1.57	117.	20.	137.
26	TAN	1	341	65.	3.	8.	28.	1.	6.	1.57	58.	637.	696.
			35	65.	3.	8.	20.	1.	71.	1.00	58.	1049.	1107.
27	TAN	1	35	5.	3.	4.	20.	1.	71.	1.00	58.	1049.	1107.
			353	1.	3.	4.	16.	1.	13.	1.57	58.	448.	506.
28	BEND	1	353	4.	1.	3.	13.	16.	1.	1.57	39.	109.	148.
			37	2.	1.	5.	9.	17.	10.	1.57	39.	117.	156.
29	BEND	1	37	2.	1.	5.	9.	17.	10.	1.57	39.	117.	156.
			354	3.	1.	5.	0.	16.	13.	1.57	39.	114.	153.
30	TAN	1	354	3.	5.	1.	0.	13.	16.	1.57	58.	466.	524.
			39	3.	6.	0.	2.	13.	8.	1.00	58.	221.	279.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	5.	17.	20.	56.	13.	11.	1.00	58.	830.	888.
			17	5.	17.	21.	108.	13.	11.	1.00	58.	1552.	1610.
32	TEE	1	17	5.	17.	21.	108.	13.	11.	1.57	52.	169.	221.
			355	5.	18.	23.	151.	13.	13.	1.57	52.	150.	202.
33	TEE	1	18	11.	12.	19.	104.	130.	56.	1.57	52.	270.	322.
			355	10.	12.	16.	156.	130.	87.	1.57	52.	265.	317.
34	TEE	1	24	10.	14.	11.	118.	21.	68.	1.57	52.	212.	264.
			355	9.	14.	8.	146.	21.	97.	1.57	52.	174.	226.
35	TAN	1	18	11.	12.	19.	104.	130.	56.	1.57	82.	846.	928.
			356	14.	12.	25.	81.	130.	48.	1.57	82.	774.	856.
36	BEND	1	356	14.	25.	12.	81.	48.	130.	1.57	60.	306.	366.
			20	4.	26.	18.	175.	59.	24.	1.57	60.	356.	416.
37	BEND	1	20	4.	26.	18.	175.	59.	24.	1.57	60.	356.	416.
			357	12.	28.	15.	170.	56.	119.	1.57	60.	410.	470.
38	TAN	1	357	12.	15.	28.	170.	119.	56.	1.57	82.	1037.	1119.
			22	12.	16.	30.	270.	119.	24.	1.00	82.	908.	990.
39	TAN	1	22	0.	1.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	10.	14.	11.	118.	21.	68.	1.57	39.	180.	219.
			25	12.	14.	14.	102.	21.	54.	1.57	35.	199.	235.
41	TAN	1	25	12.	14.	14.	102.	21.	54.	1.00	62.	890.	952.
			358	13.	14.	17.	20.	21.	42.	1.00	62.	388.	450.
42	BEND	1	358	13.	17.	14.	20.	42.	21.	1.57	46.	183.	229.
			26	0.	18.	19.	41.	47.	7.	1.57	46.	226.	272.
43	BEND	1	26	0.	18.	19.	41.	47.	7.	1.57	46.	226.	272.
			359	14.	19.	14.	39.	42.	38.	1.57	46.	246.	292.
44	TAN	1	359	14.	14.	19.	39.	38.	42.	1.00	62.	522.	584.
			28	14.	15.	21.	139.	38.	27.	1.00	62.	1114.	1176.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	1.	11.	61.	59.	23.	1.00	82.	270.	352.
			360	5.	1.	4.	32.	59.	19.	1.57	82.	335.	417.
47	BEND	1	360	5.	4.	1.	32.	19.	59.	1.57	52.	107.	159.
			71	3.	5.	4.	42.	15.	38.	1.57	52.	90.	142.
48	BEND	1	71	3.	5.	4.	42.	15.	38.	1.57	52.	90.	142.
			361	1.	7.	6.	50.	15.	27.	1.57	52.	90.	142.
49	TAN	1	361	1.	6.	7.	50.	27.	15.	1.57	82.	282.	364.
			73	1.	7.	10.	26.	27.	11.	1.00	82.	118.	200.
50	TAN	1	73	1.	7.	10.	26.	27.	11.	1.00	82.	118.	200.
			362	1.	9.	14.	86.	27.	6.	1.57	82.	434.	516.
51	BEND	1	362	14.	1.	9.	6.	86.	27.	1.57	52.	138.	191.
			75	15.	1.	18.	19.	103.	20.	1.57	52.	164.	216.
52	BEND	1	75	15.	1.	18.	19.	103.	20.	1.57	52.	164.	216.
			363	10.	1.	17.	28.	118.	4.	1.57	52.	186.	239.
53	TAN	1	363	1.	17.	10.	118.	4.	28.	1.57	82.	584.	666.
			77	1.	24.	14.	223.	4.	39.	1.57	82.	1092.	1174.
54	TAN	2	5	1.	17.	7.	14.	4.	13.	1.00	58.	279.	337.
			364	1.	17.	7.	40.	4.	10.	1.57	58.	923.	981.
55	BEND	2	364	7.	1.	17.	10.	40.	4.	1.57	39.	226.	264.
			51	3.	1.	18.	10.	41.	2.	1.57	39.	229.	267.
56	BEND	2	51	3.	1.	18.	10.	41.	2.	1.57	39.	229.	267.
			365	3.	1.	17.	10.	40.	1.	1.57	39.	228.	266.
57	TAN	2	365	1.	17.	3.	40.	1.	10.	1.57	58.	931.	989.
			53	1.	15.	9.	81.	1.	7.	1.00	58.	1155.	1213.
58	TAN	2	53	0.	15.	16.	81.	1.	7.	1.00	58.	1155.	1213.
			78	0.	14.	15.	10.	1.	5.	1.57	58.	246.	304.
59	TAN	2	78	0.	14.	15.	10.	1.	5.	1.57	37.	65.	103.
			366	0.	12.	9.	27.	1.	5.	1.57	37.	160.	198.
60	TAN	2	366	0.	12.	9.	27.	1.	5.	1.57	37.	160.	198.
			79	0.	9.	3.	35.	1.	4.	1.57	37.	208.	245.

LOAD NUMBER 12. LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	9.	3.	35.	1.	4.	1.57	58.	782.	840.
			54	0.	7.	2.	41.	1.	2.	1.00	58.	577.	635.
62	TAN	2	54	0.	7.	2.	41.	1.	2.	1.00	58.	577.	635.
			55	0.	4.	8.	77.	1.	8.	1.00	58.	1092.	1150.
63	TAN	2	55	1.	4.	8.	77.	0.	8.	1.00	58.	1092.	1150.
			367	1.	3.	4.	10.	0.	13.	1.57	58.	361.	419.
64	BEND	2	367	1.	4.	3.	10.	13.	0.	1.57	39.	88.	127.
			57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	134.
65	BEND	2	57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	134.
			368	2.	3.	1.	3.	13.	12.	1.57	39.	96.	135.
66	TAN	2	368	2.	1.	3.	4.	12.	12.	1.57	58.	393.	451.
			369	1.	1.	4.	18.	12.	3.	1.57	58.	490.	548.
67	BEND	2	369	4.	1.	1.	3.	18.	12.	1.57	39.	120.	159.
			60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
68	BEND	2	60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
			370	1.	2.	5.	11.	21.	2.	1.57	39.	128.	167.
69	TAN	2	370	1.	5.	2.	11.	2.	21.	1.57	58.	524.	582.
			62	1.	10.	4.	46.	2.	14.	1.00	58.	682.	740.
70	TAN	2	62	0.	8.	2.	7.	0.	0.	1.00	58.	96.	154.
			371	0.	3.	1.	6.	0.	0.	1.57	58.	133.	191.
71	BEND	2	371	1.	0.	3.	0.	6.	0.	1.57	39.	33.	71.
			64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
72	BEND	2	64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
			372	2.	0.	2.	0.	5.	0.	1.57	39.	27.	-66.
73	TAN	2	372	0.	2.	2.	5.	0.	0.	1.57	58.	112.	170.
			373	0.	4.	3.	10.	0.	0.	1.57	58.	226.	284.
74	BEND	2	373	3.	0.	4.	0.	10.	0.	1.57	39.	55.	94.
			67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
75	BEND	2	67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
			374	5.	0.	4.	0.	15.	0.	1.57	39.	83.	122.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	4.	5.	15.	0.	0.	1.00	39.	53.	91.
			69	0.	5.	5.	20.	0.	0.	1.00	39.	69.	108.
77	TAN	3	342	2.	20.	70.	53.	0.	62.	1.57	0.	39.	39.
			343	2.	62.	51.	1007.	0.	28.	1.00	0.	310.	310.
78	TAN	3	343	2.	200.	67.	1007.	0.	28.	1.00	0.	310.	310.
			40	2.	165.	83.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	3061.	22	3119.
2	57	1155.	57	1213.
3	77	310.	77	310.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-4.	35.	44.	-127.	430.	216.
8	-4.	21.	35.	-127.	274.	147.
22	12.	17.	31.	271.	119.	24.
28	14.	15.	22.	139.	38.	27.
35	7.	70.	-12.	1.	40.	-143.
39	3.	0.	-6.	2.	8.	-13.
40	2.	83.	-165.	0.	0.	-0.
53	1.	-30.	-25.	162.	-1.	-13.
55	2.	-9.	-16.	153.	-1.	-17.
62	1.	5.	-18.	53.	14.	-2.
69	0.	-5.	5.	20.	0.	0.
77	1.	-14.	24.	223.	-39.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	8.	11.	57.	37.	7.	1.00	82.	210.	292.
			3	2.	9.	12.	79.	37.	10.	1.57	82.	423.	504.
2	TEE	1	3	12.	9.	2.	10.	37.	79.	1.57	52.	135.	187.
			344	15.	10.	2.	13.	37.	108.	1.57	52.	121.	173.
3	TEE	1	4	19.	12.	2.	11.	51.	146.	1.57	52.	238.	290.
			344	17.	11.	2.	11.	51.	107.	1.57	52.	131.	183.
4	TEE	1	5	0.	0.	1.	15.	12.	2.	1.57	52.	30.	82.
			344	1.	2.	1.	16.	12.	3.	1.57	58.	362.	420.
5	TAN	1	4	2.	12.	19.	146.	51.	11.	1.57	82.	747.	828.
			6	2.	13.	21.	196.	51.	10.	1.00	82.	623.	705.
6	TAN	1	6	0.	13.	20.	196.	51.	10.	1.00	82.	623.	705.
			7	0.	22.	1.	106.	51.	7.	1.00	82.	361.	443.
7	TAN	1	7	0.	22.	1.	106.	51.	7.	1.00	82.	361.	443.
			8	0.	30.	18.	136.	51.	6.	1.00	82.	444.	526.
8	TAN	1	8	14.	30.	16.	136.	51.	6.	1.00	82.	444.	526.
			345	14.	31.	14.	75.	51.	64.	1.57	82.	533.	615.
9	BEND	1	345	14.	14.	31.	75.	64.	51.	1.57	60.	211.	271.
			10	2.	13.	35.	81.	68.	16.	1.57	60.	204.	264.
10	BEND	1	10	2.	13.	35.	81.	68.	16.	1.57	60.	204.	264.
			346	16.	12.	31.	72.	62.	20.	1.57	60.	185.	245.
11	TAN	1	346	16.	31.	12.	72.	20.	62.	1.57	82.	468.	550.
			11	17.	32.	9.	16.	20.	42.	1.00	82.	150.	231.
12	TAN	1	11	13.	34.	9.	18.	17.	42.	1.00	82.	150.	231.
			347	14.	35.	5.	15.	17.	106.	1.57	82.	523.	605.
13	BEND	1	347	14.	5.	35.	15.	106.	17.	1.57	52.	167.	219.
			13	2.	5.	38.	11.	110.	22.	1.57	52.	174.	226.
14	BEND	1	13	2.	5.	38.	11.	110.	22.	1.57	52.	174.	226.
			348	14.	4.	36.	4.	108.	25.	1.57	52.	170.	223.
15	TAN	1	348	14.	36.	4.	4.	25.	108.	1.00	52.	108.	160.
			15	14.	43.	11.	43.	25.	86.	1.00	52.	97.	149.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	40.	20.	11.	48.	13.	86.	1.57	52.	153.	205.
			349	41.	21.	13.	65.	13.	143.	1.57	52.	155.	207.
17	TEE	1	16	22.	6.	20.	43.	26.	20.	1.57	52.	83.	135.
			349	21.	5.	18.	16.	26.	51.	1.57	52.	65.	118.
18	TEE	1	30	32.	11.	2.	2.	62.	88.	1.57	52.	166.	218.
			349	30.	10.	5.	13.	62.	186.	1.57	52.	206.	258.
19	TAN	1	30	33.	0.	2.	18.	60.	88.	1.00	52.	106.	158.
			350	34.	0.	0.	18.	60.	51.	1.00	52.	78.	131.
20	BEND	1	350	34.	0.	0.	18.	51.	60.	1.57	60.	153.	213.
			32	24.	2.	24.	54.	14.	30.	1.57	60.	121.	181.
21	BEND	1	32	24.	2.	24.	54.	14.	30.	1.57	60.	121.	181.
			351	0.	3.	35.	56.	1.	16.	1.57	60.	112.	172.
22	TAN	1	351	0.	35.	3.	56.	16.	1.	1.57	58.	1311.	1369.
			34	0.	38.	9.	78.	16.	1.	1.57	58.	1789.	1847.
23	TEE	1	34	9.	38.	0.	1.	16.	78.	1.57	39.	437.	476.
			352	10.	39.	0.	1.	16.	98.	1.57	39.	351.	389.
24	TEE	1	341	35.	5.	1.	1.	0.	36.	1.57	39.	194.	233.
			352	35.	6.	1.	1.	0.	96.	1.57	39.	333.	372.
25	TEE	1	342	41.	31.	1.	16.	0.	145.	1.57	39.	797.	835.
			352	41.	31.	1.	16.	0.	166.	1.57	117.	51.	168.
26	TAN	1	341	1.	5.	35.	36.	0.	1.	1.57	58.	794.	852.
			35	1.	5.	35.	22.	0.	1.	1.00	58.	312.	371.
27	TAN	1	35	0.	5.	4.	22.	0.	1.	1.00	58.	312.	371.
			353	0.	2.	4.	14.	0.	0.	1.57	58.	302.	361.
28	BEND	1	353	4.	0.	2.	0.	14.	0.	1.57	39.	74.	113.
			37	2.	0.	4.	0.	15.	0.	1.57	39.	82.	121.
29	BEND	1	37	2.	0.	4.	0.	15.	0.	1.57	39.	82.	121.
			354	2.	0.	4.	0.	15.	0.	1.57	39.	81.	119.
30	TAN	1	354	2.	4.	0.	0.	0.	15.	1.57	58.	330.	388.
			39	3.	6.	0.	0.	0.	10.	1.00	58.	137.	195.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	20.	14.	20.	48.	12.	20.	1.00	58.	762.	820.
			17	20.	14.	21.	102.	12.	32.	1.00	58.	1519.	1577.
32	TEE	1	17	20.	14.	21.	102.	12.	32.	1.57	52.	165.	217.
			355	21.	14.	23.	145.	12.	72.	1.57	52.	160.	212.
33	TEE	1	18	11.	25.	19.	104.	126.	40.	1.57	52.	259.	311.
			355	11.	23.	16.	156.	126.	74.	1.57	52.	257.	309.
34	TEE	1	24	3.	4.	11.	117.	20.	21.	1.57	52.	185.	237.
			355	3.	6.	7.	145.	20.	30.	1.57	52.	148.	200.
35	TAN	1	18	11.	25.	19.	104.	126.	40.	1.57	82.	812.	894.
			356	11.	27.	25.	81.	126.	55.	1.57	82.	768.	850.
36	BEND	1	356	11.	25.	27.	81.	55.	126.	1.57	60.	304.	364.
			20	12.	26.	28.	173.	56.	21.	1.57	60.	350.	410.
37	BEND	1	20	12.	26.	28.	173.	56.	21.	1.57	60.	350.	410.
			357	28.	28.	11.	166.	34.	119.	1.57	60.	396.	456.
38	TAN	1	357	28.	11.	28.	166.	119.	34.	1.57	82.	1000.	1082.
			22	29.	11.	30.	267.	119.	71.	1.00	82.	922.	1004.
39	TAN	1	22	1.	0.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	3.	4.	11.	117.	20.	21.	1.57	39.	157.	196.
			25	3.	3.	14.	101.	20.	17.	1.57	35.	178.	213.
41	TAN	1	25	3.	3.	14.	101.	20.	17.	1.00	62.	793.	854.
			358	3.	2.	17.	20.	20.	6.	1.00	62.	217.	279.
42	BEND	1	358	3.	17.	2.	20.	6.	20.	1.57	46.	103.	149.
			26	2.	18.	3.	40.	8.	5.	1.57	46.	149.	195.
43	BEND	1	26	2.	18.	3.	40.	8.	5.	1.57	46.	149.	195.
			359	3.	19.	3.	38.	8.	38.	1.57	46.	195.	241.
44	TAN	1	359	3.	3.	19.	38.	38.	8.	1.00	62.	412.	474.
			28	4.	3.	21.	139.	38.	17.	1.00	62.	1102.	1164.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	63.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	8.	11.	57.	37.	7.	1.00	82.	210.	292.
			360	2.	2.	4.	30.	37.	25.	1.57	82.	259.	340.
47	BEND	1	360	2.	4.	2.	30.	25.	37.	1.57	52.	83.	135.
			71	1.	5.	1.	43.	27.	21.	1.57	52.	85.	137.
48	BEND	1	71	1.	5.	1.	43.	27.	21.	1.57	52.	85.	137.
			361	1.	6.	2.	30.	27.	24.	1.57	52.	72.	124.
49	TAN	1	361	1.	2.	6.	30.	24.	27.	1.57	82.	225.	307.
			73	3.	2.	10.	12.	24.	18.	1.00	82.	98.	180.
50	TAN	1	73	3.	2.	10.	12.	24.	18.	1.00	82.	98.	180.
			362	4.	2.	14.	79.	24.	9.	1.57	82.	402.	484.
51	BEND	1	362	14.	4.	2.	9.	79.	24.	1.57	52.	128.	180.
			75	10.	5.	12.	8.	94.	24.	1.57	52.	150.	202.
52	BEND	1	75	10.	5.	12.	8.	94.	24.	1.57	52.	150.	202.
			363	2.	6.	16.	19.	99.	13.	1.57	52.	157.	209.
53	TAN	1	363	6.	16.	2.	99.	13.	19.	1.57	82.	491.	573.
			77	9.	23.	2.	84.	13.	85.	1.57	82.	582.	664.
54	TAN	2	5	0.	0.	1.	14.	6.	13.	1.00	58.	279.	337.
			364	1.	1.	1.	13.	6.	10.	1.57	58.	389.	447.
55	BEND	2	364	1.	1.	1.	10.	13.	6.	1.57	39.	95.	134.
			51	1.	1.	1.	11.	13.	3.	1.57	39.	94.	133.
56	BEND	2	51	1.	1.	1.	11.	13.	3.	1.57	39.	94.	133.
			365	1.	1.	1.	11.	13.	2.	1.57	39.	93.	132.
57	TAN	2	365	1.	1.	1.	13.	2.	11.	1.57	58.	380.	438.
			53	4.	1.	7.	74.	2.	37.	1.00	58.	1172.	1230.
58	TAN	2	53	7.	1.	16.	74.	2.	37.	1.00	58.	1172.	1230.
			78	7.	1.	15.	4.	2.	3.	1.57	58.	111.	169.
59	TAN	2	78	7.	1.	15.	4.	2.	3.	1.57	37.	30.	67.
			366	4.	1.	9.	21.	2.	10.	1.57	37.	139.	176.
60	TAN	2	366	4.	1.	9.	21.	2.	10.	1.57	37.	139.	176.
			79	2.	1.	3.	29.	2.	14.	1.57	37.	193.	231.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	2.	1.	3.	29.	2.	14.	1.57	58.	729.	787.
			54	1.	1.	2.	42.	2.	19.	1.00	58.	646.	704.
62	TAN	2	54	1.	1.	2.	42.	1.	19.	1.00	58.	646.	704.
			55	4.	1.	8.	77.	1.	41.	1.00	58.	1238.	1296.
63	TAN	2	55	5.	1.	8.	77.	4.	41.	1.00	58.	1238.	1296.
			367	3.	1.	4.	5.	4.	16.	1.57	58.	375.	433.
64	BEND	2	367	3.	4.	1.	5.	16.	4.	1.57	39.	92.	130.
			57	2.	3.	2.	8.	17.	6.	1.57	39.	108.	147.
65	BEND	2	57	2.	3.	2.	8.	17.	6.	1.57	39.	108.	147.
			368	1.	3.	3.	6.	18.	7.	1.57	39.	109.	148.
66	TAN	2	368	1.	3.	3.	7.	7.	17.	1.57	58.	446.	504.
			369	1.	2.	4.	26.	7.	2.	1.57	58.	596.	654.
67	BEND	2	369	4.	1.	2.	2.	26.	7.	1.57	39.	146.	184.
			60	4.	1.	5.	5.	28.	7.	1.57	39.	157.	196.
68	BEND	2	60	4.	1.	5.	5.	28.	7.	1.57	39.	157.	196.
			370	2.	1.	5.	8.	28.	2.	1.57	39.	157.	196.
69	TAN	2	370	2.	5.	1.	8.	2.	28.	1.57	58.	641.	699.
			62	4.	10.	1.	18.	2.	38.	1.00	58.	597.	655.
70	TAN	2	62	3.	8.	0.	3.	3.	21.	1.00	58.	308.	366.
			371	0.	3.	0.	5.	3.	4.	1.57	58.	162.	220.
71	BEND	2	371	0.	0.	3.	4.	5.	3.	1.57	39.	40.	78.
			64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
72	BEND	2	64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
			372	2.	0.	0.	4.	4.	4.	1.57	39.	35.	74.
73	TAN	2	372	0.	0.	2.	4.	4.	4.	1.57	58.	143.	201.
			373	2.	0.	3.	10.	4.	18.	1.57	58.	460.	518.
74	BEND	2	373	3.	2.	0.	18.	10.	4.	1.57	39.	112.	151.
			67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
75	BEND	2	67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
			374	0.	3.	4.	6.	12.	20.	1.57	39.	129.	168.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	3.	4.	0.	12.	20.	6.	1.00	39.	82.	120.
			69	3.	5.	0.	11.	20.	10.	1.00	39.	85.	124.
77	TAN	3	342	41.	31.	1.	16.	0.	145.	1.57	0.	71.	71.
			343	60.	68.	1.	7.	0.	750.	1.00	0.	231.	231.
78	TAN	3	343	63.	287.	1.	7.	0.	750.	1.00	0.	231.	231.
			40	48.	298.	1.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1789.	22	1847.
2	62	1238.	62	1296.
3	77	231.	77	231.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
6	-26.	2.	41.	-102.	393.	20.
8	-60.	14.	34.	-102.	271.	13.
22	30.	11.	31.	268.	119.	72.
28	4.	3.	22.	139.	38.	17.
35	10.	1.	-39.	0.	44.	-2.
39	3.	0.	-6.	0.	10.	-0.
40	48.	1.	-298.	0.	0.	-0.
53	11.	-1.	-23.	147.	-3.	-75.
55	9.	-1.	-16.	154.	-3.	-82.
62	7.	1.	-18.	21.	59.	-6.
69	3.	-0.	5.	11.	-10.	20.
77	9.	-2.	23.	84.	-85.	13.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	2.	8.	11.	57.	37.	7.	1.00	82.	210.	291.
			3	2.	9.	12.	79.	37.	10.	1.57	82.	422.	504.
2	TEE	1	3	12.	9.	2.	10.	37.	79.	1.57	52.	135.	187.
			344	15.	10.	2.	13.	37.	108.	1.57	52.	121.	173.
3	TEE	1	4	20.	12.	2.	11.	51.	146.	1.57	52.	238.	290.
			344	17.	11.	2.	11.	51.	107.	1.57	52.	131.	183.
4	TEE	1	5	0.	0.	1.	15.	12.	2.	1.57	52.	30.	82.
			344	1.	2.	1.	16.	12.	3.	1.57	58.	360.	418.
5	TAN	1	4	2.	12.	20.	146.	51.	11.	1.57	82.	747.	829.
			6	2.	13.	21.	196.	51.	10.	1.00	82.	623.	705.
6	TAN	1	6	0.	13.	20.	196.	51.	10.	1.00	82.	623.	705.
			7	0.	22.	1.	106.	51.	6.	1.00	82.	361.	442.
7	TAN	1	7	0.	22.	1.	106.	51.	6.	1.00	82.	361.	442.
			8	0.	30.	18.	135.	51.	7.	1.00	82.	444.	526.
8	TAN	1	8	14.	30.	16.	135.	51.	7.	1.00	82.	444.	526.
			345	14.	31.	14.	75.	51.	63.	1.57	82.	532.	614.
9	BEND	1	345	14.	14.	31.	75.	63.	51.	1.57	60.	211.	271.
			10	2.	13.	35.	81.	68.	16.	1.57	60.	203.	263.
10	BEND	1	10	2.	13.	35.	81.	68.	16.	1.57	60.	203.	263.
			346	16.	12.	31.	72.	62.	20.	1.57	60.	185.	245.
11	TAN	1	346	16.	31.	12.	72.	20.	62.	1.57	82.	466.	548.
			11	17.	32.	8.	16.	20.	41.	1.00	82.	147.	229.
12	TAN	1	11	13.	34.	8.	18.	18.	41.	1.00	82.	147.	229.
			347	14.	35.	5.	15.	18.	104.	1.57	82.	516.	598.
13	BEND	1	347	14.	5.	35.	15.	104.	18.	1.57	52.	165.	217.
			13	2.	5.	38.	10.	109.	22.	1.57	52.	172.	224.
14	BEND	1	13	2.	5.	38.	10.	109.	22.	1.57	52.	172.	224.
			348	14.	4.	36.	4.	106.	25.	1.57	52.	168.	220.
15	TAN	1	348	14.	36.	4.	4.	25.	106.	1.00	52.	107.	159.
			15	14.	43.	11.	43.	25.	81.	1.00	52.	93.	145.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	40.	20.	11.	48.	13.	81.	1.57	52.	147.	199.
			349	40.	21.	13.	65.	13.	138.	1.57	52.	151.	203.
17	TEE	1	16	21.	5.	20.	42.	26.	20.	1.57	52.	82.	134.
			349	21.	5.	18.	15.	26.	50.	1.57	52.	65.	117.
18	TEE	1	30	31.	10.	1.	2.	63.	87.	1.57	52.	165.	217.
			349	29.	10.	5.	12.	63.	182.	1.57	52.	203.	255.
19	TAN	1	30	33.	0.	1.	18.	60.	87.	1.00	52.	105.	157.
			350	33.	0.	0.	18.	60.	50.	1.00	52.	78.	130.
20	BEND	1	350	33.	0.	0.	18.	50.	60.	1.57	60.	153.	213.
			32	24.	2.	24.	54.	14.	30.	1.57	60.	122.	182.
21	BEND	1	32	24.	2.	24.	54.	14.	30.	1.57	60.	122.	182.
			351	0.	3.	35.	57.	1.	16.	1.57	60.	113.	173.
22	TAN	1	351	0.	35.	3.	57.	16.	1.	1.57	58.	1323.	1381.
			34	0.	37.	9.	79.	16.	1.	1.57	58.	1807.	1865.
23	TEE	1	34	9.	37.	0.	1.	16.	79.	1.57	39.	442.	480.
			352	11.	38.	0.	1.	16.	99.	1.57	39.	354.	393.
24	TEE	1	341	29.	6.	1.	0.	0.	48.	1.57	39.	263.	302.
			352	30.	6.	1.	1.	0.	107.	1.57	39.	372.	411.
25	TEE	1	342	40.	41.	1.	16.	0.	104.	1.57	39.	574.	612.
			352	39.	40.	1.	16.	0.	124.	1.57	117.	38.	156.
26	TAN	1	341	1.	6.	29.	48.	0.	0.	1.57	58.	1076.	1134.
			35	1.	6.	29.	19.	0.	1.	1.00	58.	277.	335.
27	TAN	1	35	0.	6.	4.	19.	0.	1.	1.00	58.	277.	335.
			353	0.	3.	4.	15.	0.	0.	1.57	58.	337.	395.
28	BEND	1	353	4.	0.	3.	0.	15.	0.	1.57	39.	82.	121.
			37	2.	0.	5.	0.	17.	0.	1.57	39.	90.	129.
29	BEND	1	37	2.	0.	5.	0.	17.	0.	1.57	39.	90.	129.
			354	3.	0.	5.	0.	16.	0.	1.57	39.	87.	126.
30	TAN	1	354	3.	5.	0.	0.	0.	16.	1.57	58.	355.	414.
			39	4.	6.	0.	0.	0.	7.	1.00	58.	104.	162.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	19.	14.	20.	48.	12.	20.	1.00	58.	755.	813.
			17	19.	14.	21.	101.	12.	30.	1.00	58.	1508.	1566.
32	TEE	1	17	19.	14.	21.	101.	12.	30.	1.57	52.	164.	216.
			355	20.	14.	23.	145.	12.	70.	1.57	52.	158.	210.
33	TEE	1	18	11.	24.	19.	104.	125.	40.	1.57	52.	258.	310.
			355	11.	23.	16.	156.	125.	74.	1.57	52.	257.	309.
34	TEE	1	24	3.	4.	11.	117.	20.	19.	1.57	52.	185.	237.
			355	3.	5.	7.	145.	20.	27.	1.57	52.	147.	199.
35	TAN	1	18	11.	24.	19.	104.	125.	40.	1.57	82.	810.	891.
			356	11.	27.	25.	81.	125.	55.	1.57	82.	766.	848.
36	BEND	1	356	11.	25.	27.	81.	55.	125.	1.57	60.	303.	363.
			20	11.	26.	27.	173.	56.	20.	1.57	60.	349.	409.
37	BEND	1	20	11.	26.	27.	173.	56.	20.	1.57	60.	349.	409.
			357	28.	28.	11.	165.	34.	119.	1.57	60.	395.	455.
38	TAN	1	357	28.	11.	28.	165.	119.	34.	1.57	82.	998.	1079.
			22	29.	11.	30.	266.	119.	70.	1.00	82.	920.	1002.
39	TAN	1	22	1.	0.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	3.	4.	11.	117.	20.	19.	1.57	39.	157.	196.
			25	3.	2.	14.	101.	20.	16.	1.57	35.	177.	212.
41	TAN	1	25	3.	2.	14.	101.	20.	16.	1.00	62.	791.	852.
			358	3.	2.	17.	20.	20.	5.	1.00	62.	215.	277.
42	BEND	1	358	3.	17.	2.	20.	5.	20.	1.57	46.	102.	148.
			26	2.	18.	2.	40.	7.	5.	1.57	46.	148.	194.
43	BEND	1	26	2.	18.	2.	40.	7.	5.	1.57	46.	148.	194.
			359	3.	19.	3.	38.	7.	38.	1.57	46.	194.	240.
44	TAN	1	359	3.	3.	19.	38.	38.	7.	1.00	62.	411.	472.
			28	4.	3.	21.	139.	38.	16.	1.00	62.	1100.	1162.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	63.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	2.	8.	11.	57.	37.	7.	1.00	82.	210.	291.
			360	2.	2.	4.	30.	37.	25.	1.57	82.	258.	339.
47	BEND	1	360	2.	4.	2.	30.	25.	37.	1.57	52.	82.	134.
			71	1.	5.	1.	43.	26.	20.	1.57	52.	84.	136.
48	BEND	1	71	1.	5.	1.	43.	26.	20.	1.57	52.	84.	136.
			361	1.	6.	2.	30.	26.	24.	1.57	52.	72.	124.
49	TAN	1	361	1.	2.	6.	30.	24.	26.	1.57	82.	224.	306.
			73	2.	2.	10.	12.	24.	18.	1.00	82.	99.	180.
50	TAN	1	73	2.	2.	10.	12.	24.	18.	1.00	82.	99.	180.
			362	4.	2.	14.	79.	24.	9.	1.57	82.	403.	484.
51	BEND	1	362	14.	4.	2.	9.	79.	24.	1.57	52.	128.	181.
			75	10.	5.	12.	8.	94.	24.	1.57	52.	150.	202.
52	BEND	1	75	10.	5.	12.	8.	94.	24.	1.57	52.	150.	202.
			363	2.	5.	16.	19.	99.	13.	1.57	52.	157.	209.
53	TAN	1	363	5.	16.	2.	99.	13.	19.	1.57	82.	491.	573.
			77	9.	23.	2.	85.	13.	85.	1.57	82.	581.	662.
54	TAN	2	5	0.	0.	1.	13.	6.	13.	1.00	58.	277.	335.
			364	1.	1.	1.	13.	6.	10.	1.57	58.	387.	445.
55	BEND	2	364	1.	1.	1.	10.	13.	6.	1.57	39.	95.	133.
			51	1.	1.	1.	11.	13.	3.	1.57	39.	94.	132.
56	BEND	2	51	1.	1.	1.	11.	13.	3.	1.57	39.	94.	132.
			365	1.	1.	1.	11.	13.	2.	1.57	39.	92.	131.
57	TAN	2	365	1.	1.	1.	13.	2.	11.	1.57	58.	378.	436.
			53	4.	1.	7.	74.	2.	37.	1.00	58.	1171.	1229.
58	TAN	2	53	7.	1.	16.	74.	2.	37.	1.00	58.	1171.	1229.
			78	7.	1.	15.	4.	2.	3.	1.57	58.	111.	169.
59	TAN	2	78	7.	1.	15.	4.	2.	3.	1.57	37.	29.	67.
			366	4.	1.	9.	21.	2.	10.	1.57	37.	139.	176.
60	TAN	2	366	4.	1.	9.	21.	2.	10.	1.57	37.	139.	176.
			79	2.	1.	3.	29.	2.	14.	1.57	37.	193.	231.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	2.	1.	3.	29.	2.	14.	1.57	58.	729.	787.
			54	1.	1.	2.	42.	2.	19.	1.00	58.	646.	704.
62	TAN	2	54	1.	1.	2.	42.	1.	19.	1.00	58.	646.	704.
			55	4.	1.	8.	77.	1.	41.	1.00	58.	1238.	1296.
63	TAN	2	55	5.	1.	8.	77.	4.	41.	1.00	58.	1238.	1296.
			367	3.	1.	4.	5.	4.	16.	1.57	58.	375.	433.
64	BEND	2	367	3.	4.	1.	5.	16.	4.	1.57	39.	92.	130.
			57	2.	3.	2.	8.	17.	6.	1.57	39.	108.	147.
65	BEND	2	57	2.	3.	2.	8.	17.	6.	1.57	39.	108.	147.
			368	1.	3.	3.	6.	18.	7.	1.57	39.	109.	148.
66	TAN	2	368	1.	3.	3.	7.	7.	17.	1.57	58.	446.	504.
			369	1.	2.	4.	26.	7.	2.	1.57	58.	596.	654.
67	BEND	2	369	4.	1.	2.	2.	26.	7.	1.57	39.	146.	184.
			60	4.	1.	5.	5.	28.	7.	1.57	39.	157.	196.
68	BEND	2	60	4.	1.	5.	5.	28.	7.	1.57	39.	157.	196.
			370	2.	1.	5.	8.	28.	2.	1.57	39.	157.	195.
69	TAN	2	370	2.	5.	1.	8.	2.	28.	1.57	58.	641.	699.
			62	4.	10.	1.	18.	2.	38.	1.00	58.	597.	655.
70	TAN	2	62	3.	8.	0.	3.	3.	21.	1.00	58.	308.	366.
			371	0.	3.	0.	5.	3.	4.	1.57	58.	162.	220.
71	BEND	2	371	0.	0.	3.	4.	5.	3.	1.57	39.	40.	78.
			64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
72	BEND	2	64	2.	0.	2.	5.	5.	0.	1.57	39.	39.	78.
			372	2.	0.	0.	4.	4.	4.	1.57	39.	35.	74.
73	TAN	2	372	0.	0.	2.	4.	4.	4.	1.57	58.	143.	201.
			373	2.	0.	3.	10.	4.	18.	1.57	58.	460.	518.
74	BEND	2	373	3.	2.	0.	18.	10.	4.	1.57	39.	112.	151.
			67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
75	BEND	2	67	2.	3.	3.	17.	11.	10.	1.57	39.	123.	162.
			374	0.	3.	4.	6.	12.	20.	1.57	39.	129.	168.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	3.	4.	0.	12.	20.	6.	1.00	39.	82.	120.
			69	3.	5.	0.	11.	20.	10.	1.00	39.	85.	124.
77	TAN	3	342	40.	41.	1.	16.	0.	104.	1.57	0.	51.	51.
			343	59.	83.	1.	7.	0.	731.	1.00	0.	225.	225.
78	TAN	3	343	62.	221.	1.	7.	0.	731.	1.00	0.	225.	225.
			40	46.	186.	1.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	1807.	22	1865.
2	62	1238.	62	1296.
3	77	225.	77	225.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
6	-26.	2.	41.	-101.	393.	21.
8	-60.	14.	34.	-101.	271.	14.
22	30.	11.	31.	267.	119.	70.
28	4.	3.	21.	139.	38.	16.
35	11.	1.	-33.	0.	39.	-2.
39	4.	0.	-6.	0.	7.	-0.
40	46.	1.	-186.	0.	0.	-0.
53	11.	-1.	-23.	147.	-3.	-75.
55	9.	-1.	-16.	154.	-3.	-82.
62	7.	1.	-18.	21.	59.	-6.
69	3.	-0.	5.	11.	-10.	20.
77	9.	-2.	23.	85.	-85.	13.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	2.	11.	61.	59.	20.	1.00	82.	267.	349.
			3	4.	2.	13.	85.	59.	17.	1.57	82.	507.	589.
2	TEE	1	3	13.	2.	4.	17.	59.	85.	1.57	52.	162.	214.
			344	15.	2.	5.	11.	59.	117.	1.57	52.	146.	199.
3	TEE	1	4	22.	2.	25.	48.	64.	159.	1.57	52.	273.	325.
			344	19.	2.	24.	17.	64.	113.	1.57	52.	149.	201.
4	TEE	1	5	1.	2.	18.	14.	11.	2.	1.57	52.	28.	80.
			344	1.	3.	19.	51.	11.	4.	1.57	58.	764.	822.
5	TAN	1	4	25.	2.	22.	159.	64.	48.	1.57	82.	857.	939.
			6	26.	2.	23.	215.	64.	111.	1.00	82.	767.	849.
6	TAN	1	6	9.	2.	20.	215.	64.	111.	1.00	82.	767.	849.
			7	1.	2.	1.	114.	64.	44.	1.00	82.	424.	506.
7	TAN	1	7	1.	2.	1.	114.	64.	44.	1.00	82.	424.	506.
			8	8.	2.	18.	137.	64.	62.	1.00	82.	501.	583.
8	TAN	1	8	9.	2.	17.	137.	64.	62.	1.00	82.	501.	583.
			345	8.	2.	14.	77.	64.	39.	1.57	82.	518.	600.
9	BEND	1	345	8.	14.	2.	77.	39.	64.	1.57	60.	205.	265.
			10	7.	13.	4.	83.	35.	29.	1.57	60.	181.	241.
10	BEND	1	10	7.	13.	4.	83.	35.	29.	1.57	60.	181.	241.
			346	4.	12.	7.	79.	32.	30.	1.57	60.	174.	234.
11	TAN	1	346	4.	7.	12.	79.	30.	32.	1.57	82.	439.	521.
			11	3.	5.	9.	23.	30.	13.	1.00	82.	123.	205.
12	TAN	1	11	3.	5.	9.	24.	29.	13.	1.00	82.	122.	204.
			347	2.	4.	5.	20.	29.	15.	1.57	82.	185.	266.
13	BEND	1	347	2.	5.	4.	20.	15.	29.	1.57	52.	59.	111.
			13	3.	5.	3.	11.	17.	35.	1.57	52.	62.	114.
14	BEND	1	13	3.	5.	3.	11.	17.	35.	1.57	52.	62.	114.
			348	4.	4.	2.	8.	19.	37.	1.57	52.	65.	117.
15	TAN	1	348	4.	2.	4.	8.	37.	19.	1.00	52.	41.	93.
			15	6.	2.	11.	48.	37.	32.	1.00	52.	66.	119.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	5.	3.	11.	60.	16.	32.	1.57	52.	107.	159.
			349	6.	4.	13.	77.	16.	40.	1.57	52.	88.	140.
17	TEE	1	16	8.	7.	20.	49.	31.	6.	1.57	52.	90.	142.
			349	7.	7.	18.	23.	31.	16.	1.57	52.	55.	107.
18	TEE	1	30	7.	2.	2.	2.	66.	39.	1.57	52.	117.	170.
			349	6.	3.	6.	14.	66.	48.	1.57	52.	112.	164.
19	TAN	1	30	7.	1.	2.	19.	63.	39.	1.00	52.	75.	127.
			350	7.	1.	0.	20.	63.	35.	1.00	52.	73.	125.
20	BEND	1	350	7.	0.	1.	20.	35.	63.	1.57	60.	143.	203.
			32	4.	2.	6.	57.	31.	31.	1.57	60.	138.	198.
21	BEND	1	32	4.	2.	6.	57.	31.	31.	1.57	60.	138.	198.
			351	3.	3.	7.	59.	30.	18.	1.57	60.	131.	191.
22	TAN	1	351	3.	7.	3.	59.	18.	30.	1.57	58.	1529.	1587.
			34	5.	7.	9.	78.	18.	60.	1.57	58.	2235.	2293.
23	TEE	1	34	9.	7.	5.	60.	18.	78.	1.57	39.	546.	585.
			352	11.	7.	6.	71.	18.	98.	1.57	39.	430.	469.
24	TEE	1	341	15.	3.	29.	12.	1.	17.	1.57	39.	114.	153.
			352	15.	3.	30.	71.	1.	38.	1.57	39.	279.	318.
25	TEE	1	342	3.	12.	36.	34.	0.	98.	1.57	39.	563.	602.
			352	3.	12.	36.	16.	0.	99.	1.57	117.	31.	148.
26	TAN	1	341	29.	3.	15.	17.	1.	12.	1.57	58.	467.	525.
			35	29.	3.	15.	23.	1.	17.	1.00	58.	408.	466.
27	TAN	1	35	1.	3.	4.	23.	1.	17.	1.00	58.	408.	466.
			353	3.	3.	4.	15.	1.	11.	1.57	58.	416.	474.
28	BEND	1	353	4.	3.	3.	11.	15.	1.	1.57	39.	102.	140.
			37	3.	3.	5.	8.	16.	9.	1.57	39.	112.	151.
29	BEND	1	37	3.	3.	5.	8.	16.	9.	1.57	39.	112.	151.
			354	3.	3.	5.	1.	15.	13.	1.57	39.	111.	149.
30	TAN	1	354	3.	5.	3.	1.	13.	15.	1.57	58.	452.	511.
			39	3.	6.	4.	19.	13.	13.	1.00	58.	375.	433.

WPPSS OUTLET AND BALANCE LINES
GROUP-7D

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	6.	9.	20.	57.	13.	6.	1.00	58.	831.	889.
			17	6.	9.	21.	109.	13.	9.	1.00	58.	1565.	1623.
32	TEE	1	17	6.	9.	21.	109.	13.	9.	1.57	52.	170.	222.
			355	6.	10.	23.	152.	13.	20.	1.57	52.	152.	204.
33	TEE	1	18	7.	11.	19.	104.	131.	36.	1.57	52.	263.	315.
			355	5.	11.	16.	156.	131.	54.	1.57	52.	258.	310.
34	TEE	1	24	6.	9.	11.	118.	21.	45.	1.57	52.	197.	249.
			355	5.	9.	8.	146.	21.	62.	1.57	52.	158.	210.
35	TAN	1	18	7.	11.	19.	104.	131.	36.	1.57	82.	824.	906.
			356	10.	11.	25.	81.	131.	34.	1.57	82.	760.	842.
36	BEND	1	356	10.	25.	11.	81.	34.	131.	1.57	60.	301.	361.
			20	2.	26.	15.	176.	41.	25.	1.57	60.	349.	409.
37	BEND	1	20	2.	26.	15.	176.	41.	25.	1.57	60.	349.	409.
			357	11.	28.	11.	171.	37.	119.	1.57	60.	404.	464.
38	TAN	1	357	11.	11.	28.	171.	119.	37.	1.57	82.	1021.	1103.
			22	11.	12.	30.	271.	119.	11.	1.00	82.	909.	991.
39	TAN	1	22	0.	1.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	6.	9.	11.	118.	21.	45.	1.57	39.	167.	206.
			25	8.	9.	14.	102.	21.	37.	1.57	35.	188.	223.
41	TAN	1	25	8.	9.	14.	102.	21.	37.	1.00	62.	837.	899.
			358	9.	9.	17.	20.	21.	28.	1.00	62.	306.	368.
42	BEND	1	358	9.	17.	9.	20.	28.	21.	1.57	46.	144.	190.
			26	1.	18.	13.	41.	32.	7.	1.57	46.	188.	234.
43	BEND	1	26	1.	18.	13.	41.	32.	7.	1.57	46.	188.	234.
			359	9.	19.	10.	40.	28.	38.	1.57	46.	221.	267.
44	TAN	1	359	9.	10.	19.	40.	38.	28.	1.00	62.	468.	530.
			28	9.	11.	21.	140.	38.	17.	1.00	62.	1106.	1167.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	2.	11.	61.	59.	20.	1.00	82.	267.	349.
			360	5.	2.	4.	33.	59.	15.	1.57	82.	333.	415.
47	BEND	1	360	5.	4.	2.	33.	15.	59.	1.57	52.	106.	158.
			71	3.	6.	5.	41.	18.	39.	1.57	52.	92.	144.
48	BEND	1	71	3.	6.	5.	41.	18.	39.	1.57	52.	92.	144.
			361	2.	7.	6.	50.	19.	28.	1.57	52.	93.	145.
49	TAN	1	361	2.	6.	7.	50.	28.	19.	1.57	82.	292.	374.
			73	2.	8.	10.	25.	28.	11.	1.00	82.	121.	203.
50	TAN	1	73	2.	8.	10.	25.	28.	11.	1.00	82.	121.	203.
			362	2.	9.	14.	85.	28.	5.	1.57	82.	433.	515.
51	BEND	1	362	14.	2.	9.	5.	85.	28.	1.57	52.	138.	190.
			75	15.	2.	18.	17.	102.	23.	1.57	52.	164.	216.
52	BEND	1	75	15.	2.	18.	17.	102.	23.	1.57	52.	164.	216.
			363	11.	2.	17.	29.	117.	4.	1.57	52.	186.	238.
53	TAN	1	363	2.	17.	11.	117.	4.	29.	1.57	82.	583.	665.
			77	2.	24.	14.	223.	4.	33.	1.57	82.	1089.	1171.
54	TAN	2	5	1.	17.	7.	14.	4.	12.	1.00	58.	268.	326.
			364	1.	17.	7.	40.	4.	9.	1.57	58.	920.	978.
55	BEND	2	364	7.	1.	17.	9.	40.	4.	1.57	39.	225.	264.
			51	3.	1.	18.	10.	41.	2.	1.57	39.	228.	267.
56	BEND	2	51	3.	1.	18.	10.	41.	2.	1.57	39.	228.	267.
			365	3.	1.	17.	10.	40.	1.	1.57	39.	227.	266.
57	TAN	2	365	1.	17.	3.	40.	1.	10.	1.57	58.	928.	986.
			53	1.	15.	9.	81.	1.	6.	1.00	58.	1155.	1213.
58	TAN	2	53	0.	15.	16.	81.	1.	6.	1.00	58.	1155.	1213.
			78	0.	14.	15.	10.	1.	5.	1.57	58.	242.	300.
59	TAN	2	78	0.	14.	15.	10.	1.	5.	1.57	37.	64.	102.
			366	0.	12.	9.	27.	1.	4.	1.57	37.	160.	197.
60	TAN	2	366	0.	12.	9.	27.	1.	4.	1.57	37.	160.	197.
			79	0.	9.	3.	35.	1.	4.	1.57	37.	207.	245.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	9.	3.	35.	1.	4.	1.57	58.	781.	839.
			54	0.	7.	2.	41.	1.	2.	1.00	58.	576.	635.
62	TAN	2	54	0.	7.	2.	41.	1.	2.	1.00	58.	576.	635.
			55	0.	4.	8.	77.	1.	8.	1.00	58.	1092.	1151.
63	TAN	2	55	1.	4.	8.	77.	0.	8.	1.00	58.	1092.	1151.
			367	1.	3.	4.	10.	0.	13.	1.57	58.	362.	420.
64	BEND	2	367	1.	4.	3.	10.	13.	0.	1.57	39.	88.	127.
			57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	135.
65	BEND	2	57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	135.
			368	2.	3.	1.	3.	13.	12.	1.57	39.	96.	135.
66	TAN	2	368	2.	1.	3.	4.	12.	12.	1.57	58.	393.	451.
			369	1.	1.	4.	18.	12.	3.	1.57	58.	491.	549.
67	BEND	2	369	4.	1.	1.	3.	18.	12.	1.57	39.	120.	159.
			60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
68	BEND	2	60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
			370	1.	2.	5.	11.	21.	2.	1.57	39.	128.	167.
69	TAN	2	370	1.	5.	2.	11.	2.	21.	1.57	58.	525.	583.
			62	1.	10.	4.	46.	2.	14.	1.00	58.	682.	740.
70	TAN	2	62	0.	8.	2.	7.	0.	0.	1.00	58.	96.	154.
			371	0.	3.	1.	6.	0.	0.	1.57	58.	133.	191.
71	BEND	2	371	1.	0.	3.	0.	6.	0.	1.57	39.	33.	71.
			64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
72	BEND	2	64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
			372	2.	0.	2.	0.	5.	0.	1.57	39.	27.	66.
73	TAN	2	372	0.	2.	2.	5.	0.	0.	1.57	58.	112.	170.
			373	0.	4.	3.	10.	0.	0.	1.57	58.	226.	284.
74	BEND	2	373	3.	0.	4.	0.	10.	0.	1.57	39.	55.	94.
			67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
75	BEND	2	67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
			374	5.	0.	4.	0.	15.	0.	1.57	39.	83.	122.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	4.	5.	15.	0.	0.	1.00	39.	53.	91.
			69	0.	5.	5.	20.	0.	0.	1.00	39.	69.	108.
77	TAN	3	342	3.	12.	36.	34.	0.	98.	1.57	0.	50.	50.
			343	3.	49.	55.	746.	0.	45.	1.00	0.	230.	230.
78	TAN	3	343	3.	268.	63.	746.	0.	45.	1.00	0.	230.	230.
			40	3.	279.	47.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	2235.	22	2293.
2	57	1155.	57	1213.
3	77	230.	77	230.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
6	-3.	35.	44.	-127.	430.	222.
8	-3.	17.	35.	-127.	274.	124.
22	11.	12.	31.	272.	119.	11.
28	9.	11.	22.	140.	38.	17.
35	7.	30.	-20.	3.	46.	-35.
39	3.	4.	-6.	19.	13.	-13.
40	3.	47.	-279.	0.	0.	-0.
53	1.	-30.	-25.	163.	-1.	-12.
55	2.	-9.	-16.	153.	-1.	-17.
62	1.	5.	-18.	53.	14.	-2.
69	0.	-5.	5.	20.	0.	0.
77	2.	-14.	24.	223.	-33.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	2	3.	2.	11.	61.	59.	20.	1.00	82.	267.	349.
			3	4.	2.	13.	85.	59.	17.	1.57	82.	506.	588.
2	TEE	1	3	13.	2.	4.	17.	59.	85.	1.57	52.	162.	214.
			344	16.	2.	5.	11.	59.	117.	1.57	52.	146.	198.
3	TEE	1	4	22.	1.	25.	48.	63.	159.	1.57	52.	273.	325.
			344	19.	1.	24.	18.	63.	113.	1.57	52.	148.	200.
4	TEE	1	5	1.	2.	18.	14.	11.	2.	1.57	52.	28.	80.
			344	1.	3.	19.	51.	11.	4.	1.57	58.	762.	820.
5	TAN	1	4	25.	1.	22.	159.	63.	48.	1.57	82.	857.	939.
			6	26.	1.	23.	215.	63.	111.	1.00	82.	768.	850.
6	TAN	1	6	9.	1.	20.	215.	63.	111.	1.00	82.	768.	850.
			7	1.	1.	1.	114.	63.	44.	1.00	82.	423.	505.
7	TAN	1	7	1.	1.	1.	114.	63.	44.	1.00	82.	423.	505.
			8	8.	1.	18.	137.	63.	62.	1.00	82.	501.	583.
8	TAN	1	8	9.	1.	16.	137.	63.	62.	1.00	82.	501.	583.
			345	8.	1.	14.	77.	63.	38.	1.57	82.	517.	599.
9	BEND	1	345	8.	14.	1.	77.	38.	63.	1.57	60.	205.	265.
			10	6.	13.	4.	83.	35.	29.	1.57	60.	181.	241.
10	BEND	1	10	6.	13.	4.	83.	35.	29.	1.57	60.	181.	241.
			346	4.	12.	6.	79.	32.	30.	1.57	60.	173.	233.
11	TAN	1	346	4.	6.	12.	79.	30.	32.	1.57	82.	438.	520.
			11	3.	5.	9.	23.	30.	12.	1.00	82.	122.	204.
12	TAN	1	11	3.	5.	9.	24.	29.	12.	1.00	82.	121.	203.
			347	2.	4.	5.	20.	29.	13.	1.57	82.	182.	264.
13	BEND	1	347	2.	5.	4.	20.	13.	29.	1.57	52.	58.	110.
			13	3.	5.	2.	11.	15.	35.	1.57	52.	61.	113.
14	BEND	1	13	3.	5.	2.	11.	15.	35.	1.57	52.	61.	113.
			348	4.	4.	1.	8.	17.	37.	1.57	52.	63.	116.
15	TAN	1	348	4.	1.	4.	8.	37.	17.	1.00	52.	40.	92.
			15	6.	1.	11.	48.	37.	27.	1.00	52.	65.	117.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TEE	1	15	5.	3.	11.	60.	17.	27.	1.57	52.	105.	157.
			349	6.	4.	13.	77.	17.	35.	1.57	52.	87.	139.
17	TEE	1	16	8.	6.	20.	49.	31.	5.	1.57	52.	90.	142.
			349	7.	6.	18.	23.	31.	15.	1.57	52.	54.	107.
18	TEE	1	30	6.	1.	2.	2.	66.	37.	1.57	52.	117.	169.
			349	5.	3.	5.	14.	66.	44.	1.57	52.	112.	164.
19	TAN	1	30	6.	1.	2.	20.	63.	37.	1.00	52.	74.	126.
			350	6.	1.	1.	20.	63.	35.	1.00	52.	73.	125.
20	BEND	1	350	6.	1.	1.	20.	35.	63.	1.57	60.	143.	203.
			32	3.	2.	6.	57.	31.	31.	1.57	60.	138.	198.
21	BEND	1	32	3.	2.	6.	57.	31.	31.	1.57	60.	138.	198.
			351	3.	3.	6.	60.	29.	17.	1.57	60.	132.	192.
22	TAN	1	351	3.	6.	3.	60.	17.	29.	1.57	58.	1537.	1595.
			34	5.	6.	9.	79.	17.	60.	1.57	58.	2250.	2308.
23	TEE	1	34	9.	6.	5.	60.	17.	79.	1.57	39.	550.	589.
			352	11.	6.	6.	71.	17.	99.	1.57	39.	433.	472.
24	TEE	1	341	9.	4.	29.	12.	1.	29.	1.57	39.	174.	213.
			352	11.	4.	30.	71.	1.	49.	1.57	39.	299.	338.
25	TEE	1	342	2.	22.	36.	34.	0.	56.	1.57	39.	358.	397.
			352	2.	21.	36.	16.	0.	57.	1.57	117.	18.	136.
26	TAN	1	341	29.	4.	9.	29.	1.	12.	1.57	58.	713.	771.
			35	29.	4.	9.	20.	1.	17.	1.00	58.	379.	438.
27	TAN	1	35	1.	4.	4.	20.	1.	17.	1.00	58.	379.	438.
			353	3.	4.	4.	16.	1.	11.	1.57	58.	444.	502.
28	BEND	1	353	4.	3.	4.	11.	16.	1.	1.57	39.	108.	147.
			37	2.	3.	6.	8.	18.	9.	1.57	39.	118.	157.
29	BEND	1	37	2.	3.	6.	8.	18.	9.	1.57	39.	118.	157.
			354	4.	3.	5.	1.	16.	13.	1.57	39.	115.	154.
30	TAN	1	354	4.	5.	3.	1.	13.	16.	1.57	58.	472.	530.
			39	4.	6.	4.	19.	13.	11.	1.00	58.	359.	418.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	16	5.	8.	20.	56.	13.	5.	1.00	58.	825.	883.
			17	5.	9.	21.	109.	13.	8.	1.00	58.	1557.	1615.
32	TEE	1	17	5.	9.	21.	109.	13.	8.	1.57	52.	169.	221.
			355	5.	10.	23.	152.	13.	18.	1.57	52.	151.	203.
33	TEE	1	18	7.	11.	19.	103.	130.	35.	1.57	52.	262.	314.
			355	5.	11.	16.	156.	130.	54.	1.57	52.	257.	310.
34	TEE	1	24	6.	9.	11.	118.	21.	44.	1.57	52.	196.	248.
			355	4.	9.	8.	146.	21.	59.	1.57	52.	157.	209.
35	TAN	1	18	7.	11.	19.	103.	130.	35.	1.57	82.	822.	903.
			356	10.	11.	25.	81.	130.	34.	1.57	82.	758.	840.
36	BEND	1	356	10.	25.	11.	81.	34.	130.	1.57	60.	300.	360.
			20	2.	26.	15.	176.	41.	25.	1.57	60.	348.	408.
37	BEND	1	20	2.	26.	15.	176.	41.	25.	1.57	60.	348.	408.
			357	11.	28.	11.	170.	37.	119.	1.57	60.	403.	463.
38	TAN	1	357	11.	11.	28.	170.	119.	37.	1.57	82.	1019.	1101.
			22	11.	12.	30.	271.	119.	10.	1.00	82.	907.	989.
39	TAN	1	22	0.	1.	1.	1.	0.	0.	1.00	82.	3.	85.
			23	0.	0.	0.	0.	0.	0.	1.00	82.	0.	82.
40	TAN	1	24	6.	9.	11.	118.	21.	44.	1.57	39.	166.	205.
			25	7.	9.	14.	102.	21.	35.	1.57	35.	187.	222.
41	TAN	1	25	7.	9.	14.	102.	21.	35.	1.00	62.	834.	895.
			358	9.	9.	17.	20.	21.	27.	1.00	62.	301.	362.
42	BEND	1	358	9.	17.	9.	20.	27.	21.	1.57	46.	142.	188.
			26	1.	18.	13.	41.	31.	7.	1.57	46.	186.	232.
43	BEND	1	26	1.	18.	13.	41.	31.	7.	1.57	46.	186.	232.
			359	9.	19.	10.	40.	27.	38.	1.57	46.	219.	265.
44	TAN	1	359	9.	10.	19.	40.	38.	27.	1.00	62.	464.	526.
			28	9.	11.	21.	139.	38.	16.	1.00	62.	1103.	1165.
45	TAN	1	28	0.	0.	0.	0.	0.	0.	1.00	62.	1.	62.
			29	0.	0.	0.	0.	0.	0.	1.00	62.	0.	62.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	LBS AND IN-LBS M1	M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TAN	1	2	3.	2.	11.	61.	59.	20.	1.00	82.	267.	349.
			360	5.	2.	4.	33.	59.	14.	1.57	82.	333.	415.
47	BEND	1	360	5.	4.	2.	33.	14.	59.	1.57	52.	106.	158.
			71	3.	5.	5.	41.	18.	39.	1.57	52.	91.	144.
48	BEND	1	71	3.	5.	5.	41.	18.	39.	1.57	52.	91.	144.
			361	2.	7.	6.	50.	19.	28.	1.57	52.	93.	145.
49	TAN	1	361	2.	6.	7.	50.	28.	19.	1.57	82.	291.	373.
			73	2.	7.	10.	26.	28.	11.	1.00	82.	122.	203.
50	TAN	1	73	2.	7.	10.	26.	28.	11.	1.00	82.	122.	203.
			362	2.	9.	14.	85.	28.	5.	1.57	82.	434.	516.
51	BEND	1	362	14.	2.	9.	5.	85.	28.	1.57	52.	138.	190.
			75	15.	2.	18.	17.	102.	23.	1.57	52.	164.	216.
52	BEND	1	75	15.	2.	18.	17.	102.	23.	1.57	52.	164.	216.
			363	10.	2.	17.	29.	117.	4.	1.57	52.	186.	238.
53	TAN	1	363	2.	17.	10.	117.	4.	29.	1.57	82.	583.	665.
			77	2.	24.	14.	223.	4.	33.	1.57	82.	1090.	1172.
54	TAN	2	5	1.	17.	7.	14.	4.	12.	1.00	58.	267.	325.
			364	1.	17.	7.	40.	4.	9.	1.57	58.	918.	976.
55	BEND	2	364	7.	1.	17.	9.	40.	4.	1.57	39.	224.	263.
			51	3.	1.	18.	9.	41.	2.	1.57	39.	227.	266.
56	BEND	2	51	3.	1.	18.	9.	41.	2.	1.57	39.	227.	266.
			365	3.	1.	17.	9.	40.	1.	1.57	39.	226.	265.
57	TAN	2	365	1.	17.	3.	40.	1.	9.	1.57	58.	926.	984.
			53	1.	15.	9.	81.	1.	6.	1.00	58.	1155.	1213.
58	TAN	2	53	0.	15.	16.	81.	1.	6.	1.00	58.	1155.	1213.
			78	0.	14.	15.	10.	1.	5.	1.57	58.	242.	300.
59	TAN	2	78	0.	14.	15.	10.	1.	5.	1.57	37.	64.	102.
			366	0.	12.	9.	27.	1.	4.	1.57	37.	160.	197.
60	TAN	2	366	0.	12.	9.	27.	1.	4.	1.57	37.	160.	197.
			79	0.	9.	3.	35.	1.	4.	1.57	37.	207.	245.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	2	79	0.	9.	3.	35.	1.	4.	1.57	58.	781.	839.
			54	0.	7.	2.	41.	1.	2.	1.00	58.	577.	635.
62	TAN	2	54	0.	7.	2.	41.	1.	2.	1.00	58.	577.	635.
			55	0.	4.	8.	77.	1.	8.	1.00	58.	1093.	1151.
63	TAN	2	55	1.	4.	8.	77.	0.	8.	1.00	58.	1093.	1151.
			367	1.	3.	4.	10.	0.	13.	1.57	58.	362.	420.
64	BEND	2	367	1.	4.	3.	10.	13.	0.	1.57	39.	88.	127.
			57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	135.
65	BEND	2	57	2.	3.	2.	9.	13.	7.	1.57	39.	96.	135.
			368	2.	3.	1.	3.	13.	12.	1.57	39.	96.	135.
66	TAN	2	368	2.	1.	3.	4.	12.	12.	1.57	58.	393.	451.
			369	1.	1.	4.	18.	12.	3.	1.57	58.	491.	549.
67	BEND	2	369	4.	1.	1.	3.	18.	12.	1.57	39.	120.	159.
			60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
68	BEND	2	60	3.	1.	4.	8.	20.	9.	1.57	39.	128.	167.
			370	1.	2.	5.	11.	21.	2.	1.57	39.	128.	167.
69	TAN	2	370	1.	5.	2.	11.	2.	21.	1.57	58.	525.	583.
			62	1.	10.	4.	46.	2.	14.	1.00	58.	682.	740.
70	TAN	2	62	0.	8.	2.	7.	0.	0.	1.00	58.	96.	154.
			371	0.	3.	1.	6.	0.	0.	1.57	58.	133.	191.
71	BEND	2	371	1.	0.	3.	0.	6.	0.	1.57	39.	33.	71.
			64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
72	BEND	2	64	2.	0.	3.	0.	6.	0.	1.57	39.	33.	72.
			372	2.	0.	2.	0.	5.	0.	1.57	39.	27.	66.
73	TAN	2	372	0.	2.	2.	5.	0.	0.	1.57	58.	112.	170.
			373	0.	4.	3.	10.	0.	0.	1.57	58.	226.	284.
74	BEND	2	373	3.	0.	4.	0.	10.	0.	1.57	39.	55.	94.
			67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
75	BEND	2	67	5.	0.	5.	0.	13.	0.	1.57	39.	69.	107.
			374	5.	0.	4.	0.	15.	0.	1.57	39.	83.	122.

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STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
76	TAN	2	374	0.	4.	5.	15.	0.	0.	1.00	39.	53.	91.
			69	0.	5.	5.	20.	0.	0.	1.00	39.	69.	108.
77	TAN	3	342	2.	22.	36.	34.	0.	56.	1.57	0.	32.	32.
			343	2.	64.	55.	746.	0.	26.	1.00	0.	230.	230.
78	TAN	3	343	2.	202.	63.	746.	0.	26.	1.00	0.	230.	230.
			40	2.	167.	47.	0.	0.	0.	1.57	0.	0.	0.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	22	2250.	22	2308.
2	57	1155.	57	1213.
3	77	230.	77	230.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
6	-3.	35.	44.	-127.	430.	222.
8	-3.	17.	35.	-127.	274.	125.
22	11.	12.	31.	272.	119.	10.
28	9.	11.	22.	139.	38.	16.
35	8.	30.	-13.	3.	41.	-35.
39	4.	4.	-6.	19.	11.	-13.
40	2.	47.	-167.	0.	0.	-0.
53	1.	-30.	-25.	163.	-1.	-12.
55	2.	-9.	-16.	153.	-1.	-17.
62	1.	5.	-18.	53.	14.	-2.
69	0.	-5.	5.	20.	0.	0.
77	2.	-14.	24.	223.	-33.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

```
* CPU SECONDS ** THIS STEP "STRE" TIME IS   24.32 ** LAST STEP "COMB" TIME IS   14.56 ** DELTA TIME IS    9.76 *
* ELAPSED SECONDS                           209.1                               134.6                        74.4 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   24.32 ** LAST STEP "STRE" TIME IS   24.32 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           209.1                               209.1                         0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   24.35 ** LAST STEP "SUPR" TIME IS   24.32 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           209.2                               209.1                         0.1 *
```

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS OUTLET AND BALANCE LINES
GEOMETRY
WPPSS OUTLET AND BALANCE LINES
COORDINATE INCHES
2 0 5 0
3 2 5 0
4 6.5 5 0
5 4.5 5 2
6 9 5 0
7 37.5 5 0
8 66 5 0
10 70.75 5 0
11 74.63 9.75 0
13 78.5 13.38 0
15 91.5 13.38 0
16 93.5 11.38 0
17 93.5 8.75 0
18 90.5 6.75 0
20 80.62 6.75 0
22 80.62 1.75 0
23 80.62 0 0
24 96.5 6.75 0
25 97.75 6.75 0
26 106.5 6.75 0
28 106.5 .75 0
29 106.5 0 0
30 93.5 15.38 0
32 93.5 18 0
34 69.81 18 0
35 64.81 18 0
37 34.31 18 0
39 34.31 18 6
40 67.81 18 30
51 4.5 9 4
53 4.5 30 4
54 4.5 54 4
55 4.5 78 3
57 4.5 92.75 4
60 31 92.75 4
62 31 92.75 20.5
64 31 92.75 38
67 31 113 38
69 31 113 36
71 -22 5 0
73 -22 11.5 0
75 -22 18.75 0
-77 -22 18.75 -12
78 4.5 35 4
79 4.5 38 4
341 65.81 18 0
342 67.81 18 .5
343 67.81 18 16.5
BOUNDARY
6 YZSTOP
-77 ANCHOR
-8 YZSTOP
22 ANCHOR
28 ANCHOR
```

```
35 YZSTOP
39 ANCHOR
40 SPECIAL 1 1 1 0 0 0
53 ZXSTOP
55 ZXSTOP
62 ANCHOR
69 ANCHOR
MATERIAL 1.5
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL .75
70 28300000 .3 .0000091 18800
175 27775000 .3 .0000093
MATERIAL 4.0
70 28300000 .3 .0000091
75 28300000 .3 .0000091
SIF
100 1 1 1
101 2.1 2.1 1
BRANCH 1 1.5 25 1
RUN 2 3 1.9 .145 .23 2
TEE RUN 1 3 WELDED 101
FULL 2.5 .30 .42
TEE RUN 1 4 WELDED 101
FULL
TEE BRANCH 1 5 WELDED 101
REDUCED 2.5 .30 .42 1.05 .113 .092
RUN 4 6 1.9 .145 .23 1
RUN 6 7 1.9 .145 .23 0
RUN 7 8
RUN 8 0  1.9 .145 .23 2
ELBOW 10 1.5 2.4 .25 .42 0 101
RUN 0 11 1.9 .145 .23 1
RUN 11 0 1.9 .145 .23 2
ELBOW 13 1.5 2.5 .30 .42 0 101
RUN 0 15
TEE RUN 2 15 WELDED 101
FULL 2.5 .30 .42
TEE RUN 2 16 WELDED 101
FULL
TEE BRANCH 2 30 WELDED 101
FULL
RUN 30 0
ELBOW 32 1.5 2.4 .25 .42 0 101
RUN 0 34 1.05 .113 .09 3
TEE RUN 3 34 WELDED 101
FULL 1.55 .25 .26
TEE RUN 3 341 WELDED 101
FULL
TEE BRANCH 3 342 WELDED 101
REDUCED 1.55 .25 .42 4.5 .24 .9
RUN 341 35 1.05 .113 .09 1
RUN 35 0 1.05 .113 .09 2
ELBOW 37 .75 1.55 .25 .26 0 101
RUN 0 39 1.05 .113 .09 1
RUN 16 17
TEE BRANCH 4 17 WELDED 101
FULL  2.5 .30 .42
TEE RUN 4 18 WELDED 101
FULL
```

```
TEE RUN 4 24 WELDED 101
FULL
RUN 18 0 1.9 .145 .23 3
ELBOW.20 1.5 2.4 .25 .42 0 101
RUN 0 22 1.9 .145 .23 1
RUN 22 23 1.9 .145 .23 0
REDUCER 24 25 2.5 .4 2.25 .4 1 101
RUN 25 0  1.31 .133 .14 0
ELBOW 26 1.0 1.84 .25 .44 0 101
RUN 0 28 1.31 .133 .14 0
RUN 28 29 1.31 .133 .14 0
RUN 2 0  1.9 .145 .23 2
ELBOW 71 1.5 2.5 .30 .42 0 101
RUN 0 73 1.9 .145 .23 1
RUN 73 0 1.9 .145 .23 2
ELBOW 75 1.5 2.5 .30 .42 0 101
RUN 0 77 1.9 .145 .23 3
BRANCH 2 .75 25 2
RUN 5 0 1.05 .113 .094 2
ELBOW 51 .75 1.55 .25 .3 0 101
RUN 0 53 1.05 .113 .094 1
RUN 53 78 1.05 .113 .094 2
VALVE 78 79 1.5 .25 4 3
RUN 79 54 1.05 .113 .094 1
RUN 54 55 1.05 .113 .094 0
RUN 55 0  1.05 .113 .094 2
ELBOW 57 .75 1.55 .25 .3 0 101
RUN 0 0 1.05 .113 .094 3
ELBOW 60 .75 1.55 .25 .3 0 101
RUN 0 62 1.05 .113 .094 1
RUN 62 0 1.05 .113 .094 2
ELBOW 64 .75 1.55 .25 .3 0 101
RUN 0 0  1.05 .113 .094 3
ELBOW 67 .75 1.55 .25 .3  0 101
RUN 0 69
BRANCH 3 4.0 0 3
RUN 342 343 4.5 .24 .9 1
RUN 343 40 4.5 .24 .9 2
FREQUENCY 1 15 1 1
WPPSS OUTLET AND BALANCE LINES
3DOF 51 7 13 15 20 26 32 37 54 57 60 64
3DOF 67 71 73
1MASS 343 3 .23
END OF JOB
```

```
     6    31     0     0                                                    PD1
WPPSS OUTLET AND BALANCE LINES
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0     0     1                                              P 1
WPPSS OUTLET AND BALANCE LINES                                              P 2
    78    79    45     0    12    18    13     3     0     0     0     0   P 3
     0     2     0     2     1     0     0                                  P 4
     1    79    13     0     0   344     2                                  P 5
     2     0.0         5.00000     0.0          0                          P 7
     3     2.00000     5.00000     0.0          0                          P 7
     4     6.50000     5.00000     0.0          0                          P 7
     5     4.50000     5.00000     2.00000      0                          P 7
     6     9.00000     5.00000     0.0          0                          P 7
     7    37.50000     5.00000     0.0          0                          P 7
     8    66.00000     5.00000     0.0          0                          P 7
    10    70.68130     5.14475     0.0          0                          P 7
    11    74.62999     9.75000     0.0          0                          P 7
    13    78.54158    13.27482     0.0          0                          P 7
    15    91.50000    13.38000     0.0          0                          P 7
    16    93.50000    11.38000     0.0          0                          P 7
    17    93.50000     8.75000     0.0          0                          P 7
    18    90.50000     6.75000     0.0          0                          P 7
    20    81.05933     6.31066     0.0          0                          P 7
    22    80.62000     1.75000     0.0          0                          P 7
    23    80.62000     0.0         0.0          0                          P 7
    24    96.50000     6.75000     0.0          0                          P 7
    25    97.75000     6.75000     0.0          0                          P 7
    26   106.20709     6.45711     0.0          0                          P 7
    28   106.50000     0.75000     0.0          0                          P 7
    29   106.50000     0.0         0.0          0                          P 7
    30    93.50000    15.38000     0.0          0                          P 7
    32    93.06065    17.56065     0.0          0                          P 7
    34    69.81000    18.00000     0.0          0                          P 7
    35    64.81000    18.00000     0.0          0                          P 7
    37    34.52966    18.00000     0.21967      0                          P 7
    39    34.31000    18.00000     6.00000      0                          P 7
    40    67.81000    18.00000    30.00000      0                          P 7
    51     4.50000     9.00473     3.97994      0                          P 7
    53     4.50000    30.00000     4.00000      0                          P 7
    54     4.50000    54.00000     4.00000      0                          P 7
    55     4.50000    78.00000     3.00000      0                          P 7
    57     4.71967    92.53081     3.98514      0                          P 7
    60    30.78032    92.75000     4.21967      0                          P 7
    62    31.00000    92.75000    20.50000      0                          P 7
    64    31.00000    92.96967    37.78032      0                          P 7
    67    31.00000   112.78032    37.78032      0                          P 7
    69    31.00000   113.00000    36.00000      0                          P 7
    71   -21.56065     5.43934     0.0          0                          P 7
    73   -22.00000    11.50000     0.0          0                          P 7
    75   -22.00000    18.31065    -0.43934      0                          P 7
    77   -22.00000    18.75000   -12.00000      0                          P 7
    78     4.50000    35.00000     4.00000      0                          P 7
    79     4.50000    38.00000     4.00000      0                          P 7
   341    65.81000    18.00000     0.0          0                          P 7
   342    67.81000    18.00000     0.50000      0                          P 7
   343    67.81000    18.00000    16.50000      0                          P 7
   344     4.25000     5.00000     0.0          0                          P 7
   345    70.03844     5.00000     0.0          0                          P 7
   346    71.20013     5.55108     0.0          0                          P 7
```

347	78.06720	12.97404	0.0	0			P 7
348	79.09338	13.38000	0.0	0			P 7
349	92.50000	12.38000	0.0	0			P 7
350	93.50000	16.50000	0.0	0			P 7
351	92.00000	18.00000	0.0	0			P 7
352	67.81000	18.00000	0.0	0			P 7
353	35.06000	18.00000	0.0	0			P 7
354	34.31000	18.00000	0.75000	0			P 7
355	93.50000	6.75000	0.0	0			P 7
356	82.12000	6.75000	0.0	0			P 7
357	80.62000	5.25000	0.0	0			P 7
358	105.50000	6.75000	0.0	0			P 7
359	106.50000	5.75000	0.0	0			P 7
360	-20.50000	5.00000	0.0	0			P 7
361	-22.00000	6.50000	0.0	0			P 7
362	-22.00000	17.25000	0.0	0			P 7
363	-22.00000	18.75000	-1.50000	0			P 7
364	4.50000	8.84164	3.92082	0			P 7
365	4.50000	9.17705	4.00000	0			P 7
366	4.50000	36.50000	4.00000	0			P 7
367	4.50000	92.00171	3.94927	0			P 7
368	5.25000	92.75000	4.00000	0			P 7
369	30.25000	92.75000	4.00000	0			P 7
370	31.00000	92.75000	4.75000	0			P 7
371	31.00000	92.75000	37.25000	0			P 7
372	31.00000	93.50000	38.00000	0			P 7
373	31.00000	112.25000	38.00000	0			P 7
374	31.00000	113.00000	37.25000	0			P 7
390	70.03842	6.50000	0.0	0			P 7
391	79.09338	11.88000	0.0	0			P 7
392	92.00000	16.50000	0.0	0			P 7
393	35.06000	18.00000	0.75000	0			P 7
394	82.12000	5.25000	0.0	0			P 7
395	105.50000	5.75000	0.0	0			P 7
396	-20.50000	6.50000	0.0	0			P 7
397	-22.00000	17.25000	-1.50000	0			P 7
398	4.50000	9.17705	3.25000	0			P 7
399	5.25000	92.00171	3.94927	0			P 7
400	30.25000	92.75000	4.75000	0			P 7
401	31.00000	93.50000	37.25000	0			P 7
402	31.00000	112.25000	37.25000	0			P 7
1 3	1.9000	0.1450	2.0000	0.0	0.0	0.0	P11D
2 3	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
3 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
4 4	2.4000	0.2500	2.0000	0.0	0.0	0.0	P11D
5 4	2.5000	0.3000	2.0000	0.0	0.0	0.0	P11D
6 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
7 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
8 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
9 3	4.5000	0.2400	2.0000	0.0	0.0	0.0	P11D
10 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
11 3	2.5000	0.4000	2.0000	0.0	0.0	0.0	P11D
12 3	2.2500	0.4000	2.0000	0.0	0.0	0.0	P11D
13 3	1.3100	0.1330	2.0000	0.0	0.0	0.0	P11D
14 4	1.8400	0.2500	2.0000	0.0	0.0	0.0	P11D
15 3	1.0500	0.1130	2.0000	0.0	0.0	0.0	P11D
16 4	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
17 3	1.5000	0.2500	2.0000	0.0	0.0	0.0	P11D
18 3	1.5500	0.2500	2.0000	0.0	0.0	0.0	P11D
1 5	2.5000	0.3000	2.5000	0.3000	0.0	0.0	P12

```
 2  5     1.5500      0.2500      1.5500      0.2500      0.0          0.0      P12
 100    1.000000    1.000000    1.000000                                        P 12.1
 101    2.099999    2.099999    1.000000                                        P 12.1
  0.230    0.420    0.092    0.420    0.420    0.090    0.260    0.420         P13
  0.900    0.260    0.800    0.800    0.140    0.440    0.094    0.300         P13
  1.333    0.300
 1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0         P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0         P14A
 2  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0         P14
      0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0         P14A
 3  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0         P14
      0.75000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0         P14A
   25.00000     0.0         0.0         0.0         0.0         0.0             P15
 6  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.100E 01               P18
77  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
 8  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0                     P18
22  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
28  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
35  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0                     P18
39  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
40  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0                     P18
53  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0                     P18
55  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0                     P18
62  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
69  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01               P18
  1   2   31002   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    2    1    0    0    1                                                   P21B
  2   3 344   5   1   1   1   2   2   2   1   0   0   0   0  0.0                P21
   1  101    1    1    1    1                                                   P21B
  3   4 344   5   1   1   1   2   2   2   1   0   0   0   0  0.0                P21
   1  101    1    1    1    1                                                   P21B
  4   5 344   3   1   3   2   2   3   2   1   0   0   0   0  0.0                P21
   1  101    1    2    1    1                                                   P21B
  5   4   61002   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    1    1    0    0    1                                                   P21B
  6   6   71002   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    0    1    0    0    1                                                   P21B
  7   7   81002   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    0    1    0    0    1                                                   P21B
  8   8 3451002   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    2    1    0    0    1                                                   P21B
  9 345  10 390   1   2   1   4   4   1   1   0   0   0   0  0.0                P21
   1  101    1    0    0    1                                                   P21B
 10  10 346 390   1   2   1   4   4   1   1   0   0   0   0  0.0                P21
   1  101    1    0    0    1                                                   P21B
 11 346  111001   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    1    1    0    0    1                                                   P21B
 12  11 3471001   1   1   1   1   1   1   1   0   0   0   0  0.0                P21
   1    2    1    0    0    1                                                   P21B
 13 347  13 391   1   2   1   5   5   1   1   0   0   0   0  0.0                P21
   1  101    1    0    0    1                                                   P21B
 14  13 348 391   1   2   1   5   5   1   1   0   0   0   0  0.0                P21
   1  101    1    0    0    1                                                   P21B
 15 348  151002   1   1   1   2   2   1   1   0   0   0   0  0.0                P21
   1    0    1    0    0    1                                                   P21B
 16  15 349  30   1   1   1   2   2   2   1   0   0   0   0  0.0                P21
   1  101    1    1    1    1                                                   P21B
 17  16 349  30   1   1   1   2   2   2   1   0   0   0   0  0.0                P21
   1  101    1    1    1    1                                                   P21B
 18  30 349  15   1   1   1   2   2   2   1   0   0   0   0  0.0                P21
```

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  1  101    1    2    1    1                                                P21B
 19  30 3501001   1    1    1    2    2    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 20 350  32 392   1    2    1    4    4    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 21  32 351 392   1    2    1    4    4    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 22 351  341002   1    1    1    6    6    1    1    0    0    0    0  0.0  P21
  1    3    1    0    0    1                                                P21B
 23  34 352 342   1    1    1    7    7    2    1    0    0    0    0  0.0  P21
  1  101    1    1    2    1                                                P21B
 24 341 352 342   1    1    1    7    7    2    1    0    0    0    0  0.0  P21
  1  101    1    1    2    1                                                P21B
 25 342 352  34   1    3    2    8    9    2    1    0    0    0    0  0.0  P21
  1  101    1    2    2    1                                                P21B
 26 341  351002   1    1    1    6    6    1    1    0    0    0    0  0.0  P21
  1    1    1    0    0    1                                                P21B
 27  35 3531002   1    1    1    6    6    1    1    0    0    0    0  0.0  P21
  1    2    1    0    0    1                                                P21B
 28 353  37 393   1    2    1   10   10    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 29  37 354 393   1    2    1   10   10    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 30 354  391001   1    1    1    6    6    1    1    0    0    0    0  0.0  P21
  1    1    1    0    0    1                                                P21B
 31  16  171001   1    1    1    6    6    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 32  17 355  18   1    1    1    2    2    2    1    0    0    0    0  0.0  P21
  1  101    1    2    1    1                                                P21B
 33  18 355  17   1    1    1    2    2    2    1    0    0    0    0  0.0  P21
  1  101    1    1    1    1                                                P21B
 34  24 355  17   1    1    1    2    2    2    1    0    0    0    0  0.0  P21
  1  101    1    1    1    1                                                P21B
 35  18 3561002   1    1    1    1    1    1    1    0    0    0    0  0.0  P21
  1    3    1    0    0    1                                                P21B
 36 356  20 394   1    2    1    4    4    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 37  20 357 394   1    2    1    4    4    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 38 357  221001   1    1    1    1    1    1    1    0    0    0    0  0.0  P21
  1    1    1    0    0    1                                                P21B
 39  22  231001   1    1    1    1    1    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 40  24  251002   1    3    2   11   12    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 41  25 3581002   1    1    1   13   13    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 42 358  26 395   1    2    1   14   14    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 43  26 359 395   1    2    1   14   14    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 44 359  281001   1    1    1   13   13    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 45  28  291001   1    1    1   13   13    1    1    0    0    0    0  0.0  P21
  1    0    1    0    0    1                                                P21B
 46   2 3601002   1    1    1    1    1    1    1    0    0    0    0  0.0  P21
  1    2    1    0    0    1                                                P21B
 47 360  71 396   1    2    1    5    5    1    1    0    0    0    0  0.0  P21
  1  101    1    0    0    1                                                P21B
 48  71 361 396   1    2    1    5    5    1    1    0    0    0    0  0.0  P21
```

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  1  101    1    0    0    1                                                P21B
49 361  731001   1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    1    1    0    0    1                                                P21B
50  73 3621001   1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    2    1    0    0    1                                                P21B
51 362  75 397   1    2    1    5    5    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                P21B
52  75 363 397   1    2    1    5    5    1    1    0    0    0    0  0.0    P21
  1  101    1    0    0    1                                                P21B
53 363  771001   1    1    1    1    1    1    1    0    0    0    0  0.0    P21
  1    3    1    0    0    1                                                P21B
54   5 3641001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    2    2    0    0    2                                                P21B
55 364  51 398   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
56  51 365 398   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
57 365  531001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    1    2    0    0    2                                                P21B
58  53  781001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    2    2    0    0    2                                                P21B
59  78 3661001   2    1    1   17   17    1    1    0    0    0    0  0.0    P21
  1    3    2    0    0    2                                                P21B
60 366  791001   2    1    1   17   17    1    1    0    0    0    0  0.0    P21
  1    3    2    0    0    2                                                P21B
61  79  541001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    1    2    0    0    2                                                P21B
62  54  551001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    0    2    0    0    2                                                P21B
63  55 3671001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    2    2    0    0    2                                                P21B
64 367  57 399   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
65  57 368 399   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
66 368 3691002   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    3    2    0    0    2                                                P21B
67 369  60 400   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
68  60 370 400   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
69 370  621001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    1    2    0    0    2                                                P21B
70  62 3711001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    2    2    0    0    2                                                P21B
71 371  64 401   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
72  64 372 401   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
73 372 3731001   2    1    1   15   15    1    1    0    0    0    0  0.0    P21
  1    3    2    0    0    2                                                P21B
74 373  67 402   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
75  67 374 402   2    2    1   16   16    1    1    0    0    0    0  0.0    P21
  1  101    2    0    0    2                                                P21B
76 374  691001   2    1    1   18   18    1    1    0    0    0    0  0.0    P21
  1    0    2    0    0    2                                                P21B
77 342 3431001   3    1    1    9    9    1    1    0    0    0    0  0.0    P21
  2    1    3    0    0    3                                                P21B
78 343  401001   3    1    1    9    9    1    1    0    0    0    0  0.0    P21
```

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    2    2    3    0    0    3                                                  P21B
   15      0 0.10000E 01 0.10000E 01                                            P25
  51    7  13  15  20  26  32  37  54  57  60  64  67  71  73   0   0   0       P26
    0      0                                                                    P28
    0      1                                                                    P30
  343  3     0.23000E 00     0  0    0.0             0  0    0.0               P31
    0                                                                           P68
WPPSS OUTLET AND BALANCE LINES                                                  D1
    1     -1    15     0     1     0                                            D2
    4      0.00100     1                                                        D3
    0                                                                           PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.27 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.27 *
* ELAPSED SECONDS                             2.3                                 0.0                       2.3 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	78
TOTAL NUMBER OF STRUCTURAL JOINTS	79
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	13
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	45
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	12
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	18
TOTAL NUMBER OF MATERIALS	3
TOTAL NUMBER OF PIPE PRESSURES	2
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	79
TOTAL FICTIOUS JOINTS READ IN	13
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
2	0.0	5.000000	0.0
3	2.000000	5.000000	0.0
4	6.500000	5.000000	0.0
5	4.500000	5.000000	2.000000
6	9.000000	5.000000	0.0
7	37.500000	5.000000	0.0
8	66.000000	5.000000	0.0
10	70.681290	5.144750	0.0
11	74.629990	9.750000	0.0
13	78.541565	13.274819	0.0
15	91.500000	13.379999	0.0
16	93.500000	11.379999	0.0
17	93.500000	8.750000	0.0
18	90.500000	6.750000	0.0
20	81.059326	6.310659	0.0
22	80.619995	1.750000	0.0
23	80.619995	0.0	0.0
24	96.500000	6.750000	0.0
25	97.750000	6.750000	0.0
26	106.207077	6.457109	0.0
28	106.500000	0.750000	0.0
29	106.500000	0.0	0.0
30	93.500000	15.379999	0.0
32	93.060638	17.560638	0.0
34	69.809998	18.000000	0.0
35	64.809998	18.000000	0.0
37	34.529648	18.000000	0.219670
39	34.309998	18.000000	6.000000
40	67.809998	18.000000	30.000000
51	4.500000	9.004729	3.979939
53	4.500000	30.000000	4.000000
54	4.500000	54.000000	4.000000
55	4.500000	78.000000	3.000000
57	4.719669	92.530807	3.985140
60	30.780319	92.750000	4.219669
62	31.000000	92.750000	20.500000
64	31.000000	92.969666	37.780319
67	31.000000	112.780319	37.780319
69	31.000000	113.000000	36.000000
71	-21.560638	5.439340	0.0
73	-22.000000	11.500000	0.0
75	-22.000000	18.310638	-0.439340
77	-22.000000	18.750000	-12.000000
78	4.500000	35.000000	4.000000
79	4.500000	38.000000	4.000000
341	65.809998	18.000000	0.0
342	67.809998	18.000000	0.500000
343	67.809998	18.000000	16.500000
344	4.250000	5.000000	0.0
345	70.038437	5.000000	0.0
346	71.200119	5.551080	0.0
347	78.067200	12.974039	0.0
348	79.093369	13.379999	0.0
349	92.500000	12.379999	0.0
350	93.500000	16.500000	0.0
351	92.000000	18.000000	0.0

352	67.809998	18.000000	0.0
353	35.059998	18.000000	0.0
354	34.309998	18.000000	0.750000
355	93.500000	6.750000	0.0
356	82.119995	6.750000	0.0
357	80.619995	5.250000	0.0
358	105.500000	6.750000	0.0
359	106.500000	5.750000	0.0
360	-20.500000	5.000000	0.0
361	-22.000000	6.500000	0.0
362	-22.000000	17.250000	0.0
363	-22.000000	18.750000	-1.500000
364	4.500000	8.841640	3.920819
365	4.500000	9.177050	4.000000
366	4.500000	36.500000	4.000000
367	4.500000	92.001709	3.949269
368	5.250000	92.750000	4.000000
369	30.250000	92.750000	4.000000
370	31.000000	92.750000	4.750000
371	31.000000	92.750000	37.250000
372	31.000000	93.500000	38.000000
373	31.000000	112.250000	38.000000
374	31.000000	113.000000	37.250000
390	70.038406	6.500000	0.0
391	79.093369	11.879999	0.0
392	92.000000	16.500000	0.0
393	35.059998	18.000000	0.750000
394	82.119995	5.250000	0.0
395	105.500000	5.750000	0.0
396	-20.500000	6.500000	0.0
397	-22.000000	17.250000	-1.500000
398	4.500000	9.177050	3.250000
399	5.250000	92.001709	3.949269
400	30.250000	92.750000	4.750000
401	31.000000	93.500000	37.250000
402	31.000000	112.250000	37.250000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	S	2.500	0.300	.2073E 01	.1278E 01	.2556E 01	.1278E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
3	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
4	C	2.400	0.250	.1689E 01	.9889E 00	.9889E 00	.1978E 01	2.0	2.0	1.20	0.0	0.0	1.20	-1.20	0.0	0.0	-1.20
5	C	2.500	0.300	.2073E 01	.1278E 01	.1278E 01	.2556E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
6	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
7	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
8	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
9	S	4.500	0.240	.3212E 01	.7309E 01	.1462E 02	.7309E 01	2.0	2.0	2.25	0.0	0.0	2.25	-2.25	0.0	0.0	-2.25
10	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
11	S	2.500	0.400	.2639E 01	.1507E 01	.3015E 01	.1507E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
12	S	2.250	0.400	.2325E 01	.1041E 01	.2082E 01	.1041E 01	2.0	2.0	1.13	0.0	0.0	1.13	-1.13	0.0	0.0	-1.13
13	S	1.310	0.133	.4918E 00	.8625E-01	.1725E 00	.8625E-01	2.0	2.0	0.65	0.0	0.0	0.65	-0.65	0.0	0.0	-0.65
14	C	1.840	0.250	.1249E 01	.4044E 00	.4044E 00	.8088E 00	2.0	2.0	0.92	0.0	0.0	0.92	-0.92	0.0	0.0	-0.92
15	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
16	C	1.550	0.250	.1021E 01	.2237E 00	.2237E 00	.4473E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77
17	S	1.500	0.250	.9817E 00	.1994E 00	.3988E 00	.1994E 00	2.0	2.0	0.75	0.0	0.0	0.75	-0.75	0.0	0.0	-0.75
18	S	1.550	0.250	.1021E 01	.2237E 00	.4473E 00	.2237E 00	2.0	2.0	0.77	0.0	0.0	0.77	-0.77	0.0	0.0	-0.77

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2500000E 01	.3000000E 00	.2500000E 01	.3000000E 00	.0
2	.1549999E 01	.2500000E 00	.1549999E 01	.2500000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	175.00	27774992.00	0.300000	0.000009300	18800.00
2	70.00	28300000.00	0.300000	0.000009100	18800.00
2-A	175.00	27774992.00	0.300000	0.000009300	18800.00
3	70.00	28300000.00	0.300000	0.000009100	0.0
3-A	75.00	28300000.00	0.300000	0.000009100	0.0

PRESSURE DATA

TYPE	PRESSURE
1	25.00
2	0.0

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	6	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
2	77	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	8	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
4	22	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
5	28	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
6	35	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
7	39	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
8	40	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
9	53	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
10	55	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
11	62	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
12	69	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.46 ** LAST STEP "BEGP" TIME IS    0.27 ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                            14.0                                 2.3                      11.7 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   79


 BAND-WIDTH =    36  BY D.O.F.          BAND-WIDTH =     6  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.79 ** LAST STEP "DA3D" TIME IS    0.46 ** DELTA TIME IS    0.33 *
* ELAPSED SECONDS                            50.5                                 14.0                     36.5 *
```

WPPSS OUTLET AND BALANCE LINES

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 45

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	7	1	2	7	2	3	7	3	4	51	1	5	51	2
6	51	3	7	71	1	8	71	2	9	71	3	10	73	1
11	73	2	12	73	3	13	54	1	14	54	2	15	54	3
16	13	1	17	13	2	18	13	3	19	15	1	20	15	2
21	15	3	22	57	1	23	57	2	24	57	3	25	60	1
26	60	2	27	60	3	28	32	1	29	32	2	30	32	3
31	20	1	32	20	2	33	20	3	34	64	1	35	64	2
36	64	3	37	26	1	38	26	2	39	26	3	40	67	1
41	67	2	42	67	3	43	37	1	44	37	2	45	37	3

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.84 ** LAST STEP "JCSO" TIME IS    0.79 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                            71.9                                50.5                      21.4 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.30927E 09) OCCURS AT THE 56TH DOF
MINIMUM VALUE (0.38862E 04) OCCURS AT THE 163TH DOF
RATIO OF MAX/MIN= 0.79582E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    4.18 ** LAST STEP "INPT" TIME IS    0.84 ** DELTA TIME IS    3.34 *
* ELAPSED SECONDS                            154.3                               71.9                      82.3 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    6.03 ** LAST STEP "EQ3D" TIME IS    4.18 ** DELTA TIME IS    1.85 *
* ELAPSED SECONDS                            250.7                               154.3                     96.5 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	2	3	1002	1	1	1	1	2	1	1	1	2.00000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
2	3	344	5	1	1	2	1	101	1	1	2	2.25000	0.42000			0.0	0.0	1.000000
																-1.000000	0.0	0.0
																0.0	-1.000000	0.0
3	4	344	5	1	1	2	1	101	1	1	2	2.25000	0.42000			0.0	0.0	1.000000
																1.000000	0.0	0.0
																0.0	1.000000	0.0
4	5	344	3	1	3	2	1	101	1	1	2	0.0	0.25600			-0.992278	0.0	0.124035
											3	2.01556				0.124035	0.0	0.992278
																0.0	1.000000	0.0
5	4	6	1002	1	1	1	1	1	1	1	1	2.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
6	6	7	1002	1	1	1	1	0	1	1	1	28.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	7	8	1002	1	1	1	1	0	1	1	1	28.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
8	8	345	1002	1	1	1	1	2	1	1	1	4.03844	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
9	345	10	390	1	2	1	1	101	1	1	4	0.44291	0.42000	RAD=	1.5000	-0.000020	1.000000	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	-0.000020	0.0
10	10	346	390	1	2	1	1	101	1	1	4	0.44294	0.42000	RAD=	1.5000	-0.428589	0.903500	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	-0.903500	-0.428589	0.0
11	346	11	1001	1	1	1	1	1	1	1	1	5.42171	0.23000			0.774464	-0.632618	0.0
																-0.632618	-0.774464	0.0
																0.0	0.0	-1.000000
12	11	347	1001	1	1	1	1	2	1	1	1	4.71263	0.23000			0.684128	-0.729362	0.0
																-0.729362	-0.684128	0.0
																0.0	0.0	-1.000000
13	347	13	391	1	2	1	1	101	1	1	5	0.37665	0.42000	RAD=	1.5000	0.684121	-0.729369	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.729369	-0.684121	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	13	348	391	1	2	1	1	101	1	1	5	0.37672	0.42000	RAD=	1.5000	0.367868 -0.929878 0.0
														FLX=	1.0000	0.0 0.0 1.000000
														ECC=	0.0	-0.929878 -0.367868 0.0
15	348	15	1002	1	1	1	1	0	1	1	2	12.40663	0.42000			0.0 1.000000 0.0
																-1.000000 0.0 0.0
																0.0 0.0 1.000000
16	15	349	30	1	1	2	1	101	1	1	2	1.41421	0.42000			0.707107 0.707107 0.0
																-0.707107 0.707107 0.0
																0.0 0.0 1.000000
17	16	349	30	1	1	2	1	101	1	1	2	1.41421	0.42000			0.707107 0.707107 0.0
																0.707107 -0.707107 0.0
																0.0 0.0 -1.000000
18	30	349	15	1	1	2	1	101	1	1	2	3.16228	0.42000			-0.948683 0.316228 0.0
																0.316228 0.948683 0.0
																0.0 0.0 -1.000000
19	30	350	1001	1	1	1	1	0	1	1	2	1.12000	0.42000			1.000000 0.0 0.0
																0.0 -1.000000 0.0
																0.0 0.0 -1.000000
20	350	32	392	1	2	1	1	101	1	1	4	0.78542	0.42000	RAD=	1.5000	-1.000000 0.0 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.0 -1.000000 0.0
21	32	351	392	1	2	1	1	101	1	1	4	0.78538	0.42000	RAD=	1.5000	-0.707107 -0.707107 0.0
														FLX=	1.0000	0.0 0.0 -1.000000
														ECC=	0.0	0.707107 -0.707107 0.0
22	351	34	1002	1	1	1	1	3	1	1	6	22.19000	0.09000			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000
23	34	352	342	1	1	2	1	101	1	1	7	2.00000	0.26000			0.0 0.0 1.000000
																1.000000 0.0 0.0
																0.0 1.000000 0.0
24	341	352	342	1	1	2	1	101	1	1	7	2.00000	0.26000			0.0 0.0 1.000000
																-1.000000 0.0 0.0
																0.0 -1.000000 0.0
25	342	352	34	1	3	2	1	101	1	1	8	0.0	0.66000			1.000000 0.0 0.0
											9	0.50000				0.0 0.0 1.000000
																0.0 -1.000000 0.0
26	341	35	1002	1	1	1	1	1	1	1	6	1.00000	0.09000			0.0 1.000000 0.0
																1.000000 0.0 0.0
																0.0 0.0 -1.000000

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
27	35	353	1002	1	1	1	1	2	1	1	6	29.75000	0.09000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
28	353	37	393	1	2	1	1	101	1	1	10	0.78540	0.26000	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	1.000000	0.0	0.0
29	37	354	393	1	2	1	1	101	1	1	10	0.78540	0.26000	RAD=	0.7500	0.707120	0.0	0.707094
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	0.707094	0.0	-0.707120
30	354	39	1001	1	1	1	1	1	1	1	6	5.25000	0.09000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
31	16	17	1001	1	1	1	1	0	1	1	6	2.63000	0.09000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
32	17	355	18	1	1	2	1	101	1	1	2	2.00000	0.42000			-1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	-1.000000
33	18	355	17	1	1	2	1	101	1	1	2	3.00000	0.42000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
34	24	355	17	1	1	2	1	101	1	1	2	3.00000	0.42000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
35	18	356	1002	1	1	1	1	3	1	1	1	8.38000	0.23000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
36	356	20	394	1	2	1	1	101	1	1	4	0.78540	0.42000	RAD=	1.5000	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	1.000000	0.0	0.0
37	20	357	394	1	2	1	1	101	1	1	4	0.78540	0.42000	RAD=	1.5000	0.707110	-0.707104	0.0
														FLX=	1.0000	0.0	0.0	-1.000000
														ECC=	0.0	0.707104	0.707110	0.0
38	357	22	1001	1	1	1	1	1	1	1	1	3.50000	0.23000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
39	22	23	1001	1	1	1	1	0	1	1	1	1.75000	0.23000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
40	24	25	1002	1	3	1	1	101	1	1	11	0.0	0.80000			0.0	1.000000	0.0
											12	1.25000				-1.000000	0.0	0.0
																0.0	0.0	1.000000
41	25	358	1002	1	1	1	1	0	1	1	13	7.75000	0.14000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
42	358	26	395	1	2	1	1	101	1	1	14	0.78539	0.44000	RAD=	1.0000	0.0	-1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0
43	26	359	395	1	2	1	1	101	1	1	14	0.78540	0.44000	RAD=	1.0000	-0.707091	-0.707123	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	-0.707123	0.707091	0.0
44	359	28	1001	1	1	1	1	0	1	1	13	5.00000	0.14000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
45	28	29	1001	1	1	1	1	0	1	1	13	0.75000	0.14000			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
46	2	360	1002	1	1	1	1	2	1	1	1	20.50000	0.23000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
47	360	71	396	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	1.000000	0.0	0.0
48	71	361	396	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.707099	0.707114	0.0
														FLX=	1.0000	0.0	0.0	1.000000
														ECC=	0.0	0.707114	-0.707099	0.0
49	361	73	1001	1	1	1	1	1	1	1	1	5.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
50	73	362	1001	1	1	1	1	2	1	1	1	5.75000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
51	362	75	397	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
52	75	363	397	1	2	1	1	101	1	1	5	0.78540	0.42000	RAD=	1.5000	0.0	-0.707100	-0.707114
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707114	0.707100

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
53	363	77	1001	1	1	1	1	3	1	1	1	10.50000	0.23000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
54	5	364	1001	2	1	1	1	2	2	2	15	4.29508	0.09400			1.000000 0.0 0.0 0.0 -0.894427 -0.447213 0.0 0.447213 -0.894427
55	364	51	398	2	2	1	1	101	2	2	16	0.23179	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.447214 -0.894427 1.000000 0.0 0.0 0.0 -0.894427 -0.447214
56	51	365	398	2	2	1	1	101	2	2	16	0.23185	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.229759 -0.973247 1.000000 0.0 0.0 0.0 -0.973247 -0.229759
57	365	53	1001	2	1	1	1	1	2	2	15	20.82294	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
58	53	78	1001	2	1	1	1	2	2	2	15	5.00000	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
59	78	366	1001	2	1	1	1	3	2	2	17	1.50000	1.33300			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
60	366	79	1001	2	1	1	1	3	2	2	17	1.50000	1.33300			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
61	79	54	1001	2	1	1	1	1	2	2	15	16.00000	0.09400			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
62	54	55	1001	2	1	1	1	0	2	2	15	24.02081	0.09400			1.000000 0.0 0.0 0.0 -0.999133 0.041631 0.0 -0.041631 -0.999133
63	55	367	1001	2	1	1	1	2	2	2	15	14.03385	0.09400			1.000000 0.0 0.0 0.0 -0.997710 -0.067641 0.0 0.067641 -0.997710
64	367	57	399	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	1.000000 0.0 0.0 0.0 -0.067640 0.997710 0.0 -0.997710 -0.067640
65	57	368	399	2	2	1	1	101	2	2	16	0.78539	0.30000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.707119 -0.705476 -0.047828 0.000000 -0.067640 0.997710 -0.707095 -0.705499 -0.047829

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
66	368	369	1002	2	1	1	1	3	2	2	15	25.00000	0.09400			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
67	369	60	400	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD=	0.7500	0.0	0.0	1.000000
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-1.000000	0.0	0.0
68	60	370	400	2	2	1	1	101	2	2	16	0.78540	0.30000	RAD=	0.7500	-0.707099	0.0	0.707114
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707114	0.0	-0.707099
69	370	62	1001	2	1	1	1	1	2	2	15	15.75000	0.09400			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
70	62	371	1001	2	1	1	1	2	2	2	15	16.75000	0.09400			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
71	371	64	401	2	2	1	1	101	2	2	16	0.78539	0.30000	RAD=	0.7500	0.0	1.000000	0.0
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.0	-1.000000
72	64	372	401	2	2	1	1	101	2	2	16	0.78541	0.30000	RAD=	0.7500	0.0	0.707117	-0.707097
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707097	-0.707117
73	372	373	1001	2	1	1	1	3	2	2	15	18.75000	0.09400			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
74	373	67	402	2	2	1	1	101	2	2	16	0.78542	0.30000	RAD=	0.7500	0.0	0.0	-1.000000
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.0
75	67	374	402	2	2	1	1	101	2	2	16	0.78538	0.30000	RAD=	0.7500	0.0	-0.707107	-0.707107
														FLX=	1.0000	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707107	0.707107
76	374	69	1001	2	1	1	1	0	2	2	18	1.25000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
77	342	343	1001	3	1	1	2	1	3	3	9	16.00000	0.90000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
78	343	40	1001	3	1	1	2	2	3	3	9	13.50000	0.90000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  27 AND EQUALS 0.29750E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  55 AND EQUALS 0.17384E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  55 AND EQUALS 0.16140E 09
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  27 AND EQUALS 0.47395E 03

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    6.45 ** LAST STEP "SELT" TIME IS    6.03 ** DELTA TIME IS    0.42 *
* ELAPSED SECONDS                           267.0                               250.7                      16.2 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS   15.42 ** LAST STEP "EDIT" TIME IS    6.45 ** DELTA TIME IS    8.97 *
* ELAPSED SECONDS                           867.4                               267.0                     600.4 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS   15.49 ** LAST STEP "SLVR" TIME IS   15.42 ** DELTA TIME IS    0.07 *
* ELAPSED SECONDS                           871.9                               867.4                       4.6 *
```

ADDITIONAL MASS TO THE SYSTEM

JOINT	DIRECTION	ADDITIONAL MASS
343	3	0.23000E 00

WPPSS OUTLET AND BALANCE LINES

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
2	0.66964E-02	0.66964E-02	0.66964E-02	3	0.18181E-02	0.18181E-02	0.18181E-02	4	0.19669E-02	0.19669E-02	0.19669E-02
5	0.11901E-02	0.11901E-02	0.11901E-02	6	0.92262E-02	0.0	0.0	7	0.16964E-01	0.16964E-01	0.16964E-01
8	0.96841E-02	0.0	0.0	10	0.72216E-03	0.72216E-03	0.72216E-03	11	0.30162E-02	0.30162E-02	0.30162E-02
13	0.61415E-03	0.61415E-03	0.61415E-03	15	0.75113E-02	0.75113E-02	0.75113E-02	16	0.10749E-02	0.10749E-02	0.10749E-02
17	0.13932E-02	0.13932E-02	0.13932E-02	18	0.41245E-02	0.41245E-02	0.41245E-02	20	0.12805E-02	0.12805E-02	0.12805E-02
22	0.0	0.0	0.0	23	0.52083E-03	0.52083E-03	0.52083E-03	24	0.29244E-02	0.29244E-02	0.29244E-02
25	0.26980E-02	0.26980E-02	0.26980E-02	26	0.89434E-03	0.89434E-03	0.89434E-03	28	0.0	0.0	0.0
29	0.13587E-03	0.13587E-03	0.13587E-03	30	0.23273E-02	0.23273E-02	0.23273E-02	32	0.12805E-02	0.12805E-02	0.12805E-02
34	0.32571E-02	0.32571E-02	0.32571E-02	35	0.35811E-02	0.0	0.0	37	0.39636E-03	0.39636E-03	0.39636E-03
39	0.0	0.0	0.0	40	0.0	0.0	0.0	51	0.13499E-03	0.13499E-03	0.13499E-03
53	0.0	0.31410E-02	0.0	54	0.48680E-02	0.48680E-02	0.48680E-02	55	0.0	0.46288E-02	0.0
57	0.45733E-03	0.45733E-03	0.45733E-03	60	0.45733E-03	0.45733E-03	0.45733E-03	62	0.0	0.0	0.0
64	0.45733E-03	0.45733E-03	0.45733E-03	67	0.45733E-03	0.45733E-03	0.45733E-03	69	0.0	0.0	0.0
71	0.12805E-02	0.12805E-02	0.12805E-02	73	0.31994E-02	0.31994E-02	0.31994E-02	75	0.12805E-02	0.12805E-02	0.12805E-02
77	0.0	0.0	0.0	78	0.31955E-02	0.31955E-02	0.31955E-02	79	0.45335E-02	0.45335E-02	0.45335E-02
341	0.78934E-03	0.78934E-03	0.78934E-03	342	0.19061E-01	0.19061E-01	0.19061E-01	343	0.34356E-01	0.34356E-01	0.26436E 00
344	0.31133E-02	0.31133E-02	0.31133E-02	345	0.15630E-02	0.15630E-02	0.15630E-02	346	0.19747E-02	0.19747E-02	0.19747E-02
347	0.17096E-02	0.17096E-02	0.17096E-02	348	0.70498E-02	0.70498E-02	0.70498E-02	349	0.32558E-02	0.32558E-02	0.32558E-02
350	0.12490E-02	0.12490E-02	0.12490E-02	351	0.32245E-02	0.32245E-02	0.32245E-02	352	0.17728E-02	0.17728E-02	0.17728E-02
353	0.36629E-02	0.36629E-02	0.36629E-02	354	0.80960E-03	0.80960E-03	0.80960E-03	355	0.43478E-02	0.43478E-02	0.43478E-02
356	0.31343E-02	0.31343E-02	0.31343E-02	357	0.16819E-02	0.16819E-02	0.16819E-02	358	0.18512E-02	0.18512E-02	0.18512E-02
359	0.13530E-02	0.13530E-02	0.13530E-02	360	0.67415E-02	0.67415E-02	0.67415E-02	361	0.21284E-02	0.21284E-02	0.21284E-02
362	0.23516E-02	0.23516E-02	0.23516E-02	363	0.37653E-02	0.37653E-02	0.37653E-02	364	0.58992E-03	0.58992E-03	0.58992E-03
365	0.26003E-02	0.26003E-02	0 26003E-02	366	0.51747E-02	0.51747E-02	0.51747E-02	367	0.19357E-02	0.19357E-02	0.19357E-02
368	0.32695E-02	0.32695E-02	0.32695E-02	369	0.32696E-02	0.32696E-02	0.32696E-02	370	0.21444E-02	0.21444E-02	0.21444E-02
371	0.22661E-02	0.22661E-02	0.22661E-02	372	0.25093E-02	0.25093E-02	0.25093E-02	373	0.25093E-02	0.25093E-02	0.25093E-02
374	0.71391E-03	0.71391E-03	0.71391F-03								

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.26562E-07) OCCURS AT DOF 24
MINIMUM VALUE (0.10885E-15) OCCURS AT DOF 42
RATIO OF MAX/MIN = 0.24403E 09

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS   16.78 ** LAST STEP "UPDT" TIME IS   15.49 ** DELTA TIME IS    1.29 *
* ELAPSED SECONDS                           902.0                                871.9                      30.0 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.19586E-02) OCCURS AT DOF 24
MINIMUM VALUE(0.90255E-07) OCCURS AT DOF 42
RATIO OF CMAX/CMIN= 0.21701E 05

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS   17.32 ** LAST STEP "MASM" TIME IS   16.78 ** DELTA TIME IS    0.54 *
* ELAPSED SECONDS                           945.6                                902.0                      43.6 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   17.36 ** LAST STEP "INFM" TIME IS   17.32 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           945.8                                945.6                       0.1 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS   17.38 ** LAST STEP "BEGP" TIME IS   17.36 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           945.9                                945.8                       0.1 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS   17.48 ** LAST STEP "SRTL" TIME IS   17.38 ** DELTA TIME IS    0.10 *
```

```
* ELAPSED SECONDS                          946.9                                945.9                        1.0 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS   17.51 ** LAST STEP "SQRT" TIME IS   17.48 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                          946.9                                946.9                        0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS   17.66 ** LAST STEP "INYG" TIME IS   17.51 ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                          947.6                                946.9                        0.7 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS   18.69 ** LAST STEP "TQAD" TIME IS   17.66 ** DELTA TIME IS    1.03 *
* ELAPSED SECONDS                          963.1                                947.6                       15.5 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS   18.82 ** LAST STEP "JAMX" TIME IS   18.69 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                          964.2                                963.1                        1.1 *

* CPU SECONDS ** THIS STEP "TRPL" TIME IS   19.12 ** LAST STEP "RENM" TIME IS   18.82 ** DELTA TIME IS    0.30 *
* ELAPSED SECONDS                          965.0                                964.2                        0.8 *
```

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99974E 00
AVERAGE  DIAGONAL TERM........ 0.99998E 00
LARGEST OFF-DIAGONAL TERM..... 0.12508E-04
AVERAGE OFF-DIAGONAL TERM..... 0.23343E-06
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS   19.12 ** LAST STEP "TRPL" TIME IS   19.12 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           965.0                               965.0                        0.0 *
```

WPPSS OUTLET AND BALANCE LINES

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N
474	0.0
473	0.0
472	0.0
471	0.0
470	0.0
469	0.0
468	0.0
467	0.0
466	0.0
465	0.0
464	0.0
463	0.0
462	-0.33307E-06
461	-0.82887E-05
460	-0.10758E-06
459	-0.28200E-07
458	-0.39644E-06
457	0.33898E-04
456	-0.21272E-15
455	-0.46473E-15
454	-0.56076E-15
453	-0.12399E-15
452	0.11105E-14
451	-0.77237E-15
450	-0.33895E-06
449	-0.82152E-05
448	-0.10698E-06

447	0.18038E-05
446	-0.52827E-06
445	0.38352E-04
444	0.0
443	0.0
442	0.0
441	0.0
440	0.0
439	0.0
438	-0.28844E-15
437	-0.51815E-15
436	-0.58969E-15
435	-0.15399E-16
434	0.16154E-14
433	-0.12993E-14
432	0.16422E-05
431	-0.16152E-05
430	0.18432E-06
429	0.0
428	0.0
427	0.0
426	-0.34367E-06
425	-0.81135E-05
424	-0.10603E-06
423	0.61491E-05
422	-0.73359E-06
421	0.40176E-04
420	0.0
419	0.0
418	0.0

417	0.0
416	0.0
415	0.0
414	0.0
413	0.0
412	0.0
411	0.0
410	0.0
409	0.0
408	-0.32651E-15
407	-0.52944E-15
406	-0.58657E-15
405	0.29656E-15
404	0.17445E-14
403	-0.15806E-14
402	0.16422E-05
401	-0.14911E-05
400	0.16664E-06
399	0.58479E-07
398	0.24398E-05
397	0.21465E-04
396	0.14201E-05
395	0.62597E-06
394	0.81774E-07
393	0.0
392	0.0
391	0.42659E-04
390	-0.69258E-06
389	-0.30772E-06
388	-0.44267E-05

387	-0.11396E-04
386	-0.91444E-08
385	0.25958E-05
384	0.0
383	0.0
382	0.0
381	0.0
380	0.0
379	0.0
378	-0.27223E-14
377	-0.34636E-14
376	0.50390E-15
375	0.26182E-14
374	0.17321E-14
373	-0.44859E-13
372	0.16422E-05
371	-0.10226E-05
370	0.99877E-07
369	0.12779E-06
368	0.46749E-05
367	0.42297E-04
366	0.15849E-05
365	-0.26619E-06
364	0.88087E-07
363	-0.70364E-06
362	0.14988E-05
361	0.42743E-04
360	-0.68818E-06
359	-0.30404E-06
358	-0.45712E-05

357	-0.14669E-04
356	0.19621E-06
355	0.30976E-05
354	-0.13189E-06
353	0.57663E-06
352	-0.31296E-05
351	-0.58084E-05
350	0.15774E-06
349	0.23990E-05
348	-0.27105E-14
347	-0.34773E-14
346	0.51221E-15
345	0.23493E-14
344	0.18437E-14
343	-0.45539E-13
342	0.16422E-05
341	-0.95449E-06
340	0.90177E-07
339	0.13142E-06
338	0.47232E-05
337	0.42797E-04
336	-0.67965E-06
335	-0.29723E-06
334	-0.47399E-05
333	-0.16241E-04
332	0.68128E-06
331	0.33030E-05
330	0.21723E-07
329	0.60400E-06
328	-0.34452E-05

327	-0.95822E-05
326	0.12746E-06
325	0.26295E-05
324	-0.26963E-14
323	-0.34881E-14
322	0.50445E-15
321	0.21930E-14
320	0.21464E-14
319	-0.44282E-13
318	0.16906E-05
317	0.62859E-06
316	-0.40241E-06
315	0.25490E-06
314	0.80720E-05
313	0.42871E-04
312	-0.59253E-06
311	0.30427E-07
310	-0.12896E-04
309	-0.18107E-04
308	0.51215E-05
307	0.33801E-05
306	0.20093E-06
305	0.61408E-06
304	-0.38083E-05
303	-0.11826E-04
302	0.30451E-06
301	0.26368E-05
300	0.0
299	0.0
298	0.0

297	0.0
296	0.0
295	0.0
294	-0.38590E-05
293	-0.47135E-05
292	-0.33408E-04
291	-0.33774E-03
290	0.14250E-04
289	0.45387E-04
288	-0.59564E-06
287	0.40975E-07
286	-0.12986E-04
285	-0.18067E-04
284	0.58617E-05
283	0.33826E-05
282	-0.10048E-06
281	0.23211E-06
280	-0.12449E-04
279	-0.17363E-04
278	0.83861E-05
277	0.32983E-05
276	-0.34955E-03
275	-0.12730E-02
274	-0.13827E-02
273	-0.59083E-05
272	-0.12566E-01
271	0.11388E-01
270	-0.38936E-05
269	-0.49449E-05
268	-0.33453E-04

267	-0.31799E-03
266	0.10181E-04
265	0.43730E-04
264	-0.60768E-06
263	0.73892E-07
262	-0.13199E-04
261	-0.17909E-04
260	0.76581E-05
259	0.33897E-05
258	-0.35210E-03
257	-0.12777E-02
256	-0.13876E-02
255	-0.28648E-03
254	-0.13224E-01
253	0.12065E-01
252	-0.39629E-05
251	-0.52345E-05
250	-0.33499E-04
249	-0.28031E-03
248	0.84946E-05
247	0.39674E-04
246	-0.93410E-06
245	-0.58493E-07
244	-0.13676E-04
243	-0.44845E-04
242	0.76920E-05
241	0.53080E-05
240	-0.35440E-03
239	-0.12821E-02
238	-0.13934E-02

237	-0.96554E-03
236	-0.13342E-01
235	0.12346E-01
234	-0.40481E-05
233	-0.54635E-05
232	-0.33559E-04
231	-0.24280E-03
230	0.84950E-05
229	0.35288E-04
228	-0.45640E-05
227	-0.60645E-05
226	-0.33517E-04
225	-0.10780E-03
224	0.79694E-05
223	0.18117E-04
222	-0.91225E-03
221	-0.15894E-02
220	-0.28748E-02
219	-0.40256E-01
218	0.20727E-02
217	0.12346E-01
216	-0.44646E-05
215	-0.60973E-05
214	-0.33838E-04
213	-0.14760E-03
212	0.12665E-04
211	0.22835E-04
210	-0.91485E-03
209	-0.15877E-02
208	-0.28802E-02

207	-0.40467E-01
206	0.25144E-02
205	0.12169E-01
204	-0.44750E-05
203	-0.63340E-05
202	-0.34248E-04
201	-0.18794E-03
200	0.17370E-04
199	0.27586E-04
198	-0.91732E-03
197	-0.15858E-02
196	-0.28845E-02
195	-0.39290E-01
194	0.26122E-02
193	0.11741E-01
192	-0.17646E-05
191	-0.75525E-05
190	-0.38558E-04
189	-0.27647E-03
188	0.61577E-04
187	0.28198E-04
186	-0.79630E-03
185	-0.12827E-02
184	-0.23477E-02
183	0.0
182	-0.51901E-04
181	0.0
180	-0.15414E-05
179	-0.75723E-05
178	-0.38754E-04

177	-0.27660E-03
176	0.62518E-04
175	0.28054E-04
174	0.0
173	0.0
172	0.0
171	0.0
170	0.0
169	0.0
168	0.16999E-03
167	-0.84888E-03
166	0.41190E-03
165	0.23051E-01
164	0.90593E-03
163	-0.85482E-02
162	-0.13196E-05
161	-0.76019E-05
160	-0.38939E-04
159	-0.26852E-03
158	0.63183E-04
157	0.27672E-04
156	0.10753E-06
155	0.99857E-05
154	-0.29660E-04
153	-0.41497E-06
152	0.16997E-03
151	0.49944E-04
150	0.40238E-03
149	-0.55201E-03
148	0.11029E-02

147	0.78708E-02
146	0.90255E-03
145	-0.28509E-02
144	0.45694E-05
143	-0.84509E-05
142	-0.45304E-04
141	-0.16085E-03
140	0.56068E-04
139	0.35121E-04
138	0.82045E-07
137	0.10309E-04
136	-0.30270E-04
135	0.12791E-04
134	0.20180E-03
133	0.60714E-04
132	0.39865E-03
131	-0.54684E-03
130	0.10937E-02
129	0.62203E-02
128	0.90244E-03
127	-0.22490E-02
126	0.67999E-05
125	-0.88455E-05
124	-0.52968E-04
123	0.15083E-04
122	0.34223E-04
121	0.62820E-04
120	0.60600E-07
119	0.10696E-04
118	-0.30876E-04

117	0.45184E-04
116	0.21521E-03
115	0.65350E-04
114	0.39359E-03
113	-0.54167E-03
112	0.10808E-02
111	0.45864E-02
110	0.90233E-03
109	-0.16537E-02
108	0.67721E-05
107	-0.88488E-05
106	-0.53295E-04
105	0.32054E-04
104	0.30671E-04
103	0.65656E-04
102	0.63654E-06
101	0.18869E-04
100	-0.44982E-04
99	0.26048E-03
98	0.21548E-03
97	0.66776E-04
96	0.25091E-03
95	-0.44890E-03
94	0.70729E-03
93	0.0
92	0.90128E-03
91	0.0
90	0.67386E-05
89	-0.88297E-05
88	-0.53653E-04

87	0.34083E-04
86	0.26359E-04
85	0.66673E-04
84	0.17067E-05
83	0.25976E-04
82	-0.60073E-04
81	0.52089E-03
80	0.21567E-03
79	0.72197E-04
78	-0.78743E-04
77	-0.62544E-04
76	-0.26194E-03
75	-0.96692E-03
74	0.89688E-03
73	0.27423E-03
72	0.70355E-05
71	-0.78484E-05
70	-0.60760E-04
69	0.0
68	0.0
67	0.67182E-04
66	0.17821E-05
65	0.26452E-04
64	-0.61112E-04
63	0.57346E-03
62	0.21647E-03
61	0.74053E-04
60	-0.78584E-04
59	-0.62007E-04
58	-0.26183E-03

57	-0.92162E-03
56	0.89160E-03
55	0.26185E-03
54	0.25491E-05
53	0.11101E-05
52	-0.11091E-03
51	-0.97583E-04
50	-0.19881E-03
49	0.70767E-04
48	0.18395E-05
47	0.26838E-04
46	-0.62367E-04
45	0.57205E-03
44	0.21847E-03
43	0.74866E-04
42	-0.78384E-04
41	-0.61477E-04
40	-0.26169E-03
39	-0.87873E-03
38	0.87605E-03
37	0.25261E-03
36	-0.17463E-04
35	0.33072E-05
34	-0.16106E-03
33	0.0
32	0.0
31	0.74399E-04
30	-0.14097E-04
29	0.12332E-04
28	-0.15493E-03

27	0.52873E-04
26	0.16158E-03
25	0.74833E-04
24	-0.23077E-04
23	0.51682E-05
22	-0.17432E-03
21	0.15059E-04
20	0.42944E-03
19	0.87115E-04
18	-0.18775E-04
17	0.47930E-05
16	-0.16546E-03
15	0.62410E-05
14	0.46697E-04
13	0.74718E-04
12	-0.17690E-04
11	0.74286E-05
10	-0.16396E-03
9	0.32385E-04
8	0.13022E-03
7	0.74830E-04
6	-0.18775E-04
5	0.59111E-05
4	-0.16642E-03
3	0.17071E-04
2	0.89377E-04
1	0.74828E-04

MODE NUMBER 1 NAT. FREQUENCY 0.255335E 03 RAD/SEC ; 0.406379E 02 HERTZ PERIOD 0.246076E-01 SEC
NORMALIZING FACTOR 0.404674E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.001748743	7	2	2	-0.004912786	7	3	3	-0.002411395
13	16	1	0.000693250	13	17	2	0.001544889	13	18	3	-0.006835077
15	19	1	0.000681690	15	20	2	0.000429239	15	21	3	-0.004644331
20	31	1	0.000064978	20	32	2	0.000003150	20	33	3	-0.000236787
26	37	1	0.000076545	26	38	2	0.000004849	26	39	3	-0.000362500
32	28	1	0.001080634	32	29	2	0.000251578	32	30	3	-0.007857949
37	43	1	0.000947736	37	44	2	-0.000013054	37	45	3	0.000044574
51	4	1	0.006470729	51	5	2	0.022032496	51	6	3	-0.022774484
54	13	1	-0.211236119	54	14	2	0.022386678	54	15	3	0.569621205
57	22	1	0.300706744	57	23	2	0.062133279	57	24	3	-1.000000000
60	25	1	0.298143148	60	26	2	-0.326787651	60	27	3	-0.007079300
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.001829950	71	8	2	0.005349286	71	9	3	0.014170863
73	10	1	0.001650112	73	11	2	0.005324677	73	12	3	0.006436791

MODE NUMBER 2 NAT. FREQUENCY 0.381438E 03 RAD/SEC ; 0.607077E 02 HERTZ PERIOD 0.164724E-01 SEC
NORMALIZING FACTOR 0.225648E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.012215294	7	2	2	0.030641176	7	3	3	0.024825174
13	16	1	-0.005087689	13	17	2	-0.010727804	13	18	3	-0.009358175
15	19	1	-0.005016074	15	20	2	-0.002839016	15	21	3	-0.006421890
20	31	1	-0.000494280	20	32	2	-0.000014735	20	33	3	-0.000463425
26	37	1	-0.000578661	26	38	2	-0.000027027	26	39	3	-0.000914100
32	28	1	-0.008075885	32	29	2	-0.001541394	32	30	3	-0.009287003
37	43	1	-0.007218663	37	44	2	0.000120191	37	45	3	-0.000339603
51	4	1	-0.052912466	51	5	2	0.007072676	51	6	3	-0.029650360
54	13	1	1.000000000	54	14	2	0.006962549	54	15	3	0.607345283
57	22	1	-0.599314332	57	23	2	0.009260707	57	24	3	-0.318869114
60	25	1	-0.596984863	60	26	2	0.265137911	60	27	3	0.006907452
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.012325194	71	8	2	-0.012585528	71	9	3	-0.020249661
73	10	1	-0.006479308	73	11	2	-0.012126628	73	12	3	-0.011766292

WPPSS OUTLET AND BALANCE LINES

MODE NUMBER 3 NAT. FREQUENCY 0.428127E 03 RAD/SEC ; 0.681385E 02 HERTZ PERIOD 0.146760E-01 SEC
NORMALIZING FACTOR 0.207142E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.015006725	7	2	2	-0.093778014	7	3	3	-0.120914876
13	16	1	0.005770262	13	17	2	0.018134408	13	18	3	-0.047273953
15	19	1	0.005736951	15	20	2	0.004934121	15	21	3	-0.040661369
20	31	1	0.000262333	20	32	2	0.000063533	20	33	3	-0.002218985
26	37	1	0.000328772	26	38	2	0.000053590	26	39	3	-0.003946710
32	28	1	0.010217801	32	29	2	0.003037060	32	30	3	-0.070645571
37	43	1	0.009150732	37	44	2	-0.000173982	37	45	3	0.000430670
51	4	1	0.075825870	51	5	2	0.104199767	51	6	3	-0.047634684
54	13	1	-0.690670729	54	14	2	0.107269883	54	15	3	0.598560035
57	22	1	-0.131179392	57	23	2	0.079738617	57	24	3	0.145419657
60	25	1	-0.134898305	60	26	2	1.000000000	60	27	3	0.002373327
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.015375312	71	8	2	0.074647427	71	9	3	0.168562591
73	10	1	0.013354111	73	11	2	0.074421108	73	12	3	0.084795177

MODE NUMBER 4 NAT. FREQUENCY 0.473932E 03 RAD/SEC ; 0.754286E 02 HERTZ PERIOD 0.132576E-01 SEC
NORMALIZING FACTOR 0.962054E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.017840683	7	2	2	-0.441329360	7	3	3	-1.000000000
13	16	1	0.003945056	13	17	2	0.051310495	13	18	3	-0.202439487
15	19	1	0.004237156	15	20	2	0.014525145	15	21	3	-0.202277064
20	31	1	-0.001789619	20	32	2	0.000349310	20	33	3	-0.010525186
26	37	1	-0.001938821	26	38	2	0.000219610	26	39	3	-0.018931247
32	28	1	0.014015634	32	29	2	0.010432985	32	30	3	-0.366756141
37	43	1	0.012716033	37	44	2	-0.000394172	37	45	3	0.000598808
51	4	1	0.221233904	51	5	2	0.369235575	51	6	3	-0.034515340
54	13	1	0.672696054	54	14	2	0.378645778	54	15	3	-0.061238863
57	22	1	0.177524745	57	23	2	0.355098248	57	24	3	0.312169135
60	25	1	0.182479978	60	26	2	-0.737687171	60	27	3	-0.001703641
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.019023865	71	8	2	0.407925963	71	9	3	0.925609827
73	10	1	0.038033985	73	11	2	0.409251034	73	12	3	0.472515464

MODE NUMBER 5 NAT. FREQUENCY 0.500531E 03 RAD/SEC ; 0.796621E 02 HERTZ PERIOD 0.125530E-01 SEC
NORMALIZING FACTOR 0.161099E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.004893299	7	2	2	-0.066013992	7	3	3	-0.169222534
13	16	1	0.001792799	13	17	2	0.009252843	13	18	3	0.057317074
15	19	1	0.001829488	15	20	2	0.002402461	15	21	3	0.043892976
20	31	1	-0.000118071	20	32	2	0.000044000	20	33	3	0.003622729
26	37	1	-0.000119824	26	38	2	0.000027917	26	39	3	0.007883407
32	28	1	0.004091199	32	29	2	0.001512804	32	30	3	0.060058281
37	43	1	0.003815381	37	44	2	-0.000114208	37	45	3	0.000179562
51	4	1	0.029227667	51	5	2	-0.011604298	51	6	3	0.063665926
54	13	1	0.037067898	54	14	2	-0.010662179	54	15	3	-1.000000000
57	22	1	-0.154000878	57	23	2	0.101411104	57	24	3	-0.965985835
60	25	1	-0.157818317	60	26	2	0.678471267	60	27	3	-0.001086931
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.004783392	71	8	2	0.039002836	71	9	3	0.079066217
73	10	1	0.003476544	73	11	2	0.038902909	73	12	3	0.042933509

MODE NUMBER 6 NAT. FREQUENCY 0.522202E 03 RAD/SEC ; 0.831111E 02 HERTZ PERIOD 0.120321E-01 SEC
NORMALIZING FACTOR 0.127602E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.029670116	7	2	2	0.103807390	7	3	3	0.126885176
13	16	1	-0.012967315	13	17	2	-0.029600635	13	18	3	-0.174130619
15	19	1	-0.012871828	15	20	2	-0.007316582	15	21	3	-0.152525425
20	31	1	-0.001096852	20	32	2	-0.000040360	20	33	3	-0.011436746
26	37	1	-0.001287014	26	38	2	-0.000056030	26	39	3	-0.024543557
32	28	1	-0.021942835	32	29	2	-0.003705039	32	30	3	-0.229346693
37	43	1	-0.020129085	37	44	2	0.000437252	37	45	3	-0.000947555
51	4	1	-0.072712064	51	5	2	0.023072135	51	6	3	-0.046060827
54	13	1	0.841577232	54	14	2	0.026408885	54	15	3	0.036200244
57	22	1	1.000000000	57	23	2	0.006416850	57	24	3	0.157311082
60	25	1	0.996718228	60	26	2	0.914278090	60	27	3	-0.013421047
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.029653184	71	8	2	-0.014272343	71	9	3	-0.019029725
73	10	1	-0.017974067	73	11	2	-0.013462041	73	12	3	-0.012711897

MODE NUMBER 7 NAT. FREQUENCY 0.532991E 03 RAD/SEC ; 0.848282E 02 HERTZ PERIOD 0.117885E-01 SEC
NORMALIZING FACTOR 0.119766E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.019132044	7	2	2	0.181340575	7	3	3	-0.443827212
13	16	1	-0.005221605	13	17	2	-0.030851364	13	18	3	0.742439747
15	19	1	-0.005210228	15	20	2	-0.009879757	15	21	3	0.664307237
20	31	1	0.000409395	20	32	2	-0.000203362	20	33	3	0.050112769
26	37	1	0.000395233	26	38	2	-0.000169213	26	39	3	0.108371973
32	28	1	-0.010424405	32	29	2	-0.007355839	32	30	3	1.000000000
37	43	1	-0.008684956	37	44	2	0.000087822	37	45	3	-0.000409789
51	4	1	-0.011222716	51	5	2	-0.087089419	51	6	3	0.087775171
54	13	1	0.171255350	54	14	2	-0.089646697	54	15	3	0.268320501
57	22	1	0.251853943	57	23	2	-0.115715325	57	24	3	0.178274155
60	25	1	0.251138747	60	26	2	0.173955798	60	27	3	-0.002939143
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.019146927	71	8	2	-0.012513380	71	9	3	-0.010204319
73	10	1	-0.011395980	73	11	2	-0.011630546	73	12	3	-0.003611488

MODE NUMBER 8 NAT. FREQUENCY 0.545423E 03 RAD/SEC ; 0.868068E 02 HERTZ PERIOD 0.115198E-01 SEC
NORMALIZING FACTOR 0.113127E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.134917080	7	2	2	1.000000000	7	3	3	-0.455875695
13	16	1	-0.053569924	13	17	2	-0.186539054	13	18	3	-0.235809982
15	19	1	-0.053711113	15	20	2	-0.048990712	15	21	3	-0.241782129
20	31	1	-0.001242128	20	32	2	-0.000681969	20	33	3	-0.016541407
26	37	1	-0.001704108	26	38	2	-0.000536382	26	39	3	-0.035102341
32	28	1	-0.102580845	32	29	2	-0.029420424	32	30	3	-0.393618107
37	43	1	-0.094311118	37	44	2	0.002387152	37	45	3	-0.004440904
51	4	1	-0.137508690	51	5	2	-0.082914174	51	6	3	0.041086309
54	13	1	-0.229722738	54	14	2	-0.085870326	54	15	3	-0.014872417
57	22	1	-0.116428792	57	23	2	-0.081382632	57	24	3	-0.043201406
60	25	1	-0.116891623	60	26	2	-0.039109599	60	27	3	0.001491038
64	34	1	-0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.131991744	71	8	2	-0.025755454	71	9	3	0.052386623
73	10	1	-0.066998363	73	11	2	-0.020182636	73	12	3	0.016648374

MODE NUMBER 9 NAT. FREQUENCY 0.554814E 03 RAD/SEC ; 0.883013E 02 HERTZ PERIOD 0.113249E-01 SEC
NORMALIZING FACTOR 0.254095E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.000000000	7	2	2	0.000000000	7	3	3	0.000000000
13	16	1	-0.000000000	13	17	2	-0.000000000	13	18	3	-0.000000000
15	19	1	-0.000000000	15	20	2	0.000000000	15	21	3	-0.000000000
20	31	1	-0.000000000	20	32	2	0.000000000	20	33	3	-0.000000000
26	37	1	-0.000000000	26	38	2	-0.000000000	26	39	3	-0.000000000
32	28	1	-0.000000000	32	29	2	0.000000000	32	30	3	-0.000000000
37	43	1	-0.000000000	37	44	2	-0.000000000	37	45	3	-0.000000000
51	4	1	-0.000000000	51	5	2	0.000000000	51	6	3	-0.000000000
54	13	1	0.000000000	54	14	2	0.000000000	54	15	3	0.000000000
57	22	1	0.000000000	57	23	2	-0.000000000	57	24	3	0.000000000
60	25	1	0.000000000	60	26	2	0.000000000	60	27	3	-0.000000000
64	34	1	1.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	0.001957385	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.000000000	71	8	2	0.000000000	71	9	3	0.000000000
73	10	1	-0.000000000	73	11	2	0.000000000	73	12	3	0.000000000

MODE NUMBER 10 NAT. FREQUENCY 0.647444E 03 RAD/SEC ; 0.103044E 03 HERTZ PERIOD 0.970459E-02 SEC
NORMALIZING FACTOR 0.804822E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.104335785	7	2	2	0.431818962	7	3	3	0.788972795
13	16	1	-0.044608518	13	17	2	-0.117729723	13	18	3	0.173592746
15	19	1	-0.044442985	15	20	2	-0.030379657	15	21	3	0.249066472
20	31	1	-0.002969165	20	32	2	-0.000278901	20	33	3	0.018377680
26	37	1	-0.003550004	26	38	2	-0.000286874	26	39	3	0.042615686
32	28	1	-0.078671873	32	29	2	-0.016796906	32	30	3	0.409844220
37	43	1	-0.072435677	37	44	2	0.001628410	37	45	3	-0.003413840
51	4	1	0.004635472	51	5	2	0.311259687	51	6	3	-0.173752666
54	13	1	-0.006310090	54	14	2	0.327102244	54	15	3	-0.196103573
57	22	1	-0.058401939	57	23	2	0.341881812	57	24	3	-0.039511930
60	25	1	-0.057325359	60	26	2	-0.082853734	60	27	3	0.000623984
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.098483145	71	8	2	0.483306468	71	9	3	1.000000000
73	10	1	-0.000989456	73	11	2	0.490178287	73	12	3	0.528423965

WPPSS OUTLET AND BALANCE LINES

MODE NUMBER 11 NAT. FREQUENCY 0.737014E 03 RAD/SEC ; 0.117299E 03 HERTZ PERIOD 0.852519E-02 SEC
NORMALIZING FACTOR 0.383848E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.991051018	7	2	2	-0.924823284	7	3	3	-0.043906309
13	16	1	-0.513509333	13	17	2	-0.562304914	13	18	3	0.027422052
15	19	1	-0.506714582	15	20	2	-0.091444671	15	21	3	0.016473282
20	31	1	-0.074940145	20	32	2	0.003915489	20	33	3	0.001291975
26	37	1	-0.085352004	26	38	2	0.001357886	26	39	3	0.002829004
32	28	1	-0.776326716	32	29	2	0.010517046	32	30	3	0.022212047
37	43	1	-0.720986307	37	44	2	0.012465585	37	45	3	-0.034003098
51	4	1	-0.997660995	51	5	2	-0.071317315	51	6	3	0.068800271
54	13	1	-0.288680136	54	14	2	-0.076330125	54	15	3	0.050261524
57	22	1	-0.037163008	57	23	2	-0.079296231	57	24	3	0.009728651
60	25	1	-0.038015008	60	26	2	-0.006651435	60	27	3	0.000697499
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-1.000000000	71	8	2	-0.025028259	71	9	3	-0.225829065
73	10	1	-0.767806172	73	11	2	-0.013211463	73	12	3	-0.100217223

MODE NUMBER 12 NAT. FREQUENCY 0.910613E 03 RAD/SEC ; 0.144929E 03 HERTZ PERIOD 0.689995E-02 SEC
NORMALIZING FACTOR 0.501323E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.018309463	7	2	2	-0.190149248	7	3	3	0.090415180
13	16	1	0.006762389	13	17	2	0.041891847	13	18	3	-0.018220060
15	19	1	0.007045459	15	20	2	0.011911649	15	21	3	-0.125621140
20	31	1	-0.000955006	20	32	2	0.000247151	20	33	3	-0.016083963
26	37	1	-0.001011625	26	38	2	0.000152460	26	39	3	-0.047158279
32	28	1	0.018224351	32	29	2	0.007865932	32	30	3	-0.147125483
37	43	1	0.017861299	37	44	2	-0.000881676	37	45	3	0.000843847
51	4	1	0.050574824	51	5	2	-0.870803893	51	6	3	0.841540277
54	13	1	0.003707772	54	14	2	-0.962074816	54	15	3	0.331437528
57	22	1	0.031419661	57	23	2	-1.000000000	57	24	3	-0.019192882
60	25	1	0.029018633	60	26	2	0.087838650	60	27	3	-0.000621714
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.028300125	71	8	2	0.453912377	71	9	3	0.809351742
73	10	1	0.160848260	73	11	2	0.466713130	73	12	3	0.493309259

MODE NUMBER 13 NAT. FREQUENCY 0.128540E 04 RAD/SEC ; 0.204577E 03 HERTZ PERIOD 0.488812E-02 SEC
NORMALIZING FACTOR 0.304213E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	0.248889565	7	2	2	0.131675899	7	3	3	0.001894046
13	16	1	-0.371510625	13	17	2	0.803252280	13	18	3	-0.011476777
15	19	1	-0.378605723	15	20	2	0.963825703	15	21	3	0.013501607
20	31	1	-0.118198633	20	32	2	0.030722812	20	33	3	0.002355114
26	37	1	-0.125054538	26	38	2	0.029454824	26	39	3	0.008559197
32	28	1	-0.544913828	32	29	2	1.000000000	32	30	3	0.012993675
37	43	1	-0.567523003	37	44	2	-0.036160115	37	45	3	-0.026941899
51	4	1	0.296998143	51	5	2	0.003365011	51	6	3	-0.012879074
54	13	1	0.042762022	54	14	2	0.004227873	54	15	3	-0.004652891
57	22	1	0.002254579	57	23	2	0.004551016	57	24	3	-0.000973173
60	25	1	0.002439265	60	26	2	0.000535884	60	27	3	-0.000103197
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	0.273721099	71	8	2	-0.041700020	71	9	3	0.019449811
73	10	1	0.232217610	73	11	2	-0.043480948	73	12	3	-0.000405547

MODE NUMBER 14 NAT. FREQUENCY 0.147054E 04 RAD/SEC ; 0.234044E 03 HERTZ PERIOD 0.427271E-02 SEC
NORMALIZING FACTOR 0.463131E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.001805674	7	2	2	-0.023707170	7	3	3	-0.030600999
13	16	1	0.002803366	13	17	2	-0.000837484	13	18	3	-1.000000000
15	19	1	0.002936486	15	20	2	-0.007865023	15	21	3	0.389696836
20	31	1	0.000630433	20	32	2	-0.000244159	20	33	3	0.093546987
26	37	1	0.000635398	26	38	2	-0.000268945	26	39	3	0.389551044
32	28	1	0.005182762	32	29	2	-0.008625958	32	30	3	0.263747931
37	43	1	0.005214129	37	44	2	0.001489283	37	45	3	0.000249750
51	4	1	-0.015687067	51	5	2	-0.037270349	51	6	3	0.026104685
54	13	1	-0.007389665	54	14	2	-0.049010027	54	15	3	0.002789400
57	22	1	-0.000482564	57	23	2	-0.052710563	57	24	3	-0.003360063
60	25	1	-0.000573273	60	26	2	0.001969486	60	27	3	-0.000022427
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.000429529	71	8	2	-0.131699383	71	9	3	0.114729404
73	10	1	0.019292220	73	11	2	-0.129040718	73	12	3	0.021924537

MODE NUMBER 15 NAT. FREQUENCY 0.157038E 04 RAD/SEC ; 0.249933E 03 HERTZ PERIOD 0.400107E-02 SEC
NORMALIZING FACTOR 0.368131E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
7	1	1	-0.013653431	7	2	2	-0.067335904	7	3	3	0.073161125
13	16	1	-0.000607410	13	17	2	-0.001556671	13	18	3	0.196341395
15	19	1	-0.000171364	15	20	2	-0.016307883	15	21	3	-0.064923406
20	31	1	-0.000305918	20	32	2	-0.000406392	20	33	3	-0.018043060
26	37	1	-0.000515758	26	38	2	-0.000563099	26	39	3	-0.079490066
32	28	1	0.003637392	32	29	2	-0.017387498	32	30	3	-0.024234101
37	43	1	0.004568927	37	44	2	0.000826206	37	45	3	0.000217531
51	4	1	0.035142373	51	5	2	0.000932283	51	6	3	0.020904198
54	13	1	-0.010272305	54	14	2	0.002311128	54	15	3	-0.015268035
57	22	1	-0.001484138	57	23	2	0.003521685	57	24	3	-0.002555343
60	25	1	-0.001718648	60	26	2	-0.000392331	60	27	3	-0.000144975
64	34	1	0.000000000	64	35	2	0.000000000	64	36	3	0.000000000
67	40	1	-0.000000000	67	41	2	0.000000000	67	42	3	-0.000000000
71	7	1	-0.013708334	71	8	2	-1.000000000	71	9	3	0.866091192
73	10	1	-0.010512967	73	11	2	-0.993965626	73	12	3	0.173997581

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODE NO.	FREQUENCY (RAD/SEC)
16	0.18479661E 04
17	0.19015435E 04
18	0.21172869E 04
19	0.24144626E 04
20	0.25400540E 04
21	0.27238225E 04
22	0.33525254E 04
23	0.39212593E 04
24	0.42852227E 04
25	0.51995352E 04
26	0.54586211E 04
27	0.70759258E 04
28	0.74025156E 04
29	0.78539180E 04
30	0.79702656E 04
31	0.89619023E 04
32	0.90751680E 04
33	0.99343711E 04
34	0.10158125E 05
35	0.16158496E 05
36	0.16910547E 05
37	0.19794910E 05
38	0.21026145E 05
39	0.22205227E 05
40	0.24047387E 05
41	0.24466613E 05
42	0.27447344E 05
43	0.27954688E 05
44	0.57663820E 05

MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	0.769418E-04	-0.374215E-04	-0.401675E-04
2	0.730248E-05	0.351978E-04	0.729447E-04
3	-0.118550E-03	0.210404E-03	0.110480E-03
4	0.104789E-03	0.123796E-03	-0.672853E-04
5	-0.129159E-04	0.731575E-04	-0.222325E-03
6	0.198919E-03	0.834816E-04	-0.489198E-04
7	0.288182E-04	-0.847679E-05	0.289061E-03
8	-0.222664E-03	0.775838E-04	-0.180055E-03
9	0.130697E-03	0.148306E-14	-0.217461E-14
10	-0.101428E-03	0.211587E-03	0.271194E-03
11	-0.511497E-03	-0.111303E-03	-0.142299E-04
12	0.249857E-04	-0.140353E-03	0.561066E-04
13	-0.772362E-04	0.151706E-03	-0.127746E-05
14	0.259900E-05	-0.279414E-04	0.391012E-04
15	-0.147482E-05	-0.923670E-04	0.450729E-04
16	-0.203988E-07	-0.199560E-04	-0.588037E-06
17	0.209440E-04	-0.164528E-04	-0.295362E-04
18	-0.412437E-05	-0.801248E-04	-0.358500E-05
19	-0.125485E-05	-0.966633E-06	0.497639E-04
20	0.490972E-04	-0.378894E-05	0.830823E-06
21	0.671044E-05	0.178458E-04	0.131477E-04
22	0.122791E-04	0.113222E-04	0.111257E-04
23	-0.266443E-04	-0.565472E-05	0.155165E-06
24	0.137914E-07	0.179289E-06	-0.196309E-07
25	0.636527E-05	0.730510E-07	0.470313E-07
26	-0.571849E-06	-0.325358E-05	0.216850E-07
27	0.374707E-08	-0.755012E-07	-0.946304E-05
28	-0.138705E-06	0.292872E-05	-0.178363E-06
29	-0.135313E-17	0.103575E-04	0.231523E-05
30	-0.126487E-06	0.696917E-06	0.367447E-05
31	-0.336493E-06	0.686079E-05	-0.411085E-06
32	0.298302E-06	-0.868376E-08	0.817369E-05
33	0.332259E-16	-0.180617E-05	0.700925E-05
34	-0.794667E-06	-0.935381E-06	-0.791394E-06
35	0.639934E-06	-0.135458E-06	-0.387377E-05
36	0.182718E-06	0.119274E-05	-0.205561E-05
37	-0.298578E-05	0.614783E-16	0.732036E-17
38	-0.429226E-06	-0.329159E-06	-0.524759E-08
39	-0.754860E-06	-0.104794E-05	0.124901E-08
40	-0.224621E-06	0.279742E-05	0.102676E-08
41	-0.159008E-16	0.159735E-05	0.721215E-06
42	0.483995E-06	0.118350E-05	-0.423312E-08
43	-0.202781E-06	-0.320010E-05	-0.153919E-07
44	0.206907E-17	0.328289E-06	-0.960611E-06

WPPSS OUTLET AND BALANCE LINES
WPPSS OUTLET AND BALANCE LINES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.385963E-03	(0.16%)	0.912985E-04	(0.04%)	0.105189E-03	(0.02%)	0.406379E 02
2	0.775868E-05	(0.16%)	0.180252E-03	(0.12%)	0.774167E-03	(0.19%)	0.607077E 02
3	0.257603E-02	(1.22%)	0.811431E-02	(3.66%)	0.223725E-02	(0.69%)	0.681385E 02
4	0.246641E-02	(2.23%)	0.344226E-02	(5.17%)	0.101689E-02	(0.92%)	0.754286E 02
5	0.417941E-04	(2.25%)	0.134085E-02	(5.76%)	0.123834E-01	(3.66%)	0.796621E 02
6	0.107902E-01	(6.68%)	0.190046E-02	(6.59%)	0.652599E-03	(3.81%)	0.831111E 02
7	0.235926E-03	(6.78%)	0.204128E-04	(6.59%)	0.237367E-01	(9.07%)	0.848282E 02
8	0.147491E-01	(12.83%)	0.179064E-02	(7.38%)	0.964442E-02	(11.21%)	0.868068E 02
9	0.525804E-02	(14.99%)	0.677033E-24	(7.38%)	0.145565E-23	(11.21%)	0.883013E 02
10	0.431244E-02	(16.76%)	0.187665E-01	(15.58%)	0.308295E-01	(18.04%)	0.103044E 03
11	0.142114E 00	(75.11%)	0.672921E-02	(18.52%)	0.109991E-03	(18.07%)	0.117299E 03
12	0.517667E-03	(75.33%)	0.163346E-01	(25.66%)	0.261033E-02	(18.65%)	0.144929E 03
13	0.985637E-02	(79.37%)	0.380260E-01	(42.28%)	0.269631E-05	(18.65%)	0.204577E 03
14	0.146071E-04	(79.38%)	0.168830E-02	(43.01%)	0.330624E-02	(19.38%)	0.234044E 03
15	0.536399E-05	(79.38%)	0.210398E-01	(52.21%)	0.501002E-02	(20.49%)	0.249933E 03
16	0.142101E-08	(79.38%)	0.135999E-02	(52.80%)	0.118085E-05	(20.49%)	0.294113E 03
17	0.158611E-02	(80.03%)	0.978796E-03	(53.23%)	0.315444E-02	(21.19%)	0.302640E 03
18	0.762559E-04	(80.06%)	0.287801E-01	(65.81%)	0.576151E-04	(21.20%)	0.336977E 03
19	0.917959E-05	(80.07%)	0.544708E-05	(65.81%)	0.144367E-01	(24.40%)	0.384274E 03
20	0.155524E-01	(86.45%)	0.926235E-04	(65.85%)	0.445352E-05	(24.40%)	0.404262E 03
21	0.334087E-03	(86.59%)	0.236282E-02	(66.88%)	0.128250E-02	(24.69%)	0.433510E 03
22	0.169464E-02	(87.29%)	0.144081E-02	(67.51%)	0.139123E-02	(25.00%)	0.533571E 03
23	0.109159E-01	(91.77%)	0.491668E-03	(67.73%)	0.370202E-06	(25.00%)	0.624088E 03
24	0.349271E-08	(91.77%)	0.590276E-06	(67.73%)	0.707664E-08	(25.00%)	0.682014E 03
25	0.109538E-02	(92.22%)	0.144272E-06	(67.73%)	0.598001E-07	(25.00%)	0.827532E 03
26	0.974379E-05	(92.22%)	0.315419E-03	(67.87%)	0.140115E-07	(25.00%)	0.868766E 03
27	0.702993E-09	(92.22%)	0.285413E-06	(67.87%)	0.448362E-02	(25.99%)	0.112617E 04
28	0.105425E-05	(92.22%)	0.470019E-03	(68.07%)	0.174329E-05	(25.99%)	0.117815E 04
29	0.112940E-27	(92.22%)	0.661735E-02	(70.96%)	0.330644E-03	(26.06%)	0.124999E 04
30	0.101634E-05	(92.22%)	0.308537E-04	(70.98%)	0.857700E-03	(26.25%)	0.126851E 04
31	0.909395E-05	(92.23%)	0.378050E-02	(72.63%)	0.135726E-04	(26.26%)	0.142633E 04
32	0.732861E-05	(92.23%)	0.621048E-08	(72.63%)	0.550232E-02	(27.48%)	0.144436E 04
33	0.108952E-24	(92.23%)	0.321958E-03	(72.77%)	0.484869E-02	(28.55%)	0.158110E 04
34	0.651625E-04	(92.26%)	0.902826E-04	(72.81%)	0.646268E-04	(28.57%)	0.161672E 04
35	0.106923E-03	(92.30%)	0.479086E-05	(72.81%)	0.391805E-02	(29.44%)	0.257170E 04
36	0.954725E-05	(92.30%)	0.406823E-03	(72.99%)	0.120836E-02	(29.70%)	0.269140E 04
37	0.349320E-02	(93.74%)	0.148099E-23	(72.99%)	0.209977E-25	(29.70%)	0.315046E 04
38	0.814502E-04	(93.77%)	0.478996E-04	(73.01%)	0.121742E-07	(29.70%)	0.334641E 04
39	0.280959E-03	(93.89%)	0.541477E-03	(73.25%)	0.769208E-09	(29.70%)	0.353407E 04
40	0.291767E-04	(93.90%)	0.452535E-02	(75.22%)	0.609646E-09	(29.70%)	0.382726E 04
41	0.151351E-24	(93.90%)	0.152738E-02	(75.89%)	0.311370E-03	(29.77%)	0.389398E 04
42	0.176474E-03	(93.97%)	0.105520E-02	(76.35%)	0.134996E-07	(29.77%)	0.436838E 04
43	0.321338E-04	(93.99%)	0.800268E-02	(79.85%)	0.185137E-06	(29.77%)	0.444913E 04
44	0.142349E-25	(93.99%)	0.358360E-03	(80.01%)	0.306833E-02	(30.45%)	0.917748E 04
SUM OF 44 MODES	0.228898E 00	(93.99%)	0.183073E 00	(80.01%)	0.137356E 00	(30.45%)	
TOTAL LUMPED MASS	0.243547E 00		0.228826E 00		0.451056E 00		

```
 TOTAL NUMBER OF MEANINGFUL MODES =  44


ACCUM=ACCUMULATED PERCENT

* CPU SECONDS ** THIS STEP "FRQM" TIME IS   22.55 ** LAST STEP "ORTH" TIME IS   19.12 ** DELTA TIME IS    3.43 *
* ELAPSED SECONDS                          1051.4                                965.0                        86.4 *
```

2"-CW-113-CS.3N-SP2

GROUP 8

```
START NC3600 NO PRODUCTION NO TAPE 15
WPPSS 00-4-1371 GROUP 8
GEOMETRY
GROUP 8  LINE 113
COORDINATES
1 0' 0' 0'
2 0' -1'5-1/4 0'
3 0' 0' 2'0 2
4 0' 0' 2'3-7/16 2
5 0' 0' 0'3 4
6 0' 0' 0'6 4
7 0' 2'5 0' 5
8 0' 0' 0'7-1/2 6
9 0' 0' 0'8 8
10 0' 0' 0'5-1/2 9
11 0' 0' 0'8 10
12 0' 0' 0'5 11
BOUNDARY
1 ANCHOR
3 SPECIAL 1 1 1 0 0 0
12 SPECIAL 1 1 1 0 0 0
7 ANCHOR
MATERIAL C106
70 27900000 .3 .00000607
85 27900000 .3 .00000607
SIF
100 2.1 2.1
BRANCH 1 C106 215.3 1
RUN 1 0 2.375 .218 6.3 3 0 2
ELBOW 2 0'1-1/2 2.375 .218 6.3 0 100
RUN 0 3 0 0 0 1 0 2
RUN 3 4 0 0 0 2
RUN 4 5 0 0 390 1
RUN 5 6 0 0 390 2
RUN 6 8 2.375 .218 6.3
VALVE 8 9 2.375 .218 40 3 0 MOTOR 0'6 0' 0'4 8 4
RUN 9 10 2.375 .218 6.3 3
VALVE 10 11 2.375 .218 40 3
RUN 11 12 2.375 .218 6.3
BRANCH 2 C106 0 2
RUN 5 7 3.5 .3 6.3
LOAD 1
DESIGN
DEADWEIGHT -Y 1.0
FORCE  18  0 4
LOAD 2
VERTICAL +Y
DEADWEIGHT +Y 1.0
FORCE 18 0 4
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
FORCE 18 4
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
FORCE 18 4
LOAD 5
HORIZONTAL +Z
```

```
DEADWEIGHT +Z 1.0
FORCE 18 0 0 4
LOAD 6
HORIZONTAL -Z
DEADWEIGHT -Z 1.0
FORCE 18 0 0 4
LOAD 7
THERMAL
THERMAL 1 85 0 0 0 70
THERMAL 2 70 0 0 0 70
SUPERPOSITION
GROUP-8
16 2 1 -4
OBE + SRV XY
3
1 1.0 2 1.04 3 .70
OBE + SRV X-Y
2
1 2.04 3 .7
OBE + SRV ZY
3
1 1.0 2 1.04 5 .7
OBE + SRV Z-Y
2
1 2.04 5 .7
OBE + SRV -XY
3
1 1.0 2 1.04 4 .7
OBE + SRV -X-Y
2
1 2.04 4 .7
OBE + SRV -ZY
3
1 1.0 2 1.04 6 .7
OBE + SRV -Z-Y
2
2 2.04 6 .7
SSE + SRV + LOCA XY
3
1 1.0 2 1.9 3 1.16
SSE + SRV + LOCA X-Y
2
1 2.9 3 1.16
SSE + SRV + LOCA ZY
3
1 1.0 2 1.9 5 1.16
SSE + SRV + LOCA Z-Y
2
1 2.9 5 1.16
SSE + SRV + LOCA -XY
3
1 1.0 2 1.9 4 1.16
SSE + SRV + LOCA -X-Y
2
1 2.9 4 1.16
SSE + SRV + LOCA -ZY
3
1 1.0 2 1.90 6 1.16
SSE + SRV + LOCA -Z-Y
2
```

1 2.9 6 1.16
END OF JOB

WPPSS 00-4-1371 GROUP 8

NUMB=	18	NBC=	19	NBRAN=	2	NNOR=	0	NTOT=	4	NSEC=	6
NCOORD=	20	NMAT=	1	NCYL=	0	NPRES=	2	NTEE=	0	JSTART=	1
NFLOAT=	0	NREF=	4	MAXJT=	801						

JOINT COORDINATES

JNT	X1	X2	X3
1	0.0	0.0	0.0
2	0.0	-16.81065	0.43934
3	0.0	-17.25000	24.00000
4	0.0	-17.25000	27.43750
5	0.0	-17.25000	30.43750
6	0.0	-17.25000	33.43750
7	0.0	11.75000	30.43750
8	0.0	-17.25000	40.93750
9	0.0	-17.25000	48.93750
10	0.0	-17.25000	54.43750
11	0.0	-17.25000	62.43750
12	0.0	-17.25000	67.43750
13	0.0	-7.87500	0.0
14	0.0	-15.75000	0.0
15	0.0	-17.25000	1.50000
16	0.0	-17.25000	12.75000
17	0.0	-17.25000	44.93750
18	6.00000	-17.25000	44.93750
19	0.0	-17.25000	58.43750
30	0.0	-15.75000	1.50000

BOUNDARY

NB	LAMORI	OMAGA 1	OMAGA 2	OMAGA 3	OMAGA 4	OMAGA 5	OMAGA 6	J1	J2	J3
1	0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0	0	0
3	0	1.00000	1.00000	1.00000	0.0	0.0	0.0	0	0	0
12	0	1.00000	1.00000	1.00000	0.0	0.0	0.0	0	0	0
7	0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0	0	0

MATERIALS

MAT 1 IDENTIFIER = 'C106' NTEMP= 2

PT.	TEMP.	E	POISSON'S RATIO	COEF THERMAL EXPANSION	SM	M	N
1	0.70000E 02	0.27900E 08	0.30000E 00	0.60700E-05	0.0	0.0	0.0
2	0.85000E 02	0.27900E 08	0.30000E 00	0.60700E-05	0.0	0.0	0.0

STRESS AND FLEXIBILITY FACTORS

IPTYPE	SIF 1	SIF 2	FLEX FACTOR
100	2.1000	2.1000	-1.0000

PRESSURES

0.21530E 03 0.0

CROSS SECTIONS

NO.	IREC	BB 1	BB 2	BB 3	BB 4	BB 5	BB 6	WT/LENGTH
1	3	0.23750E 01	0.21800E 00	0.20000E 01	0.0	0.0	0.0	0.52500E 00
2	4	0.23750E 01	0.21800E 00	0.20000E 01	0.0	0.0	0.0	0.52500E 00
3	3	0.23750E 01	0.21800E 00	0.20000E 01	0.0	0.0	0.0	0.32500E 02
4	3	0.23750E 01	0.21800E 00	0.20000E 01	0.0	0.0	0.0	0.50000E 01
5	3	0.23750E 01	0.21800E 00	0.20000E 01	0.0	0.0	0.0	0.66667E 00
6	3	0.35000E 01	0.30000E 00	0.20000E 01	0.0	0.0	0.0	0.52500E 00

ELEMENTS

KBAR	JPN1	JPN2	JPN3	NTYP	IMAT	NDIV	ULOAD	JPRES	IPIP	KTEE	KSEC	JENDSP	IFLNG	ISYST	END CONDS. END1	END2	XSEC NO. 1	2	3	4	5	6	IPTYP	JLEG	NBRN	NSTIFF	WEIGHT	LENGTH
1	1	13	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	1	0	4.13	7.88
2	13	14	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	1	0	4.13	7.88
3	14	2	30	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	100	1	1	0	0.60	1.15
4	2	15	30	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	100	1	1	0	0.60	1.15
5	15	16	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	5.91	11.25
6	16	3	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	5.91	11.25
7	3	4	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	1	0	1.80	3.44
8	4	5	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	1	1	1	0	97.50	3.00
9	5	6	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	2	1	1	0	97.50	3.00
10	6	8	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3.94	7.50
11	8	17	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	4	0	0	0	0	0	3	1	1	0	20.00	4.00
12	17	9	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	4	0	0	0	0	0	3	1	1	0	20.00	4.00
13	17	18	8	1	1	1	0	1	1	0	0	0	0	0	0	0	5	0	0	0	0	0	3	1	1	0	4.00	6.00
14	9	10	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	1	0	2.89	5.50
15	10	19	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	4	0	0	0	0	0	3	1	1	0	20.00	4.00
16	19	11	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	4	0	0	0	0	0	3	1	1	0	20.00	4.00
17	11	12	1001	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	2.62	5.00
18	5	7	1001	1	1	1	0	2	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	2	2	0	15.22	29.00

BRANCH WEIGHTS

WEIGHT OF BRANCH # 1 IS 311.541
WEIGHT OF BRANCH # 2 IS 15.225

TOTAL SYSTEM WEIGHT IS 326.766

**** SUMMARY OF LOAD INPUTS ****

THERE ARE 6 GRAVITATIONAL LOADINGS.

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.00000
2	2	1.00000
3	3	1.00000
4	4	1.00000
5	5	1.00000
6	6	1.00000

**** GRAVITATIONAL TABLE ****

GRAV. CODE	DIRECTIONAL COSINES		
1	0.0	-1.00000	0.0
2	0.0	1.00000	0.0
3	1.00000	0.0	0.0
4	-1.00000	0.0	0.0
5	0.0	0.0	1.00000
6	0.0	0.0	-1.00000

THERE ARE 1 THERMAL LOADINGS

THERMAL LOAD NUMBER 1

LOAD CASE NUMBER 7

**** THERMAL DATA TABLES ****

THER. LOAD	THER. LEG	TB	TA	DT1	DT2	T0
1	1	85.00000	0.0	0.0	0.0	70.00000
1	2	70.00000	0.0	0.0	0.0	70.00000

THERE ARE 0 JOINTS THAT HAVE NON-ZERO DISPLACEMENTS SPECIFIED.

THERE ARE 1 JOINTS THAT HAVE CONCENTRATED JOINT FORCES APPLIED.

LOAD DATA

JOINT	LOAD NO	X	Y	Z	XX	YY	ZZ
18	1	0.0	4.0000	0.0	0.0	0.0	0.0
	2	0.0	4.0000	0.0	0.0	0.0	0.0
	3	4.0000	0.0	0.0	0.0	0.0	0.0
	4	4.0000	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	4.0000	0.0	0.0	0.0
	6	0.0	0.0	4.0000	0.0	0.0	0.0

SUPERPOSITION OF LOADINGS

NUMBER OF LOADING CASES.....16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.000	2	1.040	3	0.700				
2	1	2.040	3	0.700						
3	1	1.000	2	1.040	5	0.700				
4	1	2.040	5	0.700						
5	1	1.000	2	1.040	4	0.700				
6	1	2.040	4	0.700						
7	1	1.000	2	1.040	6	0.700				
8	2	2.040	6	0.700						
9	1	1.000	2	1.900	3	1.160				
10	1	2.900	3	1.160						
11	1	1.000	2	1.900	5	1.160				
12	1	2.900	5	1.160						
13	1	1.000	2	1.900	4	1.160				
14	1	2.900	4	1.160						
15	1	1.000	2	1.900	6	1.160				
16	1	2.900	6	1.160						

```
     1    15     0     0                                                  PD1
WPPSS 00-4-1371 GROUP 8
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                            P 1
GROUP 8  LINE 113                                                         P 2
    18    19     7     0     4     6     1     1     0     2     0     0  P 3
     6     2     1     0     1     0     0                                P 4
     1    19     1     0     0     1     1                                P 5
     1     0.0         0.0         0.0         0                         P 7
     2     0.0       -16.81065     0.43934     0                         P 7
     3     0.0       -17.25000    24.00000     0                         P 7
     4     0.0       -17.25000    27.43750     0                         P 7
     5     0.0       -17.25000    30.43750     0                         P 7
     6     0.0       -17.25000    33.43750     0                         P 7
     7     0.0        11.75000    30.43750     0                         P 7
     8     0.0       -17.25000    40.93750     0                         P 7
     9     0.0       -17.25000    48.93750     0                         P 7
    10     0.0       -17.25000    54.43750     0                         P 7
    11     0.0       -17.25000    62.43750     0                         P 7
    12     0.0       -17.25000    67.43750     0                         P 7
    13     0.0        -7.87500     0.0         0                         P 7
    14     0.0       -15.75000     0.0         0                         P 7
    15     0.0       -17.25000     1.50000     0                         P 7
    16     0.0       -17.25000    12.75000     0                         P 7
    17     0.0       -17.25000    44.93750     0                         P 7
    18     6.00000   -17.25000    44.93750     0                         P 7
    19     0.0       -17.25000    58.43750     0                         P 7
    30     0.0       -15.75000     1.50000     0                         P 7
  1  3     2.3750      0.2180     2.0000      0.0         0.0         0.0  P11D
  2  4     2.3750      0.2180     2.0000      0.0         0.0         0.0  P11D
  3  3     2.3750      0.2180     2.0000      0.0         0.0         0.0  P11D
  4  3     2.3750      0.2180     2.0000      0.0         0.0         0.0  P11D
  5  3     2.3750      0.2180     2.0000      0.0         0.0         0.0  P11D
  6  3     3.5000      0.3000     2.0000      0.0         0.0         0.0  P11D
   100    2.099999    2.099999   -1.000000                                P 12.1
   0.525    0.525    32.500    5.000    0.667    0.525
  1  2 0.70000E 02 0.27900E 08 0.30000E 00 0.60700E-05     0.0  0.0  0.0  P14
       0.85000E 02 0.27900E 08 0.30000E 00 0.60700E-05     0.0  0.0  0.0  P14A
   215.29999     0.0         0.0         0.0         0.0         0.0      P15
    0.0                                                                   P16A
    1                                                                     P16B
    1    85.00000     0.0         0.0         0.0        70.00000        P16C
    2    70.00000     0.0         0.0         0.0        70.00000        P16C
    1     0.0        -1.00000     0.0                                    P17
    2     0.0         1.00000     0.0                                    P17
    3     1.00000     0.0         0.0                                    P17
    4    -1.00000     0.0         0.0                                    P17
    5     0.0         0.0         1.00000                                P17
    6     0.0         0.0        -1.00000                                P17
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
  3  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0              P18
 12  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0              P18
  7  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
   1   1  131001   1   1   1   1   1   1   1   0   0   0   0  0.0         P21
   1    3    1    0    0    1                                            P21B
   2  13  141001   1   1   1   1   1   1   1   0   0   0   0  0.0         P21
   1    3    1    0    0    1                                            P21B
   3  14   2  30   1   2   1   2   2   1   1   0   0   0   0  0.0         P21
   1  100    1    0    0    1                                            P21B
```

```
    4   2  15  30   1   2   1   2   2   1   1   0   0   0   0  0.0          P21
     1  100     1   0   0   1                                               P21B
    5  15  161001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    1     1   0   0   1                                               P21B
    6  16   31001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    1     1   0   0   1                                               P21B
    7   3   41001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    2     1   0   0   1                                               P21B
    8   4   51001   1   1   1   3   3   1   1   0   0   0   0  0.0          P21
     1    1     1   0   0   1                                               P21B
    9   5   61001   1   1   1   3   3   1   1   0   0   0   0  0.0          P21
     1    2     1   0   0   1                                               P21B
   10   6   81001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    0     1   0   0   1                                               P21B
   11   8  171001   1   1   1   4   4   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   12  17   91001   1   1   1   4   4   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   13  17  18   8   1   1   1   5   5   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   14   9  101001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   15  10  191001   1   1   1   4   4   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   16  19  111001   1   1   1   4   4   1   1   0   0   0   0  0.0          P21
     1    3     1   0   0   1                                               P21B
   17  11  121001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
     1    0     1   0   0   1                                               P21B
   18   5   71001   1   1   1   6   6   1   1   0   0   0   0  0.0          P21
     2    0     2   0   0   2                                               P21B
     0                                                                      P22
   1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0    P32
   7                                                                        P33
   1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0      P34
     7
    18     6                                                               P39
     1     00.0       0.4000E 010.0       0.0       0.0       0.0          P40
     2     00.0       0.4000E 010.0       0.0       0.0       0.0          P40
     3     00.4000E 010.0       0.0       0.0       0.0       0.0          P40
     4     00.4000E 010.0       0.0       0.0       0.0       0.0          P40
     5     00.0       0.0       0.4000E 010.0       0.0       0.0          P40
     6     00.0       0.0       0.4000E 010.0       0.0       0.0          P40
  999999                                                                    P41
  DESIGN                                                                    P41
  VERTICAL +Y                                                               P41
  HORIZONTAL +X                                                             P41
  HORIZONTAL -X                                                             P41
  HORIZONTAL +Z                                                             P41
  HORIZONTAL -Z                                                             P41
  THERMAL                                                                   P41
    11     1     0     0     1                                             P 1
  GROUP-8                                                                   P 2
    18    19    16     0     2     1    -4                                 P60
     3                                                                      P61
  OBE + SRV XY                                                              P62
   1   1.0000  2   1.0400  3   0.7000
     2                                                                      P61
  OBE + SRV X-Y                                                             P62
   1   2.0400  3   0.7000
     3                                                                      P61
```

```
OBE + SRV ZY                                                          P62
  1   1.0000  2   1.0400  5   0.7000
      2                                                               P61
OBE + SRV Z-Y                                                         P62
  1   2.0400  5   0.7000
      3                                                               P61
OBE + SRV -XY                                                         P62
  1   1.0000  2   1.0400  4   0.7000
      2                                                               P61
OBE + SRV -X-Y                                                        P62
  1   2.0400  4   0.7000
      3                                                               P61
OBE + SRV -ZY                                                         P62
  1   1.0000  2   1.0400  6   0.7000
      2                                                               P61
OBE + SRV -Z-Y                                                        P62
  2   2.0400  6   0.7000
      3                                                               P61
SSE + SRV + LOCA XY                                                   P62
  1   1.0000  2   1.9000  3   1.1600
      2                                                               P61
SSE + SRV + LOCA X-Y                                                  P62
  1   2.9000  3   1.1600
      3                                                               P61
SSE + SRV + LOCA ZY                                                   P62
  1   1.0000  2   1.9000  5   1.1600
      2                                                               P61
SSE + SRV + LOCA Z-Y                                                  P62
  1   2.9000  5   1.1600
      3                                                               P61
SSE + SRV + LOCA -XY                                                  P62
  1   1.0000  2   1.9000  4   1.1600
      2                                                               P61
SSE + SRV + LOCA -X-Y                                                 P62
  1   2.9000  4   1.1600
      3                                                               P61
SSE + SRV + LOCA -ZY                                                  P62
  1   1.0000  2   1.9000  6   1.1600
      2                                                               P61
SSE + SRV + LOCA -Z-Y                                                 P62
  1   2.9000  6   1.1600
      0                                                               P68
      0                                                               PD1
      0                                                                PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.15 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                             0.5                                 0.0                       0.5 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS 00-4-1371 GROUP 8
GROUP 8 LINE 113

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	18
TOTAL NUMBER OF STRUCTURAL JOINTS	19
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	1
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	4
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	6
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	2
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	19
TOTAL FICTIOUS JOINTS READ IN	1
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	-16.810638	0.439340
3	0.0	-17.250000	24.000000
4	0.0	-17.250000	27.437500
5	0.0	-17.250000	30.437500
6	0.0	-17.250000	33.437500
7	0.0	11.750000	30.437500
8	0.0	-17.250000	40.937500
9	0.0	-17.250000	48.937500
10	0.0	-17.250000	54.437500
11	0.0	-17.250000	62.437500
12	0.0	-17.250000	67.437500
13	0.0	-7.875000	0.0
14	0.0	-15.750000	0.0
15	0.0	-17.250000	1.500000
16	0.0	-17.250000	12.750000
17	0.0	-17.250000	44.937500
18	6.000000	-17.250000	44.937500
19	0.0	-17.250000	58.437500
30	0.0	-15.750000	1.500000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
2	C	2.375	0.218	.1477E 01	.8679E 00	.8679E 00	.1736E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
3	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
4	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
5	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
6	S	3.500	0.300	.3016E 01	.3894E 01	.7789E 01	.3894E 01	2.0	2.0	1.75	0.0	0.0	1.75	-1.75	0.0	0.0	-1.75

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	27900000.00	0.300000	0.000006070	0.0
1-A	85.00	27900000.00	0.300000	0.000006070	0.0

PRESSURE DATA

TYPE	PRESSURE
1	215.30
2	0.0

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1						
	1	85.000	0.0	0.0	0.0	70.000
	2	70.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	-1.000000	0.0
2	0.0	1.000000	0.0
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	0.0	1.000000
6	0.0	0.0	-1.000000

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	3	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
3	12	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
4	7	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.24 ** LAST STEP "BEGP" TIME IS    0.15 ** DELTA TIME IS    0.09 *
* ELAPSED SECONDS                             1.6                                 0.5                        1.0 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   19


 BAND-WIDTH =    18  BY D.O.F.          BAND-WIDTH =     3  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.35 ** LAST STEP "DA3D" TIME IS    0.24 ** DELTA TIME IS    0.11 *
* ELAPSED SECONDS                             4.0                                 1.6                        2.4 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

APPLIED CONCENTRATED JOINT LOADS

JOINT	LOAD NO	F1 (LB)	F2 (LB)	F3 (LB)	M1 (IN-LB)	M2 (IN-LB)	M3 (IN-LB)
18	1	0.0	0.40000E 01	0.0	0.0	0.0	0.0
	2	0.0	0.40000E 01	0.0	0.0	0.0	0.0
	3	0.40000E 01	0.0	0.0	0.0	0.0	0.0
	4	0.40000E 01	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.40000E 01	0.0	0.0	0.0
	6	0.0	0.0	0.40000E 01	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.37 ** LAST STEP "JCSO" TIME IS    0.35 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                             4.1                                 4.0                        0.1 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.39693E 08) OCCURS AT THE 52TH DOF
MINIMUM VALUE (0.48785E 05) OCCURS AT THE 63TH DOF
RATIO OF MAX/MIN= 0.81362E 03

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    0.95 ** LAST STEP "INPT" TIME IS    0.37 ** DELTA TIME IS    0.58 *
* ELAPSED SECONDS                             8.9                                 4.1                        4.8 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    1.36 ** LAST STEP "EQ3D" TIME IS    0.95 ** DELTA TIME IS    0.41 *
* ELAPSED SECONDS                            14.7                                 8.9                        5.7 *
```

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	13	1001	1	1	1	1	3	1	1	1	7.87500	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
2	13	14	1001	1	1	1	1	3	1	1	1	7.87500	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
3	14	2	30	1	2	1	1	100	1	1	2	0.78540	0.52500	RAD=	1.5000	0.0	0.0	1.000000
														FLX=	5.8692	1.000000	0.0	0.0
														ECC=	0.0	0.0	1.000000	0.0
4	2	15	30	1	2	1	1	100	1	1	2	0.78540	0.52500	RAD=	1.5000	0.0	0.707100	0.707114
														FLX=	5.8692	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.707114	-0.707100
5	15	16	1001	1	1	1	1	1	1	1	1	11.25000	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
6	16	3	1001	1	1	1	1	1	1	1	1	11.25000	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
7	3	4	1001	1	1	1	1	2	1	1	1	3.43750	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
8	4	5	1001	1	1	1	1	1	1	1	3	3.00000	32.50000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
9	5	6	1001	1	1	1	1	2	1	1	3	3.00000	32.50000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
10	6	8	1001	1	1	1	1	0	1	1	1	7.50000	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
11	8	17	1001	1	1	1	1	3	1	1	4	4.00000	5.00000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
12	17	9	1001	1	1	1	1	3	1	1	4	4.00000	5.00000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
13	17	18	8	1	1	1	1	3	1	1	5	6.00000	0.66700			0.0	0.0	-1.000000
																-1.000000	0.0	0.0
																0.0	1.000000	0.0

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN	ORIENTATION MATRIX (I,J')
14	9	10	1001	1	1	1	1	3	1	1	1	5.50000	0.52500	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
15	10	19	1001	1	1	1	1	3	1	1	4	4.00000	5.00000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
16	19	11	1001	1	1	1	1	3	1	1	4	4.00000	5.00000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
17	11	12	1001	1	1	1	1	0	1	1	1	5.00000	0.52500	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
18	5	7	1001	1	1	1	2	0	2	2	6	29.00000	0.52500	1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  18 AND EQUALS 0.29000E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT   4 AND EQUALS 0.11781E 01 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT   4 AND EQUALS 0.25296E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  18 AND EQUALS 0.48785E 05

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    1.49 ** LAST STEP "SELT" TIME IS    1.36 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                            16.8                                14.7                          2.1 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.61849272E 00	0.11934209E 00	0.17952804E-01	0.0	0.0
3	0.0	0.0	0.0	-0.50201435E 01	0.0	0.0
4	0.0	-0.49652313E 02	0.0	0.23857986E 02	0.0	0.0
5	0.0	-0.10511249E 03	0.0	-0.92983246E-04	0.0	0.0
6	0.0	-0.50718765E 02	0.0	-0.21914139E 02	0.0	0.0
8	0.0	-0.11968744E 02	0.0	0.42057085E 01	0.0	0.0
9	0.0	-0.11443758E 02	0.0	-0.53432522E 01	0.0	0.0
10	0.0	-0.11443741E 02	0.0	0.53432083E 01	0.0	0.0
11	0.0	-0.11312508E 02	0.0	-0.55729437E 01	0.0	0.0
12	0.0	0.0	0.0	-0.10937567E 01	0.0	0.0
13	0.0	-0.41343746E 01	0.0	0.0	0.0	0.0
14	0.0	-0.24361172E 01	-0.58834478E-02	0.12693945E-01	0.0	0.0
15	0.0	-0.32026930E 01	-0.11345845E 00	0.54909620E 01	0.0	0.0
16	0.0	-0.59062490E 01	0.0	-0.50568575E-04	0.0	0.0
17	0.0	-0.22000992E 02	0.0	-0.38146973E-04	0.0	-0.20009928E 01
18	0.0	0.19989986E 01	0.0	0.0	0.0	0.20010004E 01
19	0.0	-0.20000000E 02	0.0	-0.38146973E-04	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.61849272E 00	-0.11934209E 00	-0.17952804E-01	0.0	0.0
3	0.0	0.0	0.0	0.50201435E 01	0.0	0.0
4	0.0	0.49652313E 02	0.0	-0.23857986E 02	0.0	0.0
5	0.0	0.10511249E 03	0.0	0.92983246E-04	0.0	0.0
6	0.0	0.50718765E 02	0.0	0.21914139E 02	0.0	0.0
8	0.0	0.11968744E 02	0.0	-0.42057085E 01	0.0	0.0
9	0.0	0.11443758E 02	0.0	0.53432522E 01	0.0	0.0
10	0.0	0.11443741E 02	0.0	-0.53432083E 01	0.0	0.0
11	0.0	0.11312508E 02	0.0	0.55729437E 01	0.0	0.0
12	0.0	0.0	0.0	0.10937567E 01	0.0	0.0
13	0.0	0.41343746E 01	0.0	0.0	0.0	0.0
14	0.0	0.24361172E 01	0.58834478E-02	-0.12693945E-01	0.0	0.0
15	0.0	0.32026930E 01	0.11345845E 00	-0.54909620E 01	0.0	0.0
16	0.0	0.59062490E 01	0.0	0.50568575E-04	0.0	0.0
17	0.0	0.22000992E 02	0.0	0.38146973E-04	0.0	0.20009928E 01
18	0.0	0.60010004E 01	0.0	0.0	0.0	-0.20010004E 01
19	0.0	0.20000000E 02	0.0	0.38146973E-04	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.61849684E 00	0.0	0.0	0.0	0.42906636E-03	-0.43162890E-03
3	0.0	0.0	0.0	0.0	-0.50201817E 01	0.0
4	0.49652313E 02	0.0	0.0	0.0	0.23858032E 02	0.0
5	0.10511249E 03	0.0	0.0	0.0	-0.92983246E-04	-0.36793686E 02
6	0.50718765E 02	0.0	0.0	0.0	-0.21914169E 02	0.0
8	0.11968744E 02	0.0	0.0	0.0	0.42057190E 01	0.0
9	0.11443758E 02	0.0	0.0	0.0	-0.53432741E 01	0.0
10	0.11443741E 02	0.0	0.0	0.0	0.53432302E 01	0.0
11	0.11312508E 02	0.0	0.0	0.0	-0.55729656E 01	0.0
12	0.0	0.0	0.0	0.0	-0.10937586E 01	0.0
13	0.41343746E 01	0.0	0.0	0.0	0.0	-0.35047517E-04
14	0.23764420E 01	0.0	0.0	0.0	0.30464446E-03	-0.26511154E 01
15	0.32623663E 01	0.0	0.0	0.0	0.54750109E 01	-0.30510523E-03
16	0.59062490E 01	0.0	0.0	0.0	-0.50568575E-04	0.0
17	0.22000992E 02	0.0	0.0	0.0	-0.38146973E-04	0.0
18	0.60010004E 01	0.0	0.0	0.0	0.0	0.0
19	0.20000000E 02	0.0	0.0	0.0	-0.38146973E-04	0.0

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.61849684E 00	0.0	0.0	0.0	-0.42906636E-03	0.43162890E-03
3	0.0	0.0	0.0	0.0	0.50201817E 01	0.0
4	-0.49652313E 02	0.0	0.0	0.0	-0.23858032E 02	0.0
5	-0.10511249E 03	0.0	0.0	0.0	0.92983246E-04	0.36793686E 02
6	-0.50718765E 02	0.0	0.0	0.0	0.21914169E 02	0.0
8	-0.11968744E 02	0.0	0.0	0.0	-0.42057190E 01	0.0
9	-0.11443758E 02	0.0	0.0	0.0	0.53432741E 01	0.0
10	-0.11443741E 02	0.0	0.0	0.0	-0.53432302E 01	0.0
11	-0.11312508E 02	0.0	0.0	0.0	0.55729656E 01	0.0
12	0.0	0.0	0.0	0.0	0.10937586E 01	0.0
13	-0.41343746E 01	0.0	0.0	0.0	0.0	0.35047517E-04
14	-0.23764420E 01	0.0	0.0	0.0	-0.30464446E-03	0.26511154E 01
15	-0.32623663E 01	0.0	0.0	0.0	-0.54750109E 01	0.30510523E-03
16	-0.59062490E 01	0.0	0.0	0.0	0.50568575E-04	0.0
17	-0.22000992E 02	0.0	0.0	0.0	0.38146973E-04	0.0
18	0.19989986E 01	0.0	0.0	0.0	0.0	0.0
19	-0.20000000E 02	0.0	0.0	0.0	0.38146973E-04	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.11934596E 00	0.61849791E 00	0.17951015E-01	0.0	0.0
4	0.0	0.0	0.49652298E 02	0.0	0.0	0.0
5	0.0	0.0	0.10511249E 03	0.36793686E 02	0.0	0.0
6	0.0	0.0	0.50718765E 02	0.0	0.0	0.0
8	0.0	0.0	0.11968740E 02	0.0	0.0	0.0
9	0.0	0.0	0.11443759E 02	0.0	0.0	0.0
10	0.0	0.0	0.11443741E 02	0.0	0.0	0.0
11	0.0	0.0	0.11312509E 02	0.0	0.0	0.0
13	0.0	0.0	0.41343746E 01	0.35047517E-04	0.0	0.0
14	0.0	0.11346191E 00	0.23167686E 01	0.26670923E 01	0.0	0.0
15	0.0	0.58843233E-02	0.33220406E 01	0.12695305E-01	0.0	0.0
16	0.0	0.0	0.59062490E 01	0.0	0.0	0.0
17	0.0	0.0	0.22000992E 02	0.0	-0.20010042E 01	0.0
18	0.0	0.0	0.60010004E 01	0.0	0.20010118E 01	0.0
19	0.0	0.0	0.20000000E 02	0.0	0.0	0.0

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.11934596E 00	-0.61849791E 00	-0.17951015E-01	0.0	0.0
4	0.0	0.0	-0.49652298E 02	0.0	0.0	0.0
5	0.0	0.0	-0.10511249E 03	-0.36793686E 02	0.0	0.0
6	0.0	0.0	-0.50718765E 02	0.0	0.0	0.0
8	0.0	0.0	-0.11968740E 02	0.0	0.0	0.0
9	0.0	0.0	-0.11443759E 02	0.0	0.0	0.0
10	0.0	0.0	-0.11443741E 02	0.0	0.0	0.0
11	0.0	0.0	-0.11312509E 02	0.0	0.0	0.0
13	0.0	0.0	-0.41343746E 01	-0.35047517E-04	0.0	0.0
14	0.0	-0.11346191E 00	-0.23167686E 01	-0.26670923E 01	0.0	0.0
15	0.0	-0.58843233E-02	-0.33220406E 01	-0.12695305E-01	0.0	0.0
16	0.0	0.0	-0.59062490E 01	0.0	0.0	0.0
17	0.0	0.0	-0.22000992E 02	0.0	0.20010042E 01	0.0
18	0.0	0.0	0.19989986E 01	0.0	-0.20010118E 01	0.0
19	0.0	0.0	-0.20000000E 02	0.0	0.0	0.0

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.16209751E 04	-0.16209541E 04	-0.78277588E-02	0.0	0.0
4	0.0	0.0	-0.48828125E-03	0.0	0.0	0.0
6	0.0	0.0	0.24414063E-02	0.0	0.0	0.0
8	0.0	0.0	-0.24414063E-02	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
9	0.0	0.0	0.24414063E-02	0.0	0.0	0.0
10	0.0	0.0	-0.24414063E-02	0.0	0.0	0.0
11	0.0	0.0	0.48828125E-03	0.0	0.0	0.0
14	0.0	-0.98545996E 03	-0.11462114E 04	0.22740512E 03	0.0	0.0
15	0.0	-0.11462314E 04	-0.98550293E 03	-0.22740288E 03	0.0	0.0
17	-0.37526675E 04	0.0	0.0	0.0	0.0	0.0
18	0.37526675E 04	0.0	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    2.38 ** LAST STEP "EDIT" TIME IS    1.49 ** DELTA TIME IS    0.89 *
* ELAPSED SECONDS                            39.6                                16.8                      22.7 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    2.42 ** LAST STEP "SLVR" TIME IS    2.38 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            40.9                                39.6                       1.3 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000001119	-0.000003934	0.000000579	0.000001357	-0.000000127	0.000000091
3	0.0	0.0	0.0	0.000008222	0.000000454	0.000000804
4	0.000001958	-0.000043436	-0.000001347	0.000015732	0.000000516	0.000000906
5	0.000003522	-0.000085963	-0.000002523	0.000026983	0.000000367	0.000000995
6	0.000004451	-0.000285414	-0.000002318	0.000074994	0.000000260	0.000002927
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.000005486	-0.001057892	-0.000001807	0.000100375	0.000000032	0.000007756
9	0.000004947	-0.001634687	-0.000001262	0.000025866	-0.000000150	0.000010332
10	0.000003854	-0.001585134	-0.000000886	-0.000045946	-0.000000237	0.000010332
11	0.000001603	-0.000792661	-0.000000341	-0.000140416	-0.000000309	0.000010332
12	0.0	0.0	0.0	-0.000160402	-0.000000322	0.000010332
13	-0.000000511	-0.000002027	0.000001773	-0.000000212	-0.000000073	-0.000000088
14	-0.000001091	-0.000003263	0.000001670	0.000000477	-0.000000146	-0.000000018
15	-0.000001203	-0.000005957	-0.000000192	0.000001480	-0.000000116	0.000000139
16	-0.000002206	-0.000002679	-0.000000096	-0.000002304	0.000000008	0.000000472
17	0.000005398	-0.001428048	-0.000001534	0.000071684	-0.000000067	0.000010332
18	0.000005398	-0.001357114	-0.000001132	0.000071684	-0.000000067	0.000012313
19	0.000002801	-0.001290616	-0.000000614	-0.000098787	-0.000000281	0.000010332

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	13.	-0.	2.	0.	1.	1.57	586.	5.	591.
			13	-0.	-9.	0.	1.	-0.	-0.	1.57	586.	2.	588.
2	TAN	1	13	0.	9.	-0.	-1.	0.	0.	1.57	586.	2.	588.
			14	-0.	-4.	0.	3.	-0.	0.	1.57	586.	8.	594.
3	BEND	1	14	-0.	0.	4.	-0.	-3.	0.	1.57	586.	8.	594.
			2	-2.	-0.	-3.	0.	2.	-0.	1.57	586.	5.	591.
4	BEND	1	2	2.	0.	3.	-0.	-2.	0.	1.57	586.	5.	591.
			15	-3.	-0.	-0.	-0.	-1.	-1.	1.57	586.	3.	590.
5	TAN	1	15	0.	0.	3.	1.	1.	0.	1.57	586.	3.	590.
			16	-0.	-0.	3.	-4.	-1.	1.	1.00	586.	5.	592.
6	TAN	1	16	0.	0.	-3.	4.	1.	-1.	1.57	586.	8.	595.
			3	-0.	-0.	9.	60.	-1.	1.	1.00	586.	82.	669.
7	TAN	1	3	-1.	-16.	5.	-60.	1.	-1.	1.00	586.	82.	669.
			4	1.	16.	-3.	47.	-1.	-0.	1.57	586.	101.	687.
8	TAN	1	4	-1.	-16.	3.	-47.	1.	0.	1.57	586.	101.	687.
			5	1.	16.	94.	184.	-1.	-2.	1.00	586.	251.	838.
9	TAN	1	5	0.	3.	147.	-560.	12.	1.	1.00	586.	766.	1353.
			6	-0.	-3.	-50.	264.	-12.	-1.	1.57	586.	569.	1156.
10	TAN	1	6	0.	3.	50.	-264.	12.	1.	1.00	586.	362.	948.
			8	-0.	-3.	-46.	-95.	-12.	-1.	1.00	586.	131.	718.
11	TAN	1	8	0.	3.	46.	95.	12.	1.	1.57	586.	207.	793.
			17	-0.	-3.	-26.	-239.	-12.	-1.	1.57	586.	515.	1102.
12	TAN	1	17	0.	3.	26.	239.	-0.	1.	1.57	586.	515.	1101.
			9	-0.	-3.	-6.	-303.	0.	-0.	1.57	586.	652.	1238.
13	TAN	1	17	-0.	0.	0.	12.	0.	-0.	1.57	586.	26.	612.
			18	0.	-0.	4.	-0.	-0.	-0.	1.57	586.	0.	586.
14	TAN	1	9	0.	3.	6.	303.	0.	0.	1.57	586.	652.	1238.
			10	-0.	-3.	-3.	-327.	-0.	-0.	1.57	586.	705.	1291.
15	TAN	1	10	0.	3.	3.	327.	-0.	0.	1.57	586.	705.	1291.
			19	-0.	-3.	17.	-299.	0.	-0.	1.57	586.	645.	1231.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	0.	3.	-17.	299.	-0.	0.	1.57	586.	645.	1231.
			11	-0.	-3.	37.	-191.	0.	-0.	1.57	586.	412.	999.
17	TAN	1	11	0.	3.	-37.	191.	0.	0.	1.00	586.	262.	848.
			12	-0.	-3.	40.	-0.	0.	-0.	1.00	586.	0.	586.
18	TAN	2	5	-1.	242.	-19.	376.	-1.	-11.	1.00	0.	169.	169.
			7	1.	-257.	19.	174.	1.	-4.	1.00	0.	78.	78.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	8	0.000005486	-0.001057892	-0.000001807
2	9	0.000004947	-0.001634687	-0.000001262
3	5	0.000003522	-0.000085963	-0.000002523

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	766.	9	1353.
2	18	169.	18	169.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	13.	-0.	2.	0.	1.
3	-1.	13.	17.	-0.	-0.	-0.
7	1.	257.	-19.	174.	-1.	4.
12	-0.	40.	3.	-0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000003359	0.000003929	-0.000000576	-0.000001350	-0.000000382	0.000000274
3	0.0	0.0	0.0	-0.000008253	0.000001363	0.000002415
4	0.000005877	0.000043142	0.000001468	-0.000016449	0.000001548	0.000002720
5	0.000010572	0.000089068	0.000002749	-0.000029397	0.000001102	0.000002987
6	0.000013362	0.000306531	0.000002526	-0.000082622	0.000000781	0.000008786
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.000016470	0.001161954	0.000001969	-0.000110865	0.000000095	0.000023284
9	0.000014852	0.001787640	0.000001374	-0.000026035	-0.000000449	0.000031016
10	0.000011571	0.001719651	0.000000966	0.000052016	-0.000000711	0.000031016
11	0.000004813	0.000853041	0.000000371	0.000151671	-0.000000928	0.000031016
12	0.0	0.0	0.0	0.000172558	-0.000000966	0.000031016
13	-0.000001533	0.000002026	-0.000001765	0.000000211	-0.000000219	-0.000000264
14	-0.000003274	0.000003261	-0.000001662	-0.000000474	-0.000000438	-0.000000053
15	-0.000003611	0.000005942	0.000000191	-0.000001469	-0.000000350	0.000000416
16	-0.000006622	0.000002554	0.000000095	0.000002308	0.000000023	0.000001415
17	0.000016205	0.001569777	0.000001672	-0.000077759	-0.000000201	0.000031016
18	0.000016205	0.001776770	0.000002878	-0.000077759	-0.000000201	0.000034981
19	0.000008410	0.001393250	0.000000669	0.000108026	-0.000000844	0.000031016

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-13.	0.	-2.	1.	2.	1.57	586.	6.	592.
			13	-0.	9.	-0.	-1.	-1.	-0.	1.57	586.	2.	588.
2	TAN	1	13	0.	-9.	0.	1.	1.	0.	1.57	586.	2.	588.
			14	-0.	4.	-0.	-3.	-1.	1.	1.57	586.	8.	595.
3	BEND	1	14	0.	0.	-4.	-1.	3.	1.	1.57	586.	8.	595.
			2	2.	-0.	3.	1.	-2.	-1.	1.57	586.	6.	592.
4	BEND	1	2	-2.	0.	-3.	-1.	2.	1.	1.57	586.	6.	592.
			15	3.	-0.	0.	-0.	1.	-2.	1.57	586.	5.	591.
5	TAN	1	15	0.	-0.	-3.	-1.	2.	0.	1.57	586.	5.	591.
			16	-0.	0.	-3.	4.	-2.	2.	1.00	586.	6.	593.
6	TAN	1	16	0.	-0.	3.	-4.	2.	-2.	1.57	586.	10.	596.
			3	-0.	0.	-9.	-60.	-2.	4.	1.00	586.	83.	669.
7	TAN	1	3	-2.	18.	-2.	60.	2.	-4.	1.00	586.	83.	669.
			4	2.	-18.	0.	-56.	-2.	-1.	1.57	586.	121.	708.
8	TAN	1	4	-2.	18.	-0.	56.	2.	1.	1.57	586.	121.	708.
			5	2.	-18.	-97.	-202.	-2.	-6.	1.00	586.	276.	862.
9	TAN	1	5	0.	-3.	-154.	611.	36.	3.	1.00	586.	838.	1424.
			6	-0.	3.	56.	-297.	-36.	-2.	1.57	586.	644.	1230.
10	TAN	1	6	0.	-3.	-56.	297.	36.	2.	1.00	586.	409.	995.
			8	-0.	3.	52.	109.	-36.	-2.	1.00	586.	158.	744.
11	TAN	1	8	0.	-3.	-52.	-109.	36.	2.	1.57	586.	248.	835.
			17	-0.	3.	32.	278.	-36.	-2.	1.57	586.	604.	1191.
12	TAN	1	17	0.	-3.	-24.	-278.	-0.	2.	1.57	586.	599.	1186.
			9	-0.	3.	4.	335.	0.	-1.	1.57	586.	721.	1308.
13	TAN	1	17	0.	0.	-8.	36.	-0.	0.	1.57	586.	78.	664.
			18	-0.	-0.	4.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	0.	-3.	-4.	-335.	-0.	1.	1.57	586.	721.	1308.
			10	-0.	3.	1.	350.	0.	-1.	1.57	586.	754.	1340.
15	TAN	1	10	0.	-3.	-1.	-350.	0.	1.	1.57	586.	754.	1340.
			19	-0.	3.	-19.	315.	0.	-1.	1.57	586.	679.	1265.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	0.	-3.	19.	-315.	0.	1.	1.57	586.	679.	1265.
			11	-0.	3.	-39.	200.	-0.	-0.	1.57	586.	431.	1018.
17	TAN	1	11	0.	-3.	39.	-200.	0.	0.	1.00	586.	274.	860.
			12	-0.	3.	-41.	0.	-0.	-0.	1.00	586.	0.	586.
18	TAN	2	5	-2.	-251.	21.	-410.	-3.	-34.	1.00	0.	185.	185.
			7	2.	266.	-21.	-189.	3.	-12.	1.00	0.	85.	85.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	8	0.000016470	0.001161954	0.000001969
2	9	0.000014852	0.001787640	0.000001374
3	18	0.000016205	0.001776770	0.000002878

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	838.	9	1424.
2	18	185.	18	185.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-13.	0.	-2.	1.	2.
3	-2.	-11.	-18.	0.	-0.	-0.
7	2.	-266.	21.	-189.	-3.	12.
12	-0.	-41.	-3.	0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000916828	0.000000000	-0.000000000	-0.000000000	-0.000040307	-0.000056026
3	0.0	0.0	0.0	0.000000000	0.000240238	0.000055838
4	0.001020270	0.000000000	0.000000000	0.000000000	0.000281532	0.000071938
5	0.001877633	-0.000000000	0.000000000	0.000000000	0.000237980	0.000085990
6	0.002625118	-0.000000000	0.000000000	0.000000000	0.000231643	0.000085990
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.004089903	-0.000000000	0.000000000	0.000000000	0.000133001	0.000085990
9	0.004452471	-0.000000000	-0.000000000	-0.000000000	-0.000052498	0.000085990
10	0.003802173	-0.000000000	-0.000000000	-0.000000000	-0.000178996	0.000085990
11	0.001721124	-0.000000000	-0.000000000	-0.000000000	-0.000318919	0.000085990
12	0.0	0.0	0.0	-0.000000000	-0.000346797	0.000085990
13	-0.000273924	0.000000000	-0.000000000	0.000000000	-0.000020322	-0.000058282
14	-0.000829468	0.000000000	-0.000000000	-0.000000000	-0.000040645	-0.000068714
15	-0.000986245	0.000000000	0.000000000	-0.000000000	-0.000040613	-0.000049548
16	-0.001264356	0.000000000	0.000000000	-0.000000000	0.000021514	0.000003145
17	0.004466835	-0.000000000	0.000000000	0.000000000	0.000045086	0.000085990
18	0.004467711	0.000515938	-0.000270518	0.000000000	0.000045086	0.000085990
19	0.002908820	-0.000000000	-0.000000000	-0.000000000	-0.000259614	0.000085990

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	15.	-0.	0.	-0.	48.	242.	1.57	586.	532.	1118.
			13	-19.	0.	-0.	-0.	-48.	-111.	1.57	586.	261.	847.
2	TAN	1	13	19.	-0.	0.	0.	48.	111.	1.57	586.	261.	847.
			14	-23.	0.	-0.	-0.	-48.	52.	1.57	586.	153.	740.
3	BEND	1	14	0.	23.	-0.	-52.	0.	48.	1.57	586.	153.	740.
			2	0.	-23.	0.	28.	-0.	-81.	1.57	586.	185.	771.
4	BEND	1	2	-0.	23.	-0.	-28.	0.	81.	1.57	586.	185.	771.
			15	0.	-24.	0.	-13.	-0.	-87.	1.57	586.	190.	776.
5	TAN	1	15	24.	-0.	-0.	0.	87.	13.	1.57	586.	190.	776.
			16	-30.	0.	0.	0.	-87.	291.	1.00	586.	416.	1002.
6	TAN	1	16	30.	-0.	-0.	-0.	87.	-291.	1.57	586.	655.	1241.
			3	-36.	0.	0.	0.	-87.	661.	1.00	586.	913.	1499.
7	TAN	1	3	-216.	0.	-0.	-0.	87.	-661.	1.00	586.	913.	1499.
			4	214.	-0.	0.	0.	-87.	-79.	1.57	586.	253.	840.
8	TAN	1	4	-214.	0.	-0.	-0.	87.	79.	1.57	586.	253.	840.
			5	117.	-0.	0.	0.	-87.	-576.	1.00	586.	797.	1383.
9	TAN	1	5	-140.	0.	0.	-0.	-0.	-110.	1.00	586.	151.	737.
			6	43.	-0.	-0.	0.	0.	-164.	1.57	586.	353.	939.
10	TAN	1	6	-43.	0.	0.	-0.	-0.	164.	1.00	586.	224.	810.
			8	39.	-0.	-0.	-0.	0.	-468.	1.00	586.	641.	1227.
11	TAN	1	8	-39.	0.	0.	0.	-0.	468.	1.57	586.	1009.	1596.
			17	19.	-0.	-0.	-0.	0.	-583.	1.57	586.	1256.	1842.
12	TAN	1	17	-11.	-0.	-0.	0.	-0.	583.	1.57	586.	1256.	1842.
			9	-9.	0.	0.	-0.	0.	-585.	1.57	586.	1261.	1848.
13	TAN	1	17	0.	8.	0.	-0.	-0.	0.	1.57	586.	0.	586.
			18	-0.	-4.	-0.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	9.	-0.	-0.	0.	0.	585.	1.57	586.	1261.	1848.
			10	-12.	0.	0.	-0.	0.	-526.	1.57	586.	1133.	1720.
15	TAN	1	10	12.	0.	-0.	0.	-0.	526.	1.57	586.	1133.	1720.
			19	-32.	-0.	0.	-0.	0.	-437.	1.57	586.	941.	1528.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRFSSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	32.	0.	-0.	0.	0.	437.	1.57	586.	941.	1528.
			11	-52.	-0.	0.	-0.	0.	-268.	1.57	586.	577.	1164.
17	TAN	1	11	52.	0.	-0.	0.	-0.	268.	1.00	586.	366.	953.
			12	-55.	-0.	0.	-0.	0.	-0.	1.00	586.	0.	586.
18	TAN	2	5	23.	0.	-0.	0.	-686.	87.	1.00	0.	311.	311.
			7	-38.	-0.	0.	0.	686.	805.	1.00	0.	475.	475.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	18	0.004467711	0.000515938	-0.000270518
2	18	0.004467711	0.000515938	-0.000270518
3	18	0.004467711	0.000515938	-0.000270518

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1261.	12	1848.
2	18	475.	18	475.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	15.	-0.	0.	-0.	48.	242.
3	-252.	-0.	-0.	-0.	-0.	-0.
7	-38.	0.	-0.	0.	-686.	-805.
12	-55.	0.	0.	-0.	-0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000867816	-0.000000000	0.000000000	0.000000000	0.000039039	0.000053009
3	0.0	0.0	0.0	-0.000000000	-0.000230650	-0.000053633
4	-0.000980978	-0.000000000	-0.000000000	-0.000000000	-0.000269740	-0.000068988
5	-0.001800646	0.000000000	-0.000000000	-0.000000000	-0.000226037	-0.000082389
6	-0.002505825	0.000000000	-0.000000000	-0.000000000	-0.000217158	-0.000082389
7	0.0	0.0	0.0	0.0	0.0	0.0
8	-0.003859038	0.000000000	-0.000000000	-0.000000000	-0.000121346	-0.000082389
9	-0.004183143	0.000000000	0.000000000	0.000000000	0.000049315	-0.000082389
10	-0.003576462	0.000000000	0.000000000	0.000000000	0.000167401	-0.000082389
11	-0.001622658	0.000000000	0.000000000	0.000000000	0.000300331	-0.000082389
12	0.0	0.0	0.0	0.000000000	0.000326996	-0.000082389
13	0.000258761	-0.000000000	0.000000000	-0.000000000	0.000019647	0.000055132
14	0.000784730	-0.000000000	0.000000000	0.000000000	0.000039293	0.000065054
15	0.000934562	-0.000000000	-0.000000000	0.000000000	0.000039472	0.000046874
16	0.001208335	-0.000000000	-0.000000000	0.000000000	-0.000019985	-0.000003380
17	-0.004199002	0.000000000	-0.000000000	-0.000000000	-0.000040305	-0.000082389
18	-0.004198711	-0.000494334	0.000241832	-0.000000000	-0.000040305	-0.000082389
19	-0.002739739	0.000000000	0.000000000	0.000000000	0.000243746	-0.000082389

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-14.	0.	-0.	0.	-46.	-228.	1.57	586.	502.	1088.
			13	18.	-0.	0.	0.	46.	105.	1.57	586.	248.	835.
2	TAN	1	13	-18.	0.	-0.	-0.	-46.	-105.	1.57	586.	248.	835.
			14	22.	-0.	0.	0.	46.	-50.	1.57	586.	147.	733.
3	BEND	1	14	-0.	-22.	0.	50.	-0.	-46.	1.57	586.	147.	733.
			2	-0.	22.	-0.	-26.	0.	78.	1.57	586.	177.	763.
4	BEND	1	2	0.	-22.	0.	26.	-0.	-78.	1.57	586.	177.	763.
			15	-0.	23.	-0.	13.	0.	83.	1.57	586.	181.	768.
5	TAN	1	15	-23.	0.	0.	-0.	-83.	-13.	1.57	586.	181.	768.
			16	29.	-0.	-0.	-0.	83.	-280.	1.00	586.	399.	986.
6	TAN	1	16	-29.	0.	0.	0.	-83.	280.	1.57	586.	629.	1215.
			3	35.	-0.	-0.	-0.	83.	-638.	1.00	586.	881.	1467.
7	TAN	1	3	212.	-0.	0.	0.	-83.	638.	1.00	586.	881.	1467.
			4	-210.	0.	-0.	-0.	83.	87.	1.57	586.	259.	845.
8	TAN	1	4	210.	-0.	0.	0.	-83.	-87.	1.57	586.	259.	845.
			5	-112.	0.	-0.	-0.	83.	570.	1.00	586.	788.	1375.
9	TAN	1	5	134.	-0.	-0.	0.	0.	81.	1.00	586.	111.	698.
			6	-37.	0.	0.	-0.	-0.	176.	1.57	586.	379.	965.
10	TAN	1	6	37.	-0.	-0.	0.	0.	-176.	1.00	586.	241.	827.
			8	-33.	0.	0.	0.	-0.	438.	1.00	586.	599.	1186.
11	TAN	1	8	33.	-0.	-0.	-0.	0.	-438.	1.57	586.	944.	1530.
			17	-13.	0.	0.	0.	-0.	530.	1.57	586.	1142.	1728.
12	TAN	1	17	13.	0.	0.	-0.	0.	-530.	1.57	586.	1142.	1728.
			9	7.	-0.	-0.	0.	-0.	542.	1.57	586.	1168.	1754.
13	TAN	1	17	-0.	-0.	-0.	0.	0.	-0.	1.57	586.	0.	586.
			18	0.	-4.	0.	-0.	-0.	-0.	1.57	586.	0.	586.
14	TAN	1	9	-7.	-0.	0.	-0.	0.	-542.	1.57	586.	1168.	1754.
			10	10.	0.	-0.	0.	-0.	495.	1.57	586.	1067.	1654.
15	TAN	1	10	-10.	-0.	0.	-0.	0.	-495.	1.57	586.	1067.	1654.
			19	30.	0.	-0.	0.	-0.	416.	1.57	586.	896.	1482.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	-30.	-0.	0.	-0.	0.	-416.	1.57	586.	896.	1482.
			11	50.	0.	-0.	0.	0.	256.	1.57	586.	552.	1138.
17	TAN	1	11	-50.	-0.	0.	-0.	0.	-256.	1.00	586.	350.	937.
			12	53.	0.	-0.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	-22.	-0.	0.	-0.	651.	-83.	1.00	0.	295.	295.
			7	37.	0.	-0.	-0.	-651.	-774.	1.00	0.	455.	455.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	17	-0.004199002	0.000000000	-0.000000000
2	18	-0.004198711	-0.000494334	0.000241832
3	18	-0.004198711	-0.000494334	0.000241832

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1168.	12	1754.
2	18	455.	18	455.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-14.	0.	-0.	0.	-46.	-228.
3	247.	0.	0.	0.	0.	0.
7	37.	-0.	0.	-0.	651.	774.
12	53.	-0.	-0.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000003151	-0.000000726	0.000006180	0.000001464	-0.000000078	-0.000000199
3	0.0	0.0	0.0	-0.000000216	0.000000609	0.000000117
4	0.000002576	0.000000596	0.000017423	0.000000105	0.000000615	0.000000162
5	0.000004326	-0.000000231	0.000029014	0.000000668	0.000000293	0.000000201
6	0.000004820	-0.000001984	0.000033092	0.000000512	-0.000000244	0.000000201
7	0.0	0.0	0.0	0.0	0.0	0.0
8	-0.000005344	-0.000004488	0.000034057	0.000000179	-0.000003037	0.000000201
9	-0.000036324	-0.000004762	0.000030046	-0.000000085	-0.000002352	0.000000201
10	-0.000039356	-0.000003897	0.000023893	-0.000000213	0.000000839	0.000000201
11	-0.000019558	-0.000001675	0.000010781	-0.000000318	0.000003492	0.000000201
12	0.0	0.0	0.0	-0.000000337	0.000003953	0.000000201
13	-0.000000969	0.000000035	0.000012563	-0.000000910	-0.000000042	-0.000000202
14	-0.000002874	0.000000070	0.000008219	0.000001486	-0.000000083	-0.000000238
15	-0.000003322	-0.000002017	0.000005452	0.000000721	-0.000000070	-0.000000179
16	-0.000003571	-0.000003643	0.000003532	-0.000000226	0.000000099	-0.000000031
17	-0.000021519	-0.000004889	0.000033411	0.000000035	-0.000005374	0.000000201
18	-0.000021519	-0.000003682	0.000086552	0.000000035	-0.000009339	0.000000201
19	-0.000032110	-0.000002892	0.000018307	-0.000000277	0.000002460	0.000000201

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-0.	-5.	19.	0.	1.	1.57	586.	40.	627.
			13	-0.	0.	1.	8.	-0.	-0.	1.57	586.	17.	603.
2	TAN	1	13	0.	-0.	-1.	-8.	0.	0.	1.57	586.	17.	603.
			14	-0.	0.	-3.	2.	-0.	0.	1.57	586.	3.	590.
3	BEND	1	14	3.	0.	-0.	-0.	-2.	0.	1.57	586.	3.	590.
			2	-2.	-0.	3.	0.	-2.	-0.	1.57	586.	4.	590.
4	BEND	1	2	2.	0.	-3.	-0.	2.	0.	1.57	586.	4.	590.
			15	0.	-0.	4.	-0.	-3.	-0.	1.57	586.	7.	593.
5	TAN	1	15	0.	-4.	-0.	3.	0.	0.	1.57	586.	7.	593.
			16	-0.	10.	0.	-1.	-0.	1.	1.00	586.	2.	588.
6	TAN	1	16	0.	-10.	-0.	1.	0.	-1.	1.57	586.	3.	589.
			3	-0.	16.	0.	1.	-0.	1.	1.00	586.	2.	589.
7	TAN	1	3	-1.	210.	-1.	-1.	0.	-1.	1.00	586.	2.	589.
			4	1.	-208.	1.	3.	-0.	-1.	1.57	586.	8.	594.
8	TAN	1	4	-1.	208.	-1.	-3.	0.	1.	1.57	586.	8.	594.
			5	1.	-110.	1.	6.	-0.	-4.	1.00	586.	9.	596.
9	TAN	1	5	-1.	105.	-0.	1.	-0.	3.	1.00	586.	4.	591.
			6	1.	-7.	0.	-1.	0.	-6.	1.57	586.	12.	599.
10	TAN	1	6	-1.	7.	-0.	1.	-0.	6.	1.00	586.	8.	594.
			8	1.	-3.	0.	-1.	0.	-12.	1.00	586.	17.	603.
11	TAN	1	8	-1.	3.	-0.	1.	-0.	12.	1.57	586.	27.	613.
			17	1.	17.	0.	-1.	0.	-16.	1.57	586.	34.	621.
12	TAN	1	17	-1.	-25.	-0.	1.	-0.	-20.	1.57	586.	43.	630.
			9	1.	45.	0.	-1.	0.	17.	1.57	586.	36.	622.
13	TAN	1	17	8.	-0.	0.	-0.	0.	36.	1.57	586.	78.	664.
			18	-4.	0.	-0.	-0.	-0.	0.	1.57	586.	0.	586.
14	TAN	1	9	-1.	-45.	-0.	1.	-0.	-17.	1.57	586.	36.	622.
			10	1.	48.	0.	-0.	0.	12.	1.57	586.	25.	611.
15	TAN	1	10	-1.	-48.	-0.	0.	-0.	-12.	1.57	586.	25.	611.
			19	1.	68.	0.	-0.	0.	8.	1.57	586.	17.	604.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	-1.	-68.	-0.	0.	-0.	-8.	1.57	586.	17.	604.
			11	1.	88.	0.	-0.	0.	4.	1.57	586.	10.	596.
17	TAN	1	11	-1.	-88.	-0.	0.	0.	-4.	1.00	586.	6.	593.
			12	1.	90.	0.	-0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	0.	1.	6.	-7.	-1.	0.	1.00	0.	3.	3.
			7	-0.	-1.	10.	62.	1.	2.	1.00	0.	28.	28.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	10	-0.000039356	-0.000003897	0.000023893
2	17	-0.000021519	-0.000004889	0.000033411
3	18	-0.000021519	-0.000003682	0.000086552

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	13	78.	13	664.
2	18	28.	18	28.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-0.	-5.	19.	0.	1.
3	-1.	-1.	-226.	-0.	-0.	-0.
7	-0.	1.	-10.	62.	-1.	-2.
12	1.	0.	-90.	-0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000001050	0.000000726	-0.000006180	-0.000001465	-0.000000026	-0.000000066
3	0.0	0.0	0.0	0.000000218	0.000000203	0.000000039
4	0.000000858	-0.000000608	-0.000017079	-0.000000109	0.000000205	0.000000054
5	0.000001441	0.000000240	-0.000028369	-0.000000686	0.000000098	0.000000067
6	0.000001605	0.000002041	-0.000032145	-0.000000526	-0.000000081	0.000000067
7	0.0	0.0	0.0	0.0	0.0	0.0
8	-0.000001780	0.000004614	-0.000032356	-0.000000184	-0.000001012	0.000000067
9	-0.000012100	0.000004895	-0.000028317	0.000000088	-0.000000784	0.000000067
10	-0.000013110	0.000004006	-0.000022678	0.000000219	0.000000280	0.000000067
11	-0.000006515	0.000001722	-0.000010313	0.000000327	0.000001163	0.000000067
12	0.0	0.0	0.0	0.000000346	0.000001317	0.000000067
13	-0.000000323	-0.000000035	-0.000012564	0.000000910	-0.000000014	-0.000000067
14	-0.000000957	-0.000000070	-0.000008220	-0.000001486	-0.000000028	-0.000000079
15	-0.000001107	0.000002018	-0.000005452	-0.000000721	-0.000000023	-0.000000059
16	-0.000001189	0.000003651	-0.000003532	0.000000226	0.000000033	-0.000000010
17	-0.000007168	0.000005026	-0.000031307	-0.000000036	-0.000001790	0.000000067
18	-0.000007168	0.000005428	-0.000011622	-0.000000036	-0.000003772	0.000000067
19	-0.000010696	0.000002973	-0.000017466	0.000000285	0.000000820	0.000000067

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	0.	5.	-19.	0.	0.	1.57	586.	40.	627.
			13	-0.	-0.	-1.	-8.	-0.	-0.	1.57	586.	17.	603.
2	TAN	1	13	0.	0.	1.	8.	0.	0.	1.57	586.	17.	603.
			14	-0.	-0.	3.	-2.	-0.	0.	1.57	586.	3.	590.
3	BEND	1	14	-3.	0.	0.	-0.	2.	0.	1.57	586.	3.	590.
			2	2.	-0.	-3.	0.	2.	-0.	1.57	586.	4.	590.
4	BEND	1	2	-2.	0.	3.	-0.	-2.	0.	1.57	586.	4.	590.
			15	-0.	-0.	-4.	-0.	3.	-0.	1.57	586.	7.	593.
5	TAN	1	15	0.	4.	0.	-3.	0.	0.	1.57	586.	7.	593.
			16	-0.	-10.	-0.	1.	-0.	0.	1.00	586.	1.	588.
6	TAN	1	16	0.	10.	0.	-1.	0.	-0.	1.57	586.	2.	589.
			3	-0.	-16.	-0.	-1.	-0.	0.	1.00	586.	2.	588.
7	TAN	1	3	-0.	-206.	1.	1.	0.	-0.	1.00	586.	2.	588.
			4	0.	204.	-1.	-4.	-0.	-0.	1.57	586.	8.	594.
8	TAN	1	4	-0.	-204.	1.	4.	0.	0.	1.57	586.	8.	594.
			5	0.	106.	-1.	-6.	-0.	-1.	1.00	586.	8.	594.
9	TAN	1	5	-0.	-101.	0.	-1.	-0.	1.	1.00	586.	2.	589.
			6	0.	3.	-0.	1.	0.	-2.	1.57	586.	5.	591.
10	TAN	1	6	-0.	-3.	0.	-1.	-0.	2.	1.00	586.	3.	589.
			8	0.	-1.	-0.	1.	0.	-4.	1.00	586.	6.	592.
11	TAN	1	8	-0.	1.	0.	-1.	-0.	4.	1.57	586.	9.	596.
			17	0.	-21.	-0.	1.	0.	-5.	1.57	586.	12.	598.
12	TAN	1	17	-0.	21.	0.	-1.	-0.	-7.	1.57	586.	15.	601.
			9	0.	-41.	-0.	1.	0.	5.	1.57	586.	12.	598.
13	TAN	1	17	-0.	0.	-0.	-0.	-0.	12.	1.57	586.	26.	612.
			18	-4.	0.	0.	0.	0.	-0.	1.57	586.	0.	586.
14	TAN	1	9	-0.	41.	0.	-1.	-0.	-5.	1.57	586.	12.	598.
			10	0.	-44.	-0.	0.	0.	4.	1.57	586.	8.	595.
15	TAN	1	10	-0.	44.	0.	-0.	-0.	-4.	1.57	586.	8.	595.
			19	0.	-64.	-0.	0.	0.	3.	1.57	586.	6.	592.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	-0.	64.	0.	-0.	-0.	-3.	1.57	586.	6.	592.
			11	0.	-84.	-0.	0.	0.	1.	1.57	586.	3.	590.
17	TAN	1	11	-0.	84.	0.	-0.	0.	-1.	1.00	586.	2.	588.
			12	0.	-86.	-0.	0.	-0.	0.	1.00	586.	0.	586.
18	TAN	2	5	0.	-1.	-6.	7.	-0.	0.	1.00	0.	3.	3.
			7	-0.	1.	-9.	-61.	0.	1.	1.00	0.	28.	28.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	10	-0.000013110	0.000004006	-0.000022678
2	18	-0.000007168	0.000005428	-0.000011622
3	8	-0.000001780	0.000004614	-0.000032356

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	40.	1	627.
2	18	28.	18	28.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	0.	5.	-19.	0.	0.
3	-0.	1.	222.	0.	-0.	-0.
7	-0.	-1.	9.	-61.	-0.	-1.
12	0.	-0.	86.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000000000	-0.001562484	-0.002095683	0.000064510	-0.000000000	-0.000000000
3	0.0	0.0	0.0	-0.000030916	0.000000000	0.000000000
4	0.000000000	0.000033705	-0.000000079	-0.000003876	0.000000000	0.000000000
5	0.000000000	0.000015703	-0.000000147	0.000001577	0.000000000	0.000000000
6	0.000000000	0.000011400	-0.000000135	0.000001310	0.000000000	0.000000000
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.000000000	0.000003856	-0.000000106	0.000000741	0.000000000	0.000000000
9	0.000000000	-0.000000094	-0.000000074	0.000000289	-0.000000000	0.000000000
10	0.000000000	-0.000001008	-0.000000052	0.000000072	-0.000000000	0.000000000
11	0.000000000	-0.000000689	-0.000000020	-0.000000109	-0.000000000	0.000000000
12	0.0	0.0	0.0	-0.000000141	-0.000000000	0.000000000
13	-0.000000000	-0.000712260	-0.000729139	0.000145559	-0.000000000	-0.000000000
14	-0.000000000	-0.001424520	-0.002016306	0.000141721	-0.000000000	-0.000000000
15	-0.000000000	-0.001622537	-0.002016779	-0.000020252	-0.000000000	-0.000000000
16	-0.000000000	-0.000841261	-0.001008390	-0.000090664	0.000000000	-0.000000000
17	0.000000000	0.000001429	-0.000000090	0.000000495	0.000000000	0.000000000
18	0.000546299	0.000001429	-0.000000090	0.000000495	0.000000000	0.000000000
19	0.000000000	-0.000001029	-0.000000036	-0.000000039	-0.000000000	0.000000000

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-25.	58.	-677.	0.	0.	2.10	586.	1946.	2532.
			13	-0.	25.	-58.	218.	-0.	-0.	2.10	586.	626.	1212.
2	TAN	1	13	0.	-25.	58.	-218.	0.	0.	2.10	586.	626.	1212.
			14	-0.	25.	-58.	-241.	-0.	0.	2.10	586.	694.	1280.
3	BEND	1	14	58.	0.	-25.	-0.	241.	0.	2.10	586.	694.	1280.
			2	-24.	-0.	59.	0.	-292.	-0.	2.10	586.	840.	1427.
4	BEND	1	2	24.	0.	-59.	-0.	292.	0.	2.10	586.	840.	1427.
			15	25.	-0.	58.	-0.	-292.	-0.	2.10	586.	838.	1424.
5	TAN	1	15	0.	-58.	-25.	292.	0.	0.	2.10	586.	838.	1424.
			16	-0.	58.	25.	-11.	-0.	0.	1.00	586.	16.	602.
6	TAN	1	16	0.	-58.	-25.	11.	0.	-0.	2.10	586.	33.	619.
			3	-0.	58.	25.	269.	-0.	0.	1.00	586.	368.	954.
7	TAN	1	3	-0.	-3754.	46.	-269.	0.	-0.	1.00	586.	368.	954.
			4	0.	3754.	-46.	112.	-0.	0.	2.10	586.	323.	909.
8	TAN	1	4	-0.	-3754.	46.	-112.	0.	-0.	2.10	586.	323.	909.
			5	0.	3754.	-46.	-24.	-0.	-0.	1.00	586.	33.	620.
9	TAN	1	5	-0.	-3753.	-0.	2.	0.	-0.	1.00	586.	3.	589.
			6	0.	3753.	0.	-2.	-0.	0.	2.10	586.	6.	592.
10	TAN	1	6	-0.	-3753.	-0.	2.	0.	-0.	1.00	586.	3.	589.
			8	0.	3753.	0.	-2.	-0.	-0.	1.00	586.	2.	589.
11	TAN	1	8	-0.	-3753.	-0.	2.	0.	0.	2.10	586.	5.	591.
			17	0.	3753.	0.	-1.	-0.	-0.	2.10	586.	4.	590.
12	TAN	1	17	-0.	-3753.	-0.	1.	-0.	0.	2.10	586.	4.	590.
			9	0.	3753.	0.	-1.	0.	-0.	2.10	586.	3.	590.
13	TAN	1	17	0.	-0.	-0.	0.	0.	0.	2.10	586.	0.	586.
			18	-0.	0.	0.	-0.	0.	0.	2.10	586.	0.	586.
14	TAN	1	9	0.	-3753.	-0.	1.	0.	0.	2.10	586.	3.	590.
			10	-0.	3753.	0.	-1.	-0.	-0.	2.10	586.	2.	589.
15	TAN	1	10	0.	-3753.	-0.	1.	0.	0.	2.10	586.	2.	589.
			19	-0.	3753.	0.	-1.	0.	-0.	2.10	586.	2.	588.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	0.	-3753.	-0.	1.	0.	0.	2.10	586.	2.	588.
			11	-0.	3753.	0.	-0.	-0.	-0.	2.10	586.	1.	587.
17	TAN	1	11	0.	-3753.	-0.	0.	0.	0.	1.00	586.	0.	587.
			12	-0.	3753.	0.	0.	-0.	-0.	1.00	586.	0.	586.
18	TAN	2	5	0.	-46.	-1.	22.	-0.	0.	1.00	0.	10.	10.
			7	-0.	46.	1.	10.	0.	0.	1.00	0.	5.	5.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	18	0.000546299	0.000001429	-0.000000090
2	15	-0.000000000	-0.001622537	-0.002016779
3	2	-0.000000000	-0.001562484	-0.002095683

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1946.	1	2532.
2	18	10.	18	10.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-25.	58.	-677.	0.	0.
3	-0.	70.	3695.	-0.	-0.	-0.
7	-0.	-46.	-1.	10.	-0.	-0.
12	-0.	0.	-3753.	0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS    3.85 ** LAST STEP "UPDT" TIME IS    2.42 ** DELTA TIME IS    1.43 *
* ELAPSED SECONDS                            63.2                                40.9                      22.3 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    3.86 ** LAST STEP "ST3D" TIME IS    3.85 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                            63.3                                63.2                       0.1 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 18
NUMBER OF JOINTS 19
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	1.0400	3	0.7000				
2	1	2.0400	3	0.7000						
3	1	1.0000	2	1.0400	5	0.7000				
4	1	2.0400	5	0.7000						
5	1	1.0000	2	1.0400	4	0.7000				
6	1	2.0400	4	0.7000						
7	1	1.0000	2	1.0400	6	0.7000				
8	2	2.0400	6	0.7000						
9	1	1.0000	2	1.9000	3	1.1600				
10	1	2.9000	3	1.1600						
11	1	1.0000	2	1.9000	5	1.1600				
12	1	2.9000	5	1.1600						
13	1	1.0000	2	1.9000	4	1.1600				
14	1	2.9000	4	1.1600						
15	1	1.0000	2	1.9000	6	1.1600				
16	1	2.9000	6	1.1600						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS    3.98 ** LAST STEP "BEGP" TIME IS    3.86 ** DELTA TIME IS    0.12 *
* ELAPSED SECONDS                            65.8                                63.3                      2.6 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	26.	1.	4.	34.	171.	1.57	586.	377.	963.
			13	13.	17.	1.	1.	34.	78.	1.57	586.	183.	770.
2	TAN	1	13	13.	17.	1.	1.	34.	78.	1.57	586.	183.	770.
			14	16.	9.	1.	7.	34.	39.	1.57	586.	112.	699.
3	BEND	1	14	1.	16.	9.	39.	7.	34.	1.57	586.	112.	699.
			2	5.	17.	6.	20.	4.	59.	1.57	586.	134.	721.
4	BEND	1	2	5.	17.	6.	20.	4.	59.	1.57	586.	134.	721.
			15	6.	17.	1.	9.	3.	63.	1.57	586.	138.	724.
5	TAN	1	15	17.	1.	6.	3.	63.	9.	1.57	586.	138.	724.
			16	21.	1.	6.	8.	63.	206.	1.00	586.	296.	882.
6	TAN	1	16	21.	1.	6.	8.	63.	206.	1.57	586.	465.	1052.
			3	25.	1.	18.	123.	63.	468.	1.00	586.	668.	1255.
7	TAN	1	3	153.	34.	7.	123.	63.	468.	1.00	586.	668.	1255.
			4	152.	34.	3.	105.	63.	57.	1.57	586.	291.	878.
8	TAN	1	4	152.	34.	3.	105.	63.	57.	1.57	586.	291.	878.
			5	84.	34.	196.	393.	63.	411.	1.00	586.	783.	1370.
9	TAN	1	5	98.	6.	307.	1196.	49.	81.	1.00	586.	1641.	2227.
			6	30.	6.	108.	573.	49.	118.	1.57	586.	1264.	1851.
10	TAN	1	6	30.	6.	108.	573.	49.	118.	1.00	586.	803.	1389.
			8	27.	6.	100.	209.	49.	330.	1.00	586.	539.	1126.
11	TAN	1	8	27.	6.	100.	209.	49.	330.	1.57	586.	849.	1436.
			17	13.	6.	59.	528.	49.	410.	1.57	586.	1445.	2031.
12	TAN	1	17	8.	6.	51.	528.	0.	410.	1.57	586.	1441.	2027.
			9	7.	6.	10.	651.	0.	412.	1.57	586.	1659.	2246.
13	TAN	1	17	0.	6.	8.	49.	0.	0.	1.57	586.	107.	693.
			18	0.	3.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	7.	6.	10.	651.	0.	412.	1.57	586.	1659.	2246.
			10	9.	6.	4.	691.	0.	369.	1.57	586.	1688.	2275.
15	TAN	1	10	9.	6.	4.	691.	0.	369.	1.57	586.	1688.	2275.
			19	23.	6.	36.	627.	0.	307.	1.57	586.	1504.	2090.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	23.	6.	36.	627.	0.	307.	1.57	586.	1504.	2090.
			11	37.	6.	77.	400.	0.	188.	1.57	586.	952.	1538.
17	TAN	1	11	37.	6.	77.	400.	0.	188.	1.00	586.	604.	1191.
			12	39.	6.	83.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	18.	503.	40.	802.	484.	108.	1.00	0.	424.	424.
			7	29.	534.	40.	371.	484.	580.	1.00	0.	378.	378.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	1688.	14	2275.
2	18	424.	18	424.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	10.	26.	1.	4.	34.	171.
3	179.	25.	-35.	246.	937.	-127.
7	29.	-534.	-40.	371.	-484.	-580.
12	39.	83.	-6.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	26.	1.	4.	34.	170.	1.57	586.	375.	961.
			13	13.	17.	1.	1.	34.	78.	1.57	586.	183.	769.
2	TAN	1	13	13.	17.	1.	1.	34.	78.	1.57	586.	183.	769.
			14	16.	9.	1.	7.	34.	38.	1.57	586.	110.	697.
3	BEND	1	14	1.	16.	9.	38.	7.	34.	1.57	586.	110.	697.
			2	5.	17.	6.	20.	4.	58.	1.57	586.	132.	718.
4	BEND	1	2	5.	17.	6.	20.	4.	58.	1.57	586.	132.	718.
			15	6.	17.	1.	9.	3.	62.	1.57	586.	136.	722.
5	TAN	1	15	17.	1.	6.	3.	62.	9.	1.57	586.	136.	722.
			16	21.	1.	6.	8.	62.	205.	1.00	586.	293.	880.
6	TAN	1	16	21.	1.	6.	8.	62.	205.	1.57	586.	462.	1049.
			3	25.	1.	18.	123.	62.	466.	1.00	586.	664.	1251.
7	TAN	1	3	152.	33.	10.	123.	62.	466.	1.00	586.	664.	1251.
			4	151.	33.	6.	95.	62.	56.	1.57	586.	273.	859.
8	TAN	1	4	151.	33.	6.	95.	62.	56.	1.57	586.	273.	859.
			5	83.	33.	193.	375.	62.	407.	1.00	586.	762.	1348.
9	TAN	1	5	98.	6.	301.	1142.	24.	79.	1.00	586.	1567.	2153.
			6	30.	6.	102.	539.	24.	116.	1.57	586.	1188.	1775.
10	TAN	1	6	30.	6.	102.	539.	24.	116.	1.00	586.	755.	1341.
			8	27.	6.	94.	194.	24.	329.	1.00	586.	524.	1110.
11	TAN	1	8	27.	6.	94.	194.	24.	329.	1.57	586.	825.	1412.
			17	13.	6.	53.	487.	24.	409.	1.57	586.	1372.	1958.
12	TAN	1	17	7.	6.	53.	487.	0.	409.	1.57	586.	1371.	1957.
			9	7.	6.	12.	617.	0.	411.	1.57	586.	1597.	2184.
13	TAN	1	17	0.	6.	0.	24.	0.	0.	1.57	586.	53.	639.
			18	0.	3.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	7.	6.	12.	617.	0.	411.	1.57	586.	1597.	2184.
			10	9.	6.	6.	667.	0.	369.	1.57	586.	1643.	2230.
15	TAN	1	10	9.	6.	6.	667.	0.	369.	1.57	586.	1643.	2230.
			19	23.	6.	35.	611.	0.	306.	1.57	586.	1472.	2058.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	23.	6.	35.	611.	0.	306.	1.57	586.	1472.	2058.
			11	37.	6.	75.	390.	0.	188.	1.57	586.	934.	1520.
17	TAN	1	11	37.	6.	75.	390.	0.	188.	1.00	586.	593.	1179.
			12	38.	6.	81.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	17.	493.	39.	767.	482.	84.	1.00	0.	409.	409.
			7	28.	524.	39.	355.	482.	572.	1.00	0.	372.	372.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	1643.	14	2230.
2	18	409.	18	409.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	10.	26.	1.	4.	34.	170.
3	178.	28.	-34.	246.	931.	-124.
7	28.	-524.	-39.	355.	-482.	-572.
12	38.	81.	-6.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	26.	5.	17.	1.	3.	1.57	586.	38.	624.
			13	0.	18.	2.	7.	1.	0.	1.57	586.	15.	601.
2	TAN	1	13	0.	18.	2.	7.	1.	0.	1.57	586.	15.	601.
			14	0.	9.	3.	8.	1.	2.	1.57	586.	18.	605.
3	BEND	1	14	3.	0.	9.	2.	8.	1.	1.57	586.	18.	605.
			2	7.	0.	8.	1.	5.	2.	1.57	586.	13.	599.
4	BEND	1	2	7.	0.	8.	1.	5.	2.	1.57	586.	13.	599.
			15	7.	0.	4.	0.	5.	2.	1.57	586.	12.	598.
5	TAN	1	15	0.	4.	7.	5.	2.	0.	1.57	586.	12.	598.
			16	0.	8.	6.	8.	2.	3.	1.00	586.	13.	599.
6	TAN	1	16	0.	8.	6.	8.	2.	3.	1.57	586.	20.	606.
			3	0.	12.	18.	124.	2.	6.	1.00	586.	169.	756.
7	TAN	1	3	3.	181.	8.	124.	2.	6.	1.00	586.	169.	756.
			4	3.	180.	4.	108.	2.	3.	1.57	586.	232.	818.
8	TAN	1	4	3.	180.	4.	108.	2.	3.	1.57	586.	232.	818.
			5	3.	112.	196.	397.	2.	11.	1.00	586.	544.	1130.
9	TAN	1	5	1.	79.	307.	1196.	49.	6.	1.00	586.	1638.	2225.
			6	1.	11.	108.	573.	49.	7.	1.57	586.	1240.	1827.
10	TAN	1	6	1.	11.	108.	573.	49.	7.	1.00	586.	788.	1374.
			8	1.	8.	100.	210.	49.	11.	1.00	586.	295.	881.
11	TAN	1	8	1.	8.	100.	210.	49.	11.	1.57	586.	465.	1051.
			17	1.	18.	59.	529.	49.	13.	1.57	586.	1145.	1731.
12	TAN	1	17	1.	23.	51.	529.	0.	16.	1.57	586.	1140.	1726.
			9	1.	37.	10.	651.	0.	13.	1.57	586.	1404.	1990.
13	TAN	1	17	6.	0.	8.	49.	0.	25.	1.57	586.	120.	706.
			18	3.	0.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	1.	37.	10.	651.	0.	13.	1.57	586.	1404.	1990.
			10	1.	39.	4.	691.	0.	9.	1.57	586.	1490.	2076.
15	TAN	1	10	1.	39.	4.	691.	0.	9.	1.57	586.	1490.	2076.
			19	1.	53.	36.	627.	0.	7.	1.57	586.	1351.	1938.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	1.	53.	36.	627.	0.	7.	1.57	586.	1351.	1938.
			11	1.	67.	77.	400.	0.	4.	1.57	586.	861.	1448.
17	TAN	1	11	1.	67.	77.	400.	0.	4.	1.00	586.	547.	1133.
			12	1.	69.	83.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	2.	503.	44.	807.	5.	47.	1.00	0.	363.	363.
			7	2.	534.	47.	414.	5.	18.	1.00	0.	186.	186.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	1638.	9	2225.
2	18	363.	18	363.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	26.	5.	17.	1.	3.
3	3.	25.	-193.	247.	13.	-5.
7	2.	-534.	-47.	414.	-5.	-18.
12	1.	83.	-69.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	26.	5.	17.	0.	2.	1.57	586.	37.	624.
			13	0.	18.	2.	7.	0.	0.	1.57	586.	15.	601.
2	TAN	1	13	0.	18.	2.	7.	0.	0.	1.57	586.	15.	601.
			14	0.	9.	3.	8.	0.	1.	1.57	586.	18.	604.
3	BEND	1	14	3.	0.	9.	1.	8.	0.	1.57	586.	18.	604.
			2	7.	0.	8.	1.	5.	1.	1.57	586.	12.	598.
4	BEND	1	2	7.	0.	8.	1.	5.	1.	1.57	586.	12.	598.
			15	7.	0.	4.	0.	5.	1.	1.57	586.	11.	598.
5	TAN	1	15	0.	4.	7.	5.	1.	0.	1.57	586.	11.	598.
			16	0.	8.	6.	8.	1.	2.	1.00	586.	12.	598.
6	TAN	1	16	0.	8.	6.	8.	1.	2.	1.57	586.	19.	605.
			3	0.	12.	18.	124.	1.	4.	1.00	586.	169.	756.
7	TAN	1	3	2.	180.	10.	124.	1.	4.	1.00	586.	169.	756.
			4	2.	179.	7.	98.	1.	2.	1.57	586.	210.	797.
8	TAN	1	4	2.	179.	7.	98.	1.	2.	1.57	586.	210.	797.
			5	2.	110.	193.	379.	1.	7.	1.00	586.	518.	1105.
9	TAN	1	5	1.	79.	301.	1143.	24.	4.	1.00	586.	1564.	2151.
			6	1.	11.	102.	539.	24.	6.	1.57	586.	1164.	1750.
10	TAN	1	6	1.	11.	102.	539.	24.	6.	1.00	586.	739.	1325.
			8	1.	8.	94.	195.	24.	10.	1.00	586.	269.	855.
11	TAN	1	8	1.	8.	94.	195.	24.	10.	1.57	586.	424.	1010.
			17	1.	17.	53.	488.	24.	12.	1.57	586.	1053.	1639.
12	TAN	1	17	1.	23.	53.	488.	0.	15.	1.57	586.	1052.	1638.
			9	1.	37.	12.	618.	0.	12.	1.57	586.	1331.	1918.
13	TAN	1	17	6.	0.	0.	24.	0.	25.	1.57	586.	76.	662.
			18	3.	0.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	1.	37.	12.	618.	0.	12.	1.57	586.	1331.	1918.
			10	1.	39.	6.	668.	0.	9.	1.57	586.	1439.	2025.
15	TAN	1	10	1.	39.	6.	668.	0.	9.	1.57	586.	1439.	2025.
			19	1.	53.	35.	611.	0.	6.	1.57	586.	1316.	1903.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	1.	53.	35.	611.	0.	6.	1.57	586.	1316.	1903.
			11	1.	67.	75.	391.	0.	3.	1.57	586.	842.	1428.
17	TAN	1	11	1.	67.	75.	391.	0.	3.	1.00	586.	534.	1121.
			12	1.	69.	81.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	1.	494.	43.	772.	3.	24.	1.00	0.	347.	347.
			7	1.	525.	45.	398.	3.	9.	1.00	0.	179.	179.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	1564.	9	2151.
2	18	347.	18	347.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	26.	5.	17.	0.	2.
3	2.	28.	-192.	247.	7.	-3.
7	1.	-525.	-45.	398.	-3.	-9.
12	1.	81.	-69.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	26.	1.	4.	33.	162.	1.57	586.	356.	943.
			13	13.	17.	1.	1.	33.	74.	1.57	586.	175.	761.
2	TAN	1	13	13.	17.	1.	1.	33.	74.	1.57	586.	175.	761.
			14	16.	9.	1.	7.	33.	37.	1.57	586.	108.	694.
3	BEND	1	14	1.	16.	9.	37.	7.	33.	1.57	586.	108.	694.
			2	5.	16.	6.	19.	4.	56.	1.57	586.	129.	715.
4	BEND	1	2	5.	16.	6.	19.	4.	56.	1.57	586.	129.	715.
			15	6.	16.	1.	9.	3.	61.	1.57	586.	132.	718.
5	TAN	1	15	16.	1.	6.	3.	61.	9.	1.57	586.	132.	718.
			16	21.	1.	6.	8.	61.	198.	1.00	586.	284.	870.
6	TAN	1	16	21.	1.	6.	8.	61.	198.	1.57	586.	447.	1033.
			3	25.	1.	18.	123.	61.	452.	1.00	586.	647.	1233.
7	TAN	1	3	150.	34.	7.	123.	61.	452.	1.00	586.	647.	1233.
			4	149.	34.	3.	105.	61.	62.	1.57	586.	294.	880.
8	TAN	1	4	149.	34.	3.	105.	61.	62.	1.57	586.	294.	880.
			5	81.	34.	196.	393.	61.	407.	1.00	586.	779.	1365.
9	TAN	1	5	94.	6.	307.	1196.	49.	61.	1.00	586.	1639.	2226.
			6	26.	6.	108.	573.	49.	126.	1.57	586.	1268.	1854.
10	TAN	1	6	26.	6.	108.	573.	49.	126.	1.00	586.	805.	1392.
			8	23.	6.	100.	209.	49.	309.	1.00	586.	515.	1101.
11	TAN	1	8	23.	6.	100.	209.	49.	309.	1.57	586.	811.	1398.
			17	9.	6.	59.	528.	49.	373.	1.57	586.	1398.	1984.
12	TAN	1	17	9.	6.	51.	528.	0.	373.	1.57	586.	1393.	1980.
			9	5.	6.	10.	651.	0.	381.	1.57	586.	1625.	2212.
13	TAN	1	17	0.	0.	8.	49.	0.	0.	1.57	586.	107.	693.
			18	0.	3.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	5.	6.	10.	651.	0.	381.	1.57	586.	1625.	2212.
			10	7.	6.	4.	691.	0.	348.	1.57	586.	1667.	2254.
15	TAN	1	10	7.	6.	4.	691.	0.	348.	1.57	586.	1667.	2254.
			19	21.	6.	36.	627.	0.	292.	1.57	586.	1490.	2076.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	21.	6.	36.	627.	0.	292.	1.57	586.	1490.	2076.
			11	35.	6.	77.	400.	0.	180.	1.57	586.	944.	1531.
17	TAN	1	11	35.	6.	77.	400.	0.	180.	1.00	586.	599.	1186.
			12	37.	6.	83.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	18.	503.	40.	802.	460.	105.	1.00	0.	418.	418.
			7	28.	534.	40.	371.	460.	558.	1.00	0.	365.	365.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

[illegible] OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

[illegible]	STRESS DUE TO LOAD 5		COMBINED STRESS (LOAD 5 + PRESSURE)	
[illegible]	ELEMENT	STRESS (PSI)	ELEMENT	STRESS (PSI)
1	14	1667.	14	2254.
2	18	418.	18	418.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY	F O R C E S (LBS)			M O M E N T S (IN-LBS)		
JOINT NO	F1	F2	F3	M1	M2	M3
[illegible]	10.	26.	1.	4.	33.	162.
[illegible]	175.	25.	-35.	246.	904.	-121.
7	28.	-534.	-40.	371.	-460.	-558.
12	37.	83.	-6.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	26.	1.	4.	33.	161.	1.57	586.	354.	940.
			13	12.	17.	1.	1.	33.	74.	1.57	586.	174.	761.
2	TAN	1	13	12.	17.	1.	1.	33.	74.	1.57	586.	174.	761.
			14	15.	9.	1.	7.	33.	36.	1.57	586.	106.	692.
3	BEND	1	14	1.	15.	9.	36.	7.	33.	1.57	586.	106.	692.
			2	5.	16.	6.	19.	4.	55.	1.57	586.	126.	713.
4	BEND	1	2	5.	16.	6.	19.	4.	55.	1.57	586.	126.	713.
			15	6.	16.	1.	9.	3.	59.	1.57	586.	130.	716.
5	TAN	1	15	16.	1.	6.	3.	59.	9.	1.57	586.	130.	716.
			16	20.	1.	6.	8.	59.	197.	1.00	586.	282.	868.
6	TAN	1	16	20.	1.	6.	8.	59.	197.	1.57	586.	444.	1030.
			3	25.	1.	18.	123.	59.	449.	1.00	586.	643.	1229.
7	TAN	1	3	149.	33.	10.	123.	59.	449.	1.00	586.	643.	1229.
			4	148.	33.	6.	95.	59.	61.	1.57	586.	276.	862.
8	TAN	1	4	148.	33.	6.	95.	59.	61.	1.57	586.	276.	862.
			5	80.	33.	193.	375.	59.	403.	1.00	586.	758.	1344.
9	TAN	1	5	94.	6.	301.	1142.	24.	59.	1.00	586.	1565.	2151.
			6	26.	6.	102.	539.	24.	125.	1.57	586.	1192.	1779.
10	TAN	1	6	26.	6.	102.	539.	24.	125.	1.00	586.	757.	1343.
			8	23.	6.	94.	194.	24.	308.	1.00	586.	499.	1086.
11	TAN	1	8	23.	6.	94.	194.	24.	308.	1.57	586.	786.	1373.
			17	9.	6.	53.	487.	24.	372.	1.57	586.	1322.	1909.
12	TAN	1	17	9.	6.	53.	487.	0.	372.	1.57	586.	1321.	1908.
			9	5.	6.	12.	617.	0.	380.	1.57	586.	1562.	2148.
13	TAN	1	17	0.	0.	0.	24.	0.	0.	1.57	586.	53.	639.
			18	0.	3.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	5.	6.	12.	617.	0.	380.	1.57	586.	1562.	2148.
			10	7.	6.	6.	667.	0.	347.	1.57	586.	1621.	2208.
15	TAN	1	10	7.	6.	6.	667.	0.	347.	1.57	586.	1621.	2208.
			19	21.	6.	35.	611.	0.	291.	1.57	586.	1458.	2044.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	21.	6.	35.	611.	0.	291.	1.57	586.	1458.	2044.
			11	35.	6.	75.	390.	0.	180.	1.57	586.	926.	1512.
17	TAN	1	11	35.	6.	75.	390.	0.	180.	1.00	586.	588.	1174.
			12	37.	6.	81.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	16.	493.	39.	767.	458.	82.	1.00	0.	403.	403.
			7	27.	524.	39.	355.	458.	550.	1.00	0.	359.	359.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	1621.	14	2208.
2	18	403.	18	403.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	10.	26.	1.	4.	33.	161.
3	174.	28.	-34.	246.	899.	-119.
7	27.	-524.	-39.	355.	-458.	-550.
12	37.	81.	-6.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	26.	5.	17.	1.	2.	2.10	586.	50.	636.
			13	0.	18.	2.	7.	1.	0.	2.10	586.	20.	606.
2	TAN	1	13	0.	18.	2.	7.	1.	0.	2.10	586.	20.	606.
			14	0.	9.	3.	8.	1.	2.	2.10	586.	24.	611.
3	BEND	1	14	3.	0.	9.	2.	8.	1.	2.10	586.	24.	611.
			2	7.	0.	8.	1.	5.	2.	2.10	586.	17.	603.
4	BEND	1	2	7.	0.	8.	1.	5.	2.	2.10	586.	17.	603.
			15	7.	0.	4.	0.	5.	2.	2.10	586.	16.	602.
5	TAN	1	15	0.	4.	7.	5.	2.	0.	2.10	586.	16.	602.
			16	0.	8.	6.	8.	2.	3.	1.00	586.	13.	599.
6	TAN	1	16	0.	8.	6.	8.	2.	3.	2.10	586.	26.	613.
			3	0.	12.	18.	124.	2.	6.	1.00	586.	169.	756.
7	TAN	1	3	2.	178.	8.	124.	2.	6.	1.00	586.	169.	756.
			4	2.	177.	4.	108.	2.	2.	2.10	586.	309.	896.
8	TAN	1	4	2.	177.	4.	108.	2.	2.	2.10	586.	309.	896.
			5	2.	109.	196.	397.	2.	9.	1.00	586.	544.	1130.
9	TAN	1	5	0.	76.	307.	1197.	49.	4.	1.00	586.	1638.	2225.
			6	0.	8.	108.	573.	49.	5.	2.10	586.	1654.	2240.
10	TAN	1	6	0.	8.	108.	573.	49.	5.	1.00	586.	788.	1374.
			8	0.	7.	100.	210.	49.	6.	1.00	586.	295.	881.
11	TAN	1	8	0.	7.	100.	210.	49.	6.	2.10	586.	619.	1205.
			17	0.	21.	59.	529.	49.	6.	2.10	586.	1526.	2112.
12	TAN	1	17	0.	21.	51.	529.	0.	7.	2.10	586.	1519.	2106.
			9	0.	35.	10.	651.	0.	6.	2.10	586.	1871.	2458.
13	TAN	1	17	0.	0.	8.	49.	0.	8.	2.10	586.	144.	730.
			18	3.	0.	8.	0.	0.	0.	2.10	586.	0.	586.
14	TAN	1	9	0.	35.	10.	651.	0.	6.	2.10	586.	1871.	2458.
			10	0.	37.	4.	691.	0.	4.	2.10	586.	1986.	2573.
15	TAN	1	10	0.	37.	4.	691.	0.	4.	2.10	586.	1986.	2573.
			19	0.	51.	36.	627.	0.	3.	2.10	586.	1802.	2388.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	0.	51.	36.	627.	0.	3.	2.10	586.	1802.	2388.
			11	0.	65.	77.	400.	0.	2.	2.10	586.	1148.	1735.
17	TAN	1	11	0.	65.	77.	400.	0.	2.	1.00	586.	547.	1133.
			12	0.	66.	83.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	2.	503.	44.	807.	5.	47.	1.00	0.	363.	363.
			7	2.	534.	47.	414.	5.	17.	1.00	0.	186.	186.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	1986.	14	2573.
2	18	363.	18	363.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	26.	5.	17.	1.	2.
3	3.	25.	-190.	247.	11.	-5.
7	2.	-534.	-47.	414.	-5.	-17.
12	0.	83.	-66.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	26.	5.	17.	1.	3.	1.57	586.	38.	624.
			13	0.	18.	2.	7.	1.	0.	1.57	586.	15.	601.
2	TAN	1	13	0.	18.	2.	7.	1.	0.	1.57	586.	15.	601.
			14	0.	9.	3.	8.	1.	3.	1.57	586.	19.	605.
3	BEND	1	14	3.	0.	9.	3.	8.	1.	1.57	586.	19.	605.
			2	7.	0.	8.	2.	5.	3.	1.57	586.	14.	600.
4	BEND	1	2	7.	0.	8.	2.	5.	3.	1.57	586.	14.	600.
			15	7.	0.	4.	0.	5.	3.	1.57	586.	13.	600.
5	TAN	1	15	0.	4.	7.	5.	3.	0.	1.57	586.	13.	600.
			16	0.	8.	6.	8.	3.	4.	1.00	586.	14.	600.
6	TAN	1	16	0.	8.	6.	8.	3.	4.	1.57	586.	21.	608.
			3	0.	12.	18.	124.	3.	8.	1.00	586.	170.	756.
7	TAN	1	3	3.	180.	5.	124.	3.	8.	1.00	586.	170.	756.
			4	3.	179.	1.	117.	3.	3.	1.57	586.	253.	839.
8	TAN	1	4	3.	179.	1.	117.	3.	3.	1.57	586.	253.	839.
			5	3.	110.	199.	415.	3.	13.	1.00	586.	568.	1155.
9	TAN	1	5	0.	77.	313.	1248.	73.	6.	1.00	586.	1710.	2297.
			6	0.	8.	114.	606.	73.	6.	1.57	586.	1316.	1902.
10	TAN	1	6	0.	8.	114.	606.	73.	6.	1.00	586.	835.	1422.
			8	0.	7.	106.	224.	73.	7.	1.00	586.	322.	909.
11	TAN	1	8	0.	7.	106.	224.	73.	7.	1.57	586.	508.	1094.
			17	0.	21.	66.	568.	73.	7.	1.57	586.	1234.	1820.
12	TAN	1	17	0.	21.	49.	568.	0.	8.	1.57	586.	1224.	1810.
			9	0.	35.	9.	683.	0.	7.	1.57	586.	1473.	2059.
13	TAN	1	17	0.	0.	16.	73.	0.	8.	1.57	586.	159.	746.
			18	3.	0.	8.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	0.	35.	9.	683.	0.	7.	1.57	586.	1473.	2059.
			10	0.	37.	3.	714.	0.	5.	1.57	586.	1539.	2125.
15	TAN	1	10	0.	37.	3.	714.	0.	5.	1.57	586.	1539.	2125.
			19	0.	51.	38.	643.	0.	3.	1.57	586.	1385.	1972.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELM. TYPE		JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
TAN		19	0.	51.	38.	643.	0.	3.	1.57	586.	1385.	1972.
		11	0.	65.	79.	408.	0.	2.	1.57	586.	880.	1466.
TAN	1	11	0.	65.	79.	408.	0.	2.	1.00	586.	559.	1145.
		12	0.	67.	84.	0.	0.	0.	1.00	586.	0.	586.
TAN	2	6	3.	512.	46.	841.	7.	70.	1.00	0.	379.	379.
		7	3.	543.	49.	429.	7.	25.	1.00	0.	193.	193.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH	STRESS DUE TO LOAD 8		COMBINED STRESS (LOAD 8 + PRESSURE)	
	ELEMENT	STRESS (PSI)	ELEMENT	STRESS (PSI)
	9	1710.	9	2297.
	18	379.	18	379.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	26.	5.	17.	1.	3.
3	4.	23.	-192.	248.	17.	-7.
7	3.	-543.	-49.	429.	-7.	-25.
12	0.	84.	-67.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
2	TAN	1	1	17.	37.	1.	6.	57.	284.	1.57	586.	624.	1211.
			13	22.	25.	1.	2.	57.	129.	1.57	586.	304.	890.
2	TAN	1	13	22.	25.	1.	2.	57.	129.	1.57	586.	304.	890.
			14	27.	13.	1.	10.	57.	64.	1.57	586.	186.	772.
3	BEND	1	14	1.	27.	13.	64.	10.	57.	1.57	586.	186.	772.
			2	7.	28.	8.	34.	6.	97.	1.57	586.	222.	809.
4	BEND	1	2	7.	28.	8.	34.	6.	97.	1.57	586.	222.	809.
			15	9.	28.	1.	15.	4.	105.	1.57	586.	229.	815.
5	TAN	1	15	28.	1.	9.	4.	105.	15.	1.57	586.	229.	815.
			16	35.	1.	8.	11.	105.	342.	1.00	586.	490.	1076.
6	TAN	1	16	35.	1.	8.	11.	105.	342.	1.57	586.	771.	1357.
			3	42.	1.	25.	175.	105.	776.	1.00	586.	1098.	1684.
7	TAN	1	3	254.	50.	9.	175.	105.	776.	1.00	586.	1098.	1684.
			4	252.	50.	4.	153.	105.	94.	1.57	586.	449.	1035.
8	TAN	1	4	252.	50.	4.	153.	105.	94.	1.57	586.	449.	1035.
			5	139.	50.	279.	567.	105.	681.	1.00	586.	1221.	1807.
9	TAN	1	5	163.	9.	439.	1721.	80.	134.	1.00	586.	2365.	2951.
			6	50.	9.	156.	828.	80.	196.	1.57	586.	1841.	2427.
10	TAN	1	6	50.	9.	156.	828.	80.	196.	1.00	586.	1169.	1755.
			8	45.	9.	145.	303.	80.	548.	1.00	586.	863.	1450.
11	TAN	1	8	45.	9.	145.	303.	80.	548.	1.57	586.	1360.	1946.
			17	22.	9.	87.	767.	80.	680.	1.57	586.	2216.	2802.
12	TAN	1	17	12.	9.	72.	767.	0.	680.	1.57	586.	2209.	2795.
			9	11.	9.	14.	939.	0.	682.	1.57	586.	2500.	3087.
13	TAN	1	17	0.	9.	15.	80.	0.	0.	1.57	586.	173.	760.
			18	0.	5.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	11.	9.	14.	939.	0.	682.	1.57	586.	2500.	3087.
			10	14.	9.	5.	992.	0.	612.	1.57	586.	2512.	3098.
15	TAN	1	10	14.	9.	5.	992.	0.	612.	1.57	586.	2512.	3098.
			19	38.	9.	53.	898.	0.	508.	1.57	586.	2223.	2809.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	38.	9.	53.	898.	0.	508.	1.57	586.	2223.	2809.
			11	61.	9.	111.	572.	0.	312.	1.57	586.	1403.	1989.
17	TAN	1	11	61.	9.	111.	572.	0.	312.	1.00	586.	891.	1477.
			12	64.	9.	118.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	30.	718.	58.	1155.	803.	178.	1.00	0.	637.	637.
			7	48.	763.	58.	534.	803.	961.	1.00	0.	612.	612.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	2512.	14	3098.
2	18	637.	18	637.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	17.	37.	1.	6.	57.	284.
3	296.	34.	-51.	350.	1552.	-210.
7	48.	-763.	-58.	534.	-803.	-961.
12	64.	118.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	17.	37.	1.	6.	56.	282.	1.57	586.	620.	1206.
			13	22.	25.	1.	2.	56.	129.	1.57	586.	303.	890.
2	TAN	1	13	22.	25.	1.	2.	56.	129.	1.57	586.	303.	890.
			14	27.	13.	1.	10.	56.	62.	1.57	586.	182.	768.
3	BEND	1	14	1.	27.	13.	62.	10.	56.	1.57	586.	182.	768.
			2	7.	27.	8.	33.	6.	95.	1.57	586.	218.	804.
4	BEND	1	2	7.	27.	8.	33.	6.	95.	1.57	586.	218.	804.
			15	9.	28.	1.	15.	4.	103.	1.57	586.	224.	810.
5	TAN	1	15	28.	1.	9.	4.	103.	15.	1.57	586.	224.	810.
			16	35.	1.	8.	11.	103.	340.	1.00	586.	486.	1072.
6	TAN	1	16	35.	1.	8.	11.	103.	340.	1.57	586.	765.	1351.
			3	42.	1.	25.	175.	103.	771.	1.00	586.	1091.	1677.
7	TAN	1	3	252.	47.	14.	175.	103.	771.	1.00	586.	1091.	1677.
			4	250.	47.	9.	135.	103.	93.	1.57	586.	417.	1003.
8	TAN	1	4	250.	47.	9.	135.	103.	93.	1.57	586.	417.	1003.
			5	137.	47.	274.	533.	103.	673.	1.00	586.	1183.	1770.
9	TAN	1	5	163.	8.	427.	1623.	35.	130.	1.00	586.	2229.	2815.
			6	49.	8.	145.	766.	35.	192.	1.57	586.	1703.	2289.
10	TAN	1	6	49.	8.	145.	766.	35.	192.	1.00	586.	1081.	1667.
			8	45.	8.	133.	276.	35.	545.	1.00	586.	837.	1424.
11	TAN	1	8	45.	8.	133.	276.	35.	545.	1.57	586.	1319.	1905.
			17	22.	8.	75.	693.	35.	678.	1.57	586.	2090.	2676.
12	TAN	1	17	12.	8.	75.	693.	0.	678.	1.57	586.	2088.	2675.
			9	11.	8.	17.	877.	0.	680.	1.57	586.	2392.	2979.
13	TAN	1	17	0.	9.	0.	35.	0.	0.	1.57	586.	75.	661.
			18	0.	5.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	11.	8.	17.	877.	0.	680.	1.57	586.	2392.	2979.
			10	14.	8.	9.	949.	0.	611.	1.57	586.	2432.	3018.
15	TAN	1	10	14.	8.	9.	949.	0.	611.	1.57	586.	2432.	3018.
			19	37.	8.	49.	868.	0.	507.	1.57	586.	2166.	2753.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	37.	8.	49.	868.	0.	507.	1.57	586.	2166.	2753.
			11	61.	8.	107.	555.	0.	311.	1.57	586.	1371.	1958.
17	TAN	1	11	61.	8.	107.	555.	0.	311.	1.00	586.	871.	1457.
			12	64.	8.	115.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	28.	701.	55.	1091.	799.	134.	1.00	0.	610.	610.
			7	46.	745.	55.	504.	799.	946.	1.00	0.	601.	601.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	2432.	14	3018.
2	18	610.	18	610.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	17.	37.	1.	6.	56.	282.
3	294.	39.	-48.	349.	1542.	-206.
7	46.	-745.	-55.	504.	-799.	-946.
12	64.	115.	-8.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	37.	7.	28.	1.	4.	1.57	586.	60.	647.
			13	0.	25.	3.	11.	1.	1.	1.57	586.	24.	610.
2	TAN	1	13	0.	25.	3.	11.	1.	1.	1.57	586.	24.	610.
			14	0.	13.	4.	12.	1.	3.	1.57	586.	27.	613.
3	BEND	1	14	4.	0.	13.	3.	12.	1.	1.57	586.	27.	613.
			2	10.	0.	11.	2.	8.	3.	1.57	586.	19.	606.
4	BEND	1	2	10.	0.	11.	2.	8.	3.	1.57	586.	19.	606.
			15	9.	0.	6.	1.	8.	4.	1.57	586.	19.	605.
5	TAN	1	15	0.	6.	9.	8.	4.	1.	1.57	586.	19.	605.
			16	0.	13.	8.	12.	4.	5.	1.00	586.	19.	605.
6	TAN	1	16	0.	13.	8.	12.	4.	5.	1.57	586.	30.	616.
			3	0.	19.	25.	176.	4.	10.	1.00	586.	241.	828.
7	TAN	1	3	4.	293.	10.	176.	4.	10.	1.00	586.	241.	828.
			4	4.	291.	4.	157.	4.	5.	1.57	586.	340.	926.
8	TAN	1	4	4.	291.	4.	157.	4.	5.	1.57	586.	340.	926.
			5	4.	178.	280.	573.	4.	18.	1.00	586.	785.	1371.
9	TAN	1	5	1.	130.	439.	1723.	80.	10.	1.00	586.	2360.	2946.
			6	1.	17.	157.	829.	80.	12.	1.57	586.	1795.	2382.
10	TAN	1	6	1.	17.	157.	829.	80.	12.	1.00	586.	1140.	1726.
			8	1.	12.	145.	304.	80.	19.	1.00	586.	431.	1018.
11	TAN	1	8	1.	12.	145.	304.	80.	19.	1.57	586.	679.	1265.
			17	1.	28.	87.	768.	80.	22.	1.57	586.	1665.	2252.
12	TAN	1	17	1.	37.	72.	768.	0.	27.	1.57	586.	1656.	2243.
			9	1.	60.	14.	939.	0.	22.	1.57	586.	2025.	2611.
13	TAN	1	17	9.	0.	15.	80.	0.	42.	1.57	586.	195.	782.
			18	5.	0.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	1.	60.	14.	939.	0.	22.	1.57	586.	2025.	2611.
			10	1.	64.	6.	992.	0.	16.	1.57	586.	2139.	2725.
15	TAN	1	10	1.	64.	6.	992.	0.	16.	1.57	586.	2139.	2725.
			19	1.	87.	53.	898.	0.	11.	1.57	586.	1936.	2522.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	1.	87.	53.	898.	0.	11.	1.57	586.	1936.	2522.
			11	1.	110.	111.	572.	0.	6.	1.57	586.	1232.	1819.
17	TAN	1	11	1.	110.	111.	572.	0.	6.	1.00	586.	782.	1369.
			12	1.	113.	118.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	4.	719.	65.	1163.	8.	77.	1.00	0.	524.	524.
			7	4.	763.	69.	605.	8.	29.	1.00	0.	272.	272.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	2360.	9	2946.
2	18	524.	18	524.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	37.	7.	28.	1.	4.
3	5.	35.	-312.	352.	21.	-8.
7	4.	-763.	-69.	605.	-8.	-29.
12	1.	118.	-113.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	37.	7.	28.	1.	3.	1.57	586.	60.	646.
			13	0.	25.	3.	11.	1.	1.	1.57	586.	24.	610.
2	TAN	1	13	0.	25.	3.	11.	1.	1.	1.57	586.	24.	610.
			14	0.	13.	4.	12.	1.	2.	1.57	586.	26.	612.
3	BEND	1	14	4.	0.	13.	2.	12.	1.	1.57	586.	26.	612.
			2	10.	0.	11.	1.	8.	2.	1.57	586.	18.	604.
4	BEND	1	2	10.	0.	11.	1.	8.	2.	1.57	586.	18.	604.
			15	9.	0.	6.	0.	8.	2.	1.57	586.	17.	603.
5	TAN	1	15	0.	6.	9.	8.	2.	0.	1.57	586.	17.	603.
			16	0.	13.	8.	12.	2.	3.	1.00	586.	17.	604.
6	TAN	1	16	0.	13.	8.	12.	2.	3.	1.57	586.	27.	614.
			3	0.	19.	25.	176.	2.	5.	1.00	586.	241.	827.
7	TAN	1	3	2.	290.	15.	176.	2.	5.	1.00	586.	241.	827.
			4	2.	288.	10.	139.	2.	3.	1.57	586.	300.	887.
8	TAN	1	4	2.	288.	10.	139.	2.	3.	1.57	586.	300.	887.
			5	2.	175.	275.	539.	2.	10.	1.00	586.	738.	1324.
9	TAN	1	5	1.	130.	427.	1625.	35.	6.	1.00	586.	2224.	2810.
			6	1.	17.	145.	767.	35.	9.	1.57	586.	1655.	2241.
10	TAN	1	6	1.	17.	145.	767.	35.	9.	1.00	586.	1051.	1637.
			8	1.	12.	133.	277.	35.	16.	1.00	586.	383.	969.
11	TAN	1	8	1.	12.	133.	277.	35.	16.	1.57	586.	603.	1189.
			17	1.	27.	75.	694.	35.	20.	1.57	586.	1497.	2084.
12	TAN	1	17	1.	37.	75.	694.	0.	25.	1.57	586.	1496.	2082.
			9	1.	60.	17.	878.	0.	20.	1.57	586.	1893.	2479.
13	TAN	1	17	9.	0.	0.	35.	0.	42.	1.57	586.	117.	704.
			18	5.	0.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	1.	60.	17.	878.	0.	20.	1.57	586.	1893.	2479.
			10	1.	63.	9.	949.	0.	14.	1.57	586.	2046.	2632.
15	TAN	1	10	1.	63.	9.	949.	0.	14.	1.57	586.	2046.	2632.
			19	1.	87.	49.	868.	0.	10.	1.57	586.	1871.	2458.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	MATERIAL NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	1.	87.	49.	868.	0.	10.	1.57	586.	1871.	2458.
			11	1.	110.	107.	555.	0.	6.	1.57	586.	1197.	1783.
17	TAN	1	11	1.	110.	107.	555.	0.	6.	1.00	586.	760.	1346.
			12	1.	113.	115.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	2.	702.	62.	1099.	4.	33.	1.00	0.	494.	494.
			7	2.	746.	66.	576.	4.	14.	1.00	0.	259.	259.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
	9	2224.	9	2810.
	18	494.	18	494.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	37.	7.	28.	1.	3.
3	3.	40.	-310.	352.	11.	-4.
7	2.	-746.	-66.	576.	-4.	-14.
12	1.	115.	-113.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	16.	37.	1.	6.	55.	268.	1.57	586.	590.	1176.
			11	21.	25.	1.	2.	55.	122.	1.57	586.	289.	876.
	TAN	1	13	21.	25.	1.	2.	55.	122.	1.57	586.	289.	876.
			14	26.	13.	1.	10.	55.	61.	1.57	586.	178.	765.
3	BEND	1	14	1.	26.	13.	61.	10.	55.	1.57	586.	178.	765.
			2	7.	26.	8.	32.	6.	93.	1.57	586.	213.	799.
4	BEND	1	2	7.	26.	8.	32.	6.	93.	1.57	586.	213.	799.
			15	9.	27.	1.	15.	4.	100.	1.57	586.	219.	805.
5	TAN	1	15	27.	1.	9.	4.	100.	15.	1.57	586.	219.	805.
			16	34.	1.	8.	11.	100.	328.	1.00	586.	470.	1057.
6	TAN	1	16	34.	1.	8.	11.	100.	328.	1.57	586.	740.	1327.
			3	41.	1.	25.	175.	100.	749.	1.00	586.	1062.	1648.
7	TAN	1	3	249.	50.	9.	175.	100.	749.	1.00	586.	1062.	1648.
			4	247.	50.	4.	153.	100.	103.	1.57	586.	453.	1040.
8	TAN	1	4	247.	50.	4.	153.	100.	103.	1.57	586.	453.	1040.
			5	134.	50.	279.	567.	100.	675.	1.00	586.	1213.	1800.
9	TAN	1	5	156.	9.	439.	1721.	80.	100.	1.00	586.	2362.	2948.
			6	43.	9.	156.	828.	80.	209.	1.57	586.	1848.	2434.
10	TAN	1	6	43.	9.	156.	828.	80.	209.	1.00	586.	1173.	1760.
			8	38.	9.	145.	303.	80.	512.	1.00	586.	822.	1408.
11	TAN	1	8	38.	9.	145.	303.	80.	512.	1.57	586.	1294.	1881.
			17	15.	9.	87.	767.	80.	618.	1.57	586.	2131.	2717.
12	TAN	1	17	15.	9.	72.	767.	0.	618.	1.57	586.	2124.	2710.
			9	8.	9.	14.	939.	0.	632.	1.57	586.	2438.	3024.
13	TAN	1	17	0.	0.	15.	80.	0.	0.	1.57	586.	173.	760.
			18	0.	5.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	8.	9.	14.	939.	0.	632.	1.57	586.	2438.	3024.
			10	12.	9.	5.	992.	0.	577.	1.57	586.	2472.	3059.
15	TAN	1	10	12.	9.	5.	992.	0.	577.	1.57	586.	2472.	3059.
			19	35.	9.	53.	898.	0.	484.	1.57	586.	2197.	2784.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	35.	9.	53.	898.	0.	484.	1.57	586.	2197.	2784.
			11	58.	9.	111.	572.	0.	298.	1.57	586.	1389.	1975.
17	TAN	1	11	58.	9.	111.	572.	0.	298.	1.00	586.	882.	1468.
			12	61.	9.	118.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	29.	718.	58.	1155.	763.	173.	1.00	0.	627.	627.
			7	47.	763.	58.	534.	763.	925.	1.00	0.	590.	590.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	2472.	14	3059.
2	18	627.	18	627.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	16.	37.	1.	6.	55.	268.
3	290.	34.	-51.	350.	1498.	-200.
7	47.	-763.	-58.	534.	-763.	-925.
12	61.	118.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	16.	37.	1.	6.	54.	266.	1.57	586.	586.	1172.
			13	21.	25.	1.	2.	54.	122.	1.57	586.	289.	875.
2	TAN	1	13	21.	25.	1.	2.	54.	122.	1.57	586.	289.	875.
			14	25.	13.	1.	10.	54.	59.	1.57	586.	175.	761.
3	BEND	1	14	1.	25.	13.	59.	10.	54.	1.57	586.	175.	761.
			2	7.	26.	8.	31.	6.	92.	1.57	586.	209.	795.
4	BEND	1	2	7.	26.	8.	31.	6.	92.	1.57	586.	209.	795.
			15	9.	27.	1.	15.	4.	98.	1.57	586.	214.	800.
5	TAN	1	15	27.	1.	9.	4.	98.	15.	1.57	586.	214.	800.
			16	34.	1.	8.	11.	98.	326.	1.00	586.	466.	1053.
6	TAN	1	16	34.	1.	8.	11.	98.	326.	1.57	586.	734.	1321.
			3	41.	1.	25.	175.	98.	744.	1.00	586.	1055.	1641.
7	TAN	1	3	247.	47.	14.	175.	98.	744.	1.00	586.	1055.	1641.
			4	245.	47.	9.	135.	98.	102.	1.57	586.	421.	1008.
8	TAN	1	4	245.	47.	9.	135.	98.	102.	1.57	586.	421.	1008.
			5	132.	47.	274.	533.	98.	667.	1.00	586.	1176.	1762.
9	TAN	1	5	156.	8.	427.	1623.	35.	97.	1.00	586.	2226.	2812.
			6	43.	8.	145.	766.	35.	206.	1.57	586.	1710.	2297.
10	TAN	1	6	43.	8.	145.	766.	35.	206.	1.00	586.	1086.	1672.
			8	38.	8.	133.	276.	35.	510.	1.00	586.	795.	1381.
11	TAN	1	8	38.	8.	133.	276.	35.	510.	1.57	586.	1252.	1838.
			17	15.	8.	75.	693.	35.	616.	1.57	586.	1999.	2586.
12	TAN	1	17	15.	8.	75.	693.	0.	616.	1.57	586.	1998.	2584.
			9	8.	8.	17.	877.	0.	630.	1.57	586.	2327.	2914.
13	TAN	1	17	0.	0.	0.	35.	0.	0.	1.57	586.	75.	661.
			18	0.	5.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	8.	8.	17.	877.	0.	630.	1.57	586.	2327.	2914.
			10	12.	8.	9.	949.	0.	575.	1.57	586.	2391.	2978.
15	TAN	1	10	12.	8.	9.	949.	0.	575.	1.57	586.	2391.	2978.
			19	35.	8.	49.	868.	0.	483.	1.57	586.	2140.	2727.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	35.	8.	49.	868.	0.	483.	1.57	586.	2140.	2727.
			11	58.	8.	107.	555.	0.	297.	1.57	586.	1357.	1943.
17	TAN	1	11	58.	8.	107.	555.	0.	297.	1.00	586.	862.	1448.
			12	61.	8.	115.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	27.	701.	55.	1091.	759.	130.	1.00	0.	600.	600.
			7	45.	745.	55.	504.	759.	910.	1.00	0.	579.	579.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	2391.	14	2978.
2	18	600.	18	600.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	16.	37.	1.	6.	54.	266.
3	288.	39.	-48.	349.	1489.	-196.
7	45.	-745.	-55.	504.	-759.	-910.
12	61.	115.	-8.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	37.	7.	28.	1.	4.	1.57	586.	60.	647.
			13	0.	25.	3.	11.	1.	0.	1.57	586.	24.	610.
2	TAN	1	13	0.	25.	3.	11.	1.	0.	1.57	586.	24.	610.
			14	0.	13.	4.	12.	1.	3.	1.57	586.	27.	613.
3	BEND	1	14	4.	0.	13.	3.	12.	1.	1.57	586.	27.	613.
			2	10.	0.	11.	2.	8.	3.	1.57	586.	19.	605.
4	BEND	1	2	10.	0.	11.	2.	8.	3.	1.57	586.	19.	605.
			15	9.	0.	6.	1.	8.	4.	1.57	586.	18.	605.
5	TAN	1	15	0.	6.	9.	8.	4.	1.	1.57	586.	18.	605.
			16	0.	13.	8.	12.	4.	4.	1.00	586.	18.	605.
6	TAN	1	16	0.	13.	8.	12.	4.	4.	1.57	586.	29.	615.
			3	0.	19.	25.	176.	4.	9.	1.00	586.	241.	828.
7	TAN	1	3	4.	288.	10.	176.	4.	9.	1.00	586.	241.	828.
			4	4.	286.	4.	158.	4.	3.	1.57	586.	340.	926.
8	TAN	1	4	4.	286.	4.	158.	4.	3.	1.57	586.	340.	926.
			5	4.	173.	280.	573.	4.	15.	1.00	586.	785.	1371.
9	TAN	1	5	1.	125.	439.	1723.	80.	7.	1.00	586.	2360.	2946.
			6	1.	12.	157.	829.	80.	8.	1.57	586.	1795.	2382.
10	TAN	1	6	1.	12.	157.	829.	80.	8.	1.00	586.	1140.	1726.
			8	1.	10.	145.	304.	80.	9.	1.00	586.	431.	1017.
11	TAN	1	8	1.	10.	145.	304.	80.	9.	1.57	586.	678.	1265.
			17	1.	33.	87.	768.	80.	10.	1.57	586.	1665.	2251.
12	TAN	1	17	1.	33.	72.	768.	0.	11.	1.57	586.	1656.	2242.
			9	1.	56.	14.	939.	0.	9.	1.57	586.	2025.	2611.
13	TAN	1	17	0.	0.	15.	80.	0.	14.	1.57	586.	176.	762.
			18	5.	0.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	1.	56.	14.	939.	0.	9.	1.57	586.	2025.	2611.
			10	1.	59.	6.	992.	0.	7.	1.57	586.	2139.	2725.
15	TAN	1	10	1.	59.	6.	992.	0.	7.	1.57	586.	2139.	2725.
			19	1.	83.	53.	898.	0.	5.	1.57	586.	1935.	2522.

[illegible]

[illegible] WITH NUCL[illegible]

[illegible]	LOAD STRESS	COMBINED STRESS
[illegible]	1535.	[illegible]
[illegible]	1232.	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	0.	[illegible]
[illegible]	[illegible]	[illegible]

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	1.	83.	53.	898.	0.	5.	1.57	586.	1935.	2522.
			11	1.	106.	111.	572.	0.	3.	1.57	586.	1232.	1819.
17	TAN	1	11	1.	106.	111.	572.	0.	3.	1.00	586.	782.	1369.
			12	1.	109.	118.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	4.	719.	65.	1163.	7.	77.	1.00	0.	524.	524.
			7	4.	763.	69.	605.	7.	27.	1.00	0.	272.	272.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	9	2360.	9	2946.
2	18	524.	18	524.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	37.	7.	28.	1.	4.
3	4.	35.	-308.	352.	19.	-8.
7	4.	-763.	-69.	605.	-7.	-27.
12	1.	118.	-109.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	37.	7.	28.	1.	2.	1.57	586.	60.	646.
			13	0.	25.	3.	11.	1.	0.	1.57	586.	24.	610.
2	TAN	1	13	0.	25.	3.	11.	1.	0.	1.57	586.	24.	610.
			14	0.	13.	4.	12.	1.	1.	1.57	586.	26.	612.
3	BEND	1	14	4.	0.	13.	1.	12.	1.	1.57	586.	26.	612.
			2	10.	0.	11.	1.	8.	1.	1.57	586.	18.	604.
4	BEND	1	2	10.	0.	11.	1.	8.	1.	1.57	586.	18.	604.
			15	9.	0.	6.	0.	8.	2.	1.57	586.	17.	603.
5	TAN	1	15	0.	6.	9.	8.	2.	0.	1.57	586.	17.	603.
			16	0.	13.	8.	12.	2.	2.	1.00	586.	17.	604.
6	TAN	1	16	0.	13.	8.	12.	2.	2.	1.57	586.	27.	613.
			3	0.	19.	25.	176.	2.	4.	1.00	586.	241.	827.
7	TAN	1	3	2.	285.	15.	176.	2.	4.	1.00	586.	241.	827.
			4	2.	283.	10.	139.	2.	2.	1.57	586.	300.	887.
8	TAN	1	4	2.	283.	10.	139.	2.	2.	1.57	586.	300.	887.
			5	2.	170.	275.	540.	2.	7.	1.00	586.	738.	1325.
9	TAN	1	5	0.	125.	427.	1625.	35.	4.	1.00	586.	2224.	2810.
			6	0.	12.	145.	767.	35.	5.	1.57	586.	1655.	2241.
10	TAN	1	6	0.	12.	145.	767.	35.	5.	1.00	586.	1051.	1637.
			8	0.	9.	133.	277.	35.	7.	1.00	586.	382.	969.
11	TAN	1	8	0.	9.	133.	277.	35.	7.	1.57	586.	602.	1188.
			17	0.	32.	75.	694.	35.	8.	1.57	586.	1497.	2083.
12	TAN	1	17	0.	32.	75.	694.	0.	9.	1.57	586.	1495.	2081.
			9	0.	55.	17.	878.	0.	8.	1.57	586.	1892.	2479.
13	TAN	1	17	0.	0.	0.	35.	0.	14.	1.57	586.	81.	667.
			18	5.	0.	12.	0.	0.	0.	1.57	586.	0.	586.
14	TAN	1	9	0.	55.	17.	878.	0.	8.	1.57	586.	1892.	2479.
			10	0.	59.	9.	949.	0.	5.	1.57	586.	2046.	2632.
15	TAN	1	10	0.	59.	9.	949.	0.	5.	1.57	586.	2046.	2632.
			19	0.	82.	49.	868.	0.	4.	1.57	586.	1871.	2458.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	19	0.	82.	49.	868.	0.	4.	1.57	586.	1871.	2458.
			11	0.	105.	107.	555.	0.	2.	1.57	586.	1197.	1783.
17	TAN	1	11	0.	105.	107.	555.	0.	2.	1.00	586.	760.	1346.
			12	0.	108.	115.	0.	0.	0.	1.00	586.	0.	586.
18	TAN	2	5	2.	702.	62.	1099.	3.	33.	1.00	0.	494.	494.
			7	2.	746.	66.	575.	3.	12.	1.00	0.	259.	259.

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START NC3600 NO PRODUCTION NO TAPE 31
2-CFG-104
GEOMETRY
2-CFG-104
CENTERS
1 16.2 0 -28.2
2 18.12 -1.8
3 43.2 7.2 -28.2
COORDINATE INCHES
1 0 0 0
2 0 0 -4 1
3 0 0 -2 2
5 0 0 -24 3
6 12 0 0 5
8 6 0 6 6
9 0 0 18 8
11 4.2 4.2 6 9
13 21 21 0 11
15 0 0 -15 13
16 0 0 -9 15
18 0 -6 -6 16
19 0 -18 0 18
20 0 0 3 19
BOUNDARY
1 ANCHOR
20 ANCHOR
15 XYSTOP
MATERIAL 2
70 28300000 .3 .0000091
1200 21500000 .3 .0000103
SIF
100 1.09 1.09 .75
101 2.1 2.1 1
BRANCH 1 2 30 1
RUN 1 2 2.38 .218 1.350 2
RUN 2 3 2.38 .218 1.35 3
RUN 3 0 2.38 .154 1.25 0
ELBOW 5 2.0 3.03 .32 1.50 0 101
RUN 0 6 2.38 .154 1.25
CURVE 6 8 2.38 .154 1.25 100 1
RUN 8 9 2.38 .154 1.25 0
CURVE 9 11 2.38 .154 1.25 100 2
RUN 11 0 2.38 .154 1.25
ELBOW 13 2.0 3.03 .32 1.50 0 101
RUN 0 15 2.38 .154 1.25 1
RUN 15 16 2.38 .154 1.25 0
CURVE 16 18 2.38 .154 1.25 100 3
RUN 18 0 2.38 .154 1.25 2
ELBOW 19 2.0 3.03 .32 1.50 0 101
RUN 0 20 2.38 .154 1.25 1
LOAD 1
THERMAL
THERMAL 1 1200 0 0 0 70
LOAD 2
DESIGN DEADWEIGHT
DEADWEIGHT -Z 1
END OF JOB
```

8009230352

```
     1    31     0     0                                                  PD1
2-CFG-104
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                            P 1
2-CFG-104                                                                 P 2
    19    20     2     0     3     4     6     1     3     1     0     0  P 3
     1     1     1     0     1     0     0                                P 4
     1    20     6     0     0     1     2                                P 5
     1    16.20000     0.0       -28.20000                               P 6
     2    18.12000    -1.80000     0.0                                   P 6
     3    43.20000     7.20000   -28.20000                               P 6
     1     0.0         0.0         0.0         0                        P 7
     2     0.0         0.0        -4.00000     0                        P 7
     3     0.0         0.0        -6.00000     0                        P 7
     5     0.58579     0.0       -29.41420     0                        P 7
     6    12.00000     0.0       -30.00000     0                        P 7
     8    18.00000     0.0       -24.00000     0                        P 7
     9    18.00000     0.0        -6.00000     0                        P 7
    11    22.20000     4.20000     0.0         0                        P 7
    13    42.78577    24.78577    -0.58579     0                        P 7
    15    43.20000    25.20000   -15.00000     0                        P 7
    16    43.20000    25.20000   -24.00000     0                        P 7
    18    43.20000    19.20000   -30.00000     0                        P 7
    19    43.20000     1.78578   -29.41420     0                        P 7
    20    43.20000     1.20000   -27.00000     0                        P 7
    21     0.0         0.0       -28.00000     0                        P 7
    22     2.00000     0.0       -30.00000     0                        P 7
    23    41.78578    23.78578     0.0         0                        P 7
    24    43.20000    25.20000    -2.00000     0                        P 7
    25    43.20000     3.20000   -30.00000     0                        P 7
    26    43.20000     1.20000   -28.00000     0                        P 7
    40     2.00000     0.0       -28.00000     0                        P 7
    41    16.20000     0.0       -28.20000     0                        P 7
    42    18.12000    -1.80000     0.0         0                        P 7
    43    41.78578    23.78578    -2.00000     0                        P 7
    44    43.20000     7.20000   -28.20000     0                        P 7
    45    43.20000     3.20000   -28.00000     0                        P 7
  1  3     2.3800      0.2180     2.0000     0.0        0.0        0.0   P11D
  2  3     2.3800      0.1540     2.0000     0.0        0.0        0.0   P11D
  3  4     3.0300      0.3200     2.0000     0.0        0.0        0.0   P11D
  4  4     2.3800      0.1540     2.0000     0.0        0.0        0.0   P11D
   100    1.089999    1.089999    0.750000                               P 12.1
   101    2.099999    2.099999    1.000000                               P 12.1
   1.350    1.250     1.500     1.250
  1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14
       0.12000E 04 0.21500E 08 0.30000E 00 0.10300E-04     0.0  0.0  0.0  P14A
    30.00000     0.0         0.0         0.0         0.0         0.0     P15
     0.0                                                                  P16A
     1                                                                    P16B
     1  1200.00000    0.0         0.0         0.0        70.00000        P16C
     1     0.0         0.0        -1.00000                               P17
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
 20  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01        P18
 15  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0             P18
   1   1   21001   1   1   1   1   1   1   0   0   0   0  0.0            P21
    1   2    1    0    0    1                                            P21B
   2   2   31001   1   1   1   1   1   1   1   0   0   0   0  0.0        P21
    1   3    1    0    0    1                                            P21B
   3   3  211001   1   1   1   2   2   1   1   0   0   0   0  0.0        P21
```

```
     1     0     1     0     0     1                                                    P21B
     4    21     5    40     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
     5     5    22    40     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
     6    22    61002     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     0     1     0     0     1                                                    P21B
     7     6     8    41     1     2     1     4     4     1     1     0     0     0     0   0.0   P21
     1   100     1     0     0     1                                                    P21B
     8     8    91001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     0     1     0     0     1                                                    P21B
     9     9    11    42     1     2     1     4     4     1     1     0     0     0     0   0.0   P21
     1   100     1     0     0     1                                                    P21B
    10    11   231001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     0     1     0     0     1                                                    P21B
    11    23    13    43     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
    12    13    24    43     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
    13    24   151001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     1     1     0     0     1                                                    P21B
    14    15   161001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     0     1     0     0     1                                                    P21B
    15    16    18    44     1     2     1     4     4     1     1     0     0     0     0   0.0   P21
     1   100     1     0     0     1                                                    P21B
    16    18   251001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     2     1     0     0     1                                                    P21B
    17    25    19    45     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
    18    19    26    45     1     2     1     3     3     1     1     0     0     0     0   0.0   P21
     1   101     1     0     0     1                                                    P21B
    19    26   201001     1     1     1     2     2     1     1     0     0     0     0   0.0   P21
     1     1     1     0     0     1                                                    P21B
     0                                                                                   P22
    0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0    P32
    2                                                                                    P33
    1 0.0     2 1.000   3 0.0     4 0.0     5 0.0     6 0.0     7 0.0     8 0.0          P34
     1
999999                                                                                   P41
THERMAL                                                                                  P41
DESIGN DEADWEIGHT                                                                        P41
     0                                                                                   P68
     0                                                                                   PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS     0.13 ** LAST STEP "ZERO" TIME IS     0.0  ** DELTA TIME IS     0.13 *
* ELAPSED SECONDS                              1.2                                  0.0                          1.2 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

2-CFG-104
2-CFG-104

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	19
TOTAL NUMBER OF STRUCTURAL JOINTS	20
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	6
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	1
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	2
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	3
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	3
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	4
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	1
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	20
TOTAL FICTIOUS JOINTS READ IN	6
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

ORIGIN OF AUXILIARY COORDINATE SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	16.199997	0.0	-28.199997
2	18.119995	-1.799999	0.0
3	43.199997	7.200000	-28.199997

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	0.0	-4.000000
3	0.0	0.0	-6.000000
5	0.585790	0.0	-29.414200
6	12.000000	0.0	-30.000000
8	18.000000	0.0	-24.000000
9	18.000000	0.0	-6.000000
11	22.199997	4.200000	0.0
13	42.785767	24.785767	-0.585790
15	43.199997	25.199997	-15.000000
16	43.199997	25.199997	-24.000000
18	43.199997	19.199997	-30.000000
19	43.199997	1.785780	-29.414200
20	43.199997	1.200000	-27.000000
21	0.0	0.0	-28.000000
22	2.000000	0.0	-30.000000
23	41.785767	23.785767	0.0
24	43.199997	25.199997	-2.000000
25	43.199997	3.200000	-30.000000
26	43.199997	1.200000	-28.000000
40	2.000000	0.0	-28.000000
41	16.199997	0.0	-28.199997
42	18.119995	-1.799999	0.0
43	41.785767	23.785767	-2.000000
44	43.199997	7.200000	-28.199997
45	43.199997	3.200000	-28.000000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	2.380	0.218	.1481E 01	.8739E 00	.1748E 01	.8739E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
2	S	2.380	0.154	.1077E 01	.6702E 00	.1340E 01	.6702E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
3	C	3.030	0.320	.2724E 01	.2536E 01	.2536E 01	.5072E 01	2.0	2.0	1.51	0.0	0.0	1.51	-1.51	0.0	0.0	-1.51
4	C	2.380	0.154	.1077E 01	.6702E 00	.6702E 00	.1340E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	0.0
1-A	1200.00	21500000.00	0.300000	0.000010300	0.0

PRESSURE DATA

TYPE	PRESSURE
1	30.00

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1	1	1200.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	0.0	-1.000000

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	20	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	15	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.26 ** LAST STEP "BEGP" TIME IS    0.13 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                             2.8                                 1.2                        1.6 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   20


 BAND-WIDTH =    12  BY D.O.F.          BAND-WIDTH =     2  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.42 ** LAST STEP "DA3D" TIME IS    0.26 ** DELTA TIME IS    0.16 *
* ELAPSED SECONDS                             5.6                                 2.8                        2.8 *
```

2-CFG-104


```
                    THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

                              LOAD NO.     GRAV. CODE     LOAD FACTOR

                                  2            1             1.0000

* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.42 ** LAST STEP "JCSO" TIME IS    0.42 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                             5.8                                 5.6                      0.1 *

    CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

    MAXIMUM VALUE ( 0.78444E 08) OCCURS AT THE  29TH DOF
    MINIMUM VALUE ( 0.68396E 05) OCCURS AT THE  91TH DOF
    RATIO OF MAX/MIN= 0.11469E 04

* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    2.01 ** LAST STEP "INPT" TIME IS    0.42 ** DELTA TIME IS    1.59 *
* ELAPSED SECONDS                            13.2                                 5.8                      7.5 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.91 ** LAST STEP "EQ3D" TIME IS    2.01 ** DELTA TIME IS    0.90 *
* ELAPSED SECONDS                            20.7                                13.2                      7.5 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	2	1001	1	1	1	1	2	1	1	1	4.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	2	3	1001	1	1	1	1	3	1	1	1	2.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
3	3	21	1001	1	1	1	1	0	1	1	2	22.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
4	21	5	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	1.000000	0.0	0.0
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
5	5	22	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.707109	0.0	0.707104
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707104	0.0	0.707109
6	22	6	1002	1	1	1	1	0	1	1	2	10.00000	1.25000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	6	8	41	1	2	1	1	100	1	1	4	2.38058	1.25000	RAD=	4.5695	0.919145	0.0	0.393920
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	0.393920	0.0	-0.919145
8	8	9	1001	1	1	1	1	0	1	1	2	18.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
9	9	11	42	1	2	1	1	100	1	1	4	1.30502	1.25000	RAD=	6.2653	0.019152	-0.287295	0.957651
														FLX=	1.0000	-0.813095	0.552905	0.182133
														ECC=	0.0	-0.581816	-0.782149	-0.223009
10	11	23	1001	1	1	1	1	0	1	1	2	27.69846	1.25000			0.707107	-0.707107	0.0
																-0.707107	-0.707107	0.0
																0.0	0.0	-1.000000
11	23	13	43	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.0	0.0	-1.000000
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.707107	-0.707107	0.0
12	13	24	43	1	2	1	1	101	1	1	3	0.78538	1.50000	RAD=	2.0000	-0.500001	-0.500001	-0.707106
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.499999	-0.499999	0.707108
13	24	15	1001	1	1	1	1	1	1	1	2	13.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	15	16	1001	1	1	1	1	0	1	1	2	9.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 1.00000 0.0 -1.000000 0.0
15	16	18	44	1	2	1	1	100	1	1	4	0.91459	1.25000	RAD=	18.4835	0.0 -0.973841-0.22722
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 -0.227229 0.97384
16	18	25	1001	1	1	1	1	2	1	1	2	16.00000	1.25000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.00000
17	25	19	45	1	2	1	1	-101	1	1	3	0.78541	1.50000	RAD=	2.0000	0.0 0.0 1.00000
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 1.000000 0.0
18	19	26	45	1	2	1	1	101	1	1	3	0.78539	1.50000	RAD=	2.0000	0.0 0.707112 0.7071
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 0.707102-0.7071
19	26	20	1001	1	1	1	1	1	1	1	2	1.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 -1.00000 0.0 1.000000 0.0

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  10 AND EQUALS 0.27698E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  19 AND EQUALS 0.10000E 01 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  12 AND EQUALS 0.39222E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  10 AND EQUALS 0.77453E 04

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    3.04 ** LAST STEP "SELT" TIME IS    2.91 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                            22.8                                20.7                          2.1 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	0.0	0.0	-0.10102950E 06	0.0	0.0	0.0
5	-0.29676506E 06	0.0	-0.29676138E 06	0.0	-0.10156250E 01	0.0
6	0.22945281E 06	0.0	-0.40041090E 05	0.0	-0.10573988E 06	0.0
8	0.40041008E 05	0.0	-0.22945263E 06	0.0	0.10574013E 06	0.0
9	-0.66528125E 05	-0.62753043E 05	0.16299319E 06	-0.97238125E 05	0.66122000E 05	0.21781273E 05
11	-0.12403281E 06	-0.12780788E 06	0.10650050E 06	0.97238250E 05	-0.66122063E 05	-0.21781297E 05
13	0.20984044E 06	0.20984044E 06	0.29676850E 06	-0.14363098E 01	0.14363098E 01	0.0
16	0.0	0.32715980E 05	-0.12853488E 06	0.18256500E 06	0.0	0.0
18	0.0	0.23677788E 06	-0.14095888E 06	-0.18257681E 06	0.0	0.0
19	0.0	-0.29676281E 06	-0.29676625E 06	-0.26210938E 01	0.0	0.0
21	-0.20984506E 06	0.0	0.23711563E 06	0.0	0.55510676E 05	0.0
22	0.23711625E 06	0.0	-0.20984781E 06	0.0	-0.55509984E 05	0.0
23	-0.16766594E 06	-0.16766594E 06	0.20984506E 06	0.39251973E 05	-0.39251973E 05	0.0
24	0.14838631E 06	0.14838631E 06	-0.23711975E 06	-0.39250836E 05	0.39250836E 05	0.0
25	0.0	0.23711375E 06	-0.20984644E 06	0.55511523E 05	0.0	0.0
26	0.0	-0.20984456E 06	0.23711888E 06	-0.55509227E 05	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	-0.40499992E 01	0.0	0.0	0.0
3	0.0	0.0	-0.15099985E 02	0.0	0.0	0.0
5	0.44438350E 00	0.0	-0.23561792E 01	0.0	0.96368134E-01	0.0
6	-0.74721694E 00	0.0	-0.15432408E 02	0.0	-0.13305851E 02	0.0
8	0.74721730E 00	0.0	-0.15665042E 02	0.0	-0.52460871E 01	0.0
9	0.75449657E 00	0.49825346E 00	-0.14504508E 02	-0.26890392E 01	0.22618914E 01	-0.69812781E 00
11	-0.75449681E 00	-0.49825627E 00	-0.24277496E 02	-0.56507645E 02	0.54855026E 02	-0.71440935E-01
13	0.31423014E 00	0.31423014E 00	-0.23561802E 01	0.68147838E-01	-0.68147838E-01	0.0
15	0.0	0.0	-0.13750003E 02	0.0	0.0	0.0
16	0.0	0.44469470E 00	-0.18596481E 02	-0.15274315E 01	0.0	0.0
18	0.0	-0.44469404E 00	-0.18159470E 02	0.18172760E 02	0.0	0.0
19	0.0	0.44439542E 00	-0.23562031E 01	-0.96382618E-01	0.0	0.0
21	-0.28707743E-01	0.0	-0.15150312E 02	0.0	0.68146408E-01	0.0
22	-0.41567588E 00	0.0	-0.72058859E 01	0.0	0.10181981E 02	0.0
23	-0.29393172E 00	-0.29393172E 00	-0.18267441E 02	0.56343979E 02	-0.56343979E 02	0.0
24	-0.20299084E-01	-0.20299084E-01	-0.95252523E 01	0.48186854E-01	-0.48186854E-01	0.0
25	0.0	-0.41568714E 00	-0.10955929E 02	-0.26432205E 02	0.0	0.0
26	0.0	-0.28709721E-01	-0.20252638E 01	-0.68143785E-01	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    3.94 ** LAST STEP "EDIT" TIME IS    3.04 ** DELTA TIME IS    0.90 *
* ELAPSED SECONDS                            58.2                                22.8                          35.4 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    3.97 ** LAST STEP "SLVR" TIME IS    3.94 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            59.2                                58.2                           1.1 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.002689487	-0.001282514	-0.046559315	-0.000498218	0.001130284	-0.000679276
3	-0.005534802	-0.002541136	-0.069838941	-0.000649856	0.001549285	-0.001018913
5	-0.035879072	0.000945492	-0.341840029	0.002950941	-0.001025172	-0.005992487
6	0.097393274	-0.070142388	-0.308198690	0.008776449	-0.006577026	-0.006292969
8	0.118290722	-0.162338972	-0.178528249	0.013014063	-0.011024449	-0.004700419
9	-0.110015392	-0.426420510	0.030952893	0.015047383	-0.012422431	0.000235833
11	-0.135216475	-0.468257070	0.190401435	0.014238384	-0.009948283	0.002029103
13	0.029000562	-0.148941219	0.515787601	0.010115232	0.001157215	0.004107445
15	0.0	0.0	0.351669490	0.010390304	0.002278659	0.003358351
16	-0.015660550	0.098060369	0.246908247	0.010959674	0.001293161	0.002858030
18	-0.019867588	0.210328639	0.030693706	0.007254250	0.000363886	0.001859485
19	-0.000217540	0.007529069	-0.027826417	0.000537786	0.000031150	0.000257376
20	0.0	0.0	0.0	0.0	0.0	0.0
21	-0.043940134	0.000447237	-0.325922072	0.002767331	-0.000825336	-0.005890336
22	-0.018798981	-0.005864721	-0.347068846	0.003177396	-0.001239723	-0.006072432
23	0.022158347	-0.170627296	0.513563097	0.010167874	0.001004839	0.004127394
24	0.030330345	-0.128191411	0.502991319	0.010065004	0.001287679	0.004081033
25	-0.000654597	0.024324764	-0.033762526	0.000712385	0.000034349	0.000316531
26	-0.000028901	0.000112732	-0.011637840	0.000372056	0.000027321	0.000185051

2-CFG-104

LOAD NUMBER 1 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	458.	27.	-305.	2951.	2454.	6225.	1.00	82.	9958.	10040.
			2	-458.	-27.	305.	-1730.	-2454.	-4394.	2.10	82.	15218.	15300.
2	TAN	1	2	458.	27.	-305.	1730.	2454.	4394.	2.10	82.	15218.	15300.
			3	-458.	-27.	305.	-1119.	-2454.	-3479.	2.10	82.	12588.	12670.
3	TAN	1	3	458.	27.	-305.	1119.	2454.	3479.	1.00	116.	7816.	7932.
			21	-458.	-27.	305.	5596.	-2454.	6590.	1.00	116.	15956.	16072.
4	BEND	1	21	458.	305.	27.	-5596.	6590.	2454.	2.10	71.	11275.	11346.
			5	-342.	-305.	305.	2653.	-7252.	-5871.	2.10	71.	12171.	12242.
5	BEND	1	5	342.	305.	-305.	-2653.	7252.	5871.	2.10	71.	12171.	12242.
			22	-27.	-305.	458.	-1844.	-7558.	-6206.	2.10	71.	12486.	12557.
6	TAN	1	22	305.	-458.	27.	7558.	6206.	1844.	1.00	116.	17670.	17786.
			6	-305.	458.	-27.	-7824.	-6206.	1208.	1.00	116.	17861.	17977.
7	BEND	1	6	431.	-305.	156.	-6181.	-7824.	-1334.	1.09	116.	19468.	19584.
			8	205.	305.	410.	-4517.	5238.	-2824.	1.09	116.	14458.	14574.
8	TAN	1	8	458.	-27.	305.	-4375.	3040.	5238.	1.00	116.	13265.	13381.
			9	-458.	27.	-305.	-1119.	-3040.	3000.	1.00	116.	7838.	7954.
9	BEND	1	9	-53.	-198.	-511.	-2028.	-3122.	2373.	1.09	116.	8544.	8660.
			11	507.	198.	83.	-2957.	5806.	-1663.	1.09	116.	13013.	13129.
10	TAN	1	11	108.	-539.	-27.	5894.	1948.	2584.	1.00	116.	11939.	12055.
			23	-108.	539.	27.	-5159.	-1948.	401.	1.00	116.	9817.	9933.
11	BEND	1	23	-27.	108.	-539.	-401.	5159.	1948.	2.10	71.	6937.	7008.
			13	400.	-108.	363.	-941.	-4806.	-1724.	2.10	71.	6513.	6584.
12	BEND	1	13	-400.	108.	-363.	941.	4806.	1724.	2.10	71.	6513.	6584.
			24	539.	-108.	-27.	-1732.	-4027.	-616.	2.10	71.	5554.	5625.
13	TAN	1	24	458.	26.	-305.	1623.	616.	4073.	2.10	116.	16507.	16623.
			15	-458.	-26.	305.	2344.	-616.	1876.	1.00	116.	5441.	5557.
14	TAN	1	15	-66.	26.	318.	-2344.	616.	-1876.	1.00	116.	5441.	5557.
			16	66.	-26.	-318.	-521.	-616.	1280.	1.00	116.	2687.	2803.
15	BEND	1	16	304.	-66.	98.	-1387.	521.	309.	1.09	116.	2929.	3044.
			18	-263.	66.	181.	-368.	-5680.	-811.	1.09	116.	11126.	11242.

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LOAD NUMBER 1 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	-66.	-318.	27.	5680.	228.	860.	1.00	116.	10207.	10323.
			25	66.	318.	-27.	-6104.	-228.	-1919.	2.10	116.	23872.	23988.
17	BEND	1	25	27.	-66.	-318.	1919.	6104.	228.	2.10	71.	8032.	8103.
			19	206.	66.	244.	-1612.	-5955.	1234.	2.10	71.	7893.	7964.
18	BEND	1	19	-206.	-66.	-244.	1612.	5955.	-1234.	2.10	71.	7893.	7964.
			26	318.	66.	27.	-361.	-5520.	2051.	2.10	71.	7402.	7473.
19	TAN	1	26	-66.	-27.	-318.	5520.	-2051.	361.	2.10	116.	21999.	22115.
			20	66.	27.	318.	-5202.	2051.	-427.	1.00	116.	9958.	10073.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	-0.135216475	-0.468257070	0.190401435
2	11	-0.135216475	-0.468257070	0.190401435
3	13	0.029000562	-0.148941219	0.515787601

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	23872.	16	23988.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	458.	305.	27.	2951.	-6225.	2454.
15	-524.	-623.	0.	-0.	0.	0.
20	66.	318.	-27.	-5202.	-427.	-2051.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** DESIGN DEADWEIGHT

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000287671	0.000024715	-0.000012386	0.000013654	0.000140724	0.000001414
3	-0.000639765	0.000058732	-0.000018324	0.000021365	0.000208966	0.000002121
5	-0.016627315	0.002386624	-0.000726891	0.000186833	0.001079670	0.000012081
6	-0.017267607	0.002695797	-0.013848934	0.000319629	0.001136778	0.000028939
8	-0.010661706	0.000947112	-0.020065233	0.000433037	0.000959414	0.000069926
9	0.002649890	-0.008077506	-0.020083591	0.000558086	0.000547516	0.000159099
11	0.004674379	-0.010841135	-0.019868143	0.000605086	0.000386027	0.000182240
13	0.000569377	-0.006433070	-0.009941578	0.000544996	0.000013469	0.000189917
15	0.0	0.0	-0.009695791	0.000328604	0.000040952	0.000143114
16	-0.000327940	0.002217951	-0.009672832	0.000134384	0.000032196	0.000111433
18	-0.000493401	-0.000320763	-0.008165997	-0.000490383	0.000015621	0.000052579
19	-0.000004504	-0.000216911	-0.000080496	-0.000131663	0.000000922	0.000005428
20	0.0	0.0	0.0	0.0	0.0	0.0
21	-0.015107285	0.002118850	-0.000093787	0.000182651	0.001066113	0.000012260
22	-0.017264739	0.002513553	-0.002270231	0.000191873	0.001091112	0.000011953
23	0.000766925	-0.006944936	-0.010481216	0.000551987	0.000012491	0.000190665
24	0.000470424	-0.005588531	-0.009721234	0.000537821	0.000015461	0.000188876
25	-0.000013757	-0.000305861	-0.000305897	-0.000165366	0.000001164	0.000006707
26	-0.000000410	-0.000051982	-0.000004801	-0.000094029	0.000000729	0.000003904

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LOAD NUMBER 2 LOAD TITLE: DESIGN DEADWEIGHT

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	7.	101.	-3.	-59.	-5.	674.	1.00	82.	922.	1004.
			2	-7.	-96.	3.	70.	5.	-648.	1.57	82.	1397.	1479.
2	TAN	1	2	7.	96.	-3.	-70.	-5.	648.	1.57	82.	1397.	1479.
			3	-7.	-93.	3.	75.	5.	-634.	1.57	82.	1370.	1452.
3	TAN	1	3	7.	93.	-3.	-75.	-5.	634.	1.00	116.	1134.	1250.
			21	-7.	-66.	3.	136.	5.	-488.	1.00	116.	900.	1016.
4	BEND	1	21	7.	3.	66.	-136.	-488.	-5.	1.57	71.	477.	548.
			5	-49.	-3.	-40.	104.	441.	-94.	1.57	71.	436.	507.
5	BEND	1	5	49.	3.	40.	-104.	-441.	94.	1.57	71.	436.	507.
			22	-61.	-3.	7.	11.	350.	-142.	1.57	71.	355.	426.
6	TAN	1	22	3.	-7.	61.	-350.	142.	-11.	1.00	116.	670.	786.
			6	-3.	7.	-48.	-197.	-142.	38.	1.00	116.	437.	552.
7	BEND	1	6	25.	-3.	-42.	-145.	-197.	-21.	1.00	116.	437.	552.
			8	35.	3.	-8.	-100.	390.	-93.	1.00	116.	733.	849.
8	TAN	1	8	7.	-35.	3.	-125.	55.	390.	1.00	116.	733.	849.
			9	-7.	12.	-3.	75.	-55.	-270.	1.00	116.	507.	623.
9	BEND	1	9	11.	-2.	-9.	-132.	200.	-155.	1.00	116.	507.	623.
			11	6.	3.	3.	168.	-210.	-76.	1.00	116.	496.	611.
10	TAN	1	11	3.	-7.	-2.	-248.	-121.	42.	1.00	116.	496.	611.
			23	-3.	7.	-32.	-172.	121.	34.	1.00	116.	378.	494.
11	BEND	1	23	32.	3.	-7.	-34.	172.	-121.	1.57	71.	200.	271.
			13	-20.	-3.	29.	113.	-216.	60.	1.57	71.	236.	307.
12	BEND	1	13	20.	3.	-29.	-113.	216.	-60.	1.57	71.	236.	307.
			24	7.	-3.	37.	126.	-227.	-39.	1.57	71.	247.	318.
13	TAN	1	24	7.	-37.	-3.	250.	39.	71.	1.57	116.	735.	851.
			15	-7.	53.	3.	-214.	-39.	15.	1.00	116.	387.	503.
14	TAN	1	15	-0.	-53.	22.	214.	39.	-15.	1.00	116.	387.	503.
			16	0.	65.	-22.	-408.	-39.	13.	1.00	116.	728.	844.
15	BEND	1	16	36.	-0.	-58.	-22.	408.	35.	1.00	116.	728.	844.
			18	38.	0.	80.	-17.	-447.	-37.	1.00	116.	797.	913.

LOAD NUMBER 2 LOAD TITLE: DESIGN DEADWEIGHT

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	-0.	-22.	-86.	447.	10.	40.	1.00	116.	797.	913.
			25	0.	22.	106.	1086.	-10.	-43.	1.57	116.	3039.	3155.
17	BEND	1	25	-106.	-0.	-22.	43.	-1086.	10.	1.57	71.	1023.	1094.
			19	92.	0.	-61.	-38.	1250.	23.	1.57	71.	1177.	1248.
18	BEND	1	19	-92.	-0.	61.	38.	-1250.	-23.	1.57	71.	1177.	1248.
			26	22.	0.	-111.	-10.	1344.	43.	1.57	71.	1265.	1337.
19	TAN	1	26	-0.	111.	-22.	-1344.	-43.	10.	1.57	116.	3761.	3877.
			20	0.	-112.	22.	1366.	43.	-11.	1.00	116.	2426.	2542.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: DESIGN DEADWEIGHT

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	6	-0.017267607	0.002695797	-0.013848934
2	11	0.004674379	-0.010841135	-0.019868143
3	9	0.002649890	-0.008077506	-0.020083591

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	19	3761.	19	3877.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	7.	3.	101.	-59.	-674.	-5.
15	-7.	-24.	-0.	0.	0.	0.
20	0.	22.	112.	1366.	-11.	-43.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS    4.50 ** LAST STEP "UPDT" TIME IS    3.97 ** DELTA TIME IS    0.53 *
* ELAPSED SECONDS                            69.2                                59.2                      9.9 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    4.54 ** LAST STEP "ST3D" TIME IS    4.50 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            69.4                                69.2                      0.2 *
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START NC3600 NO PRODUCTION NO TAPE 31
2-CFG-104
GEOMETRY
2-CFG-104
CENTERS
1 16.2 0 -28.2
2 18.12 -1.8
3 43.2 7.2 -28.2
COORDINATE INCHES
1 0 0 0
2 0 0 -4 1
3 0 0 -2 2
5 0 0 -24 3
6 12 0 0 5
8 6 0 6 6
9 0 0 18 8
11 4.2 4.2 6 9
13 21 21 0 11
15 0 0 -15 13
16 0 0 -9 15
18 0 -6 -6 16
19 0 -18 0 18
20 0 0 3 19
BOUNDARY
1 ANCHOR
20 ANCHOR
15 XYSTOP
MATERIAL 2
70 28300000 .3 .0000091
1200 21500000 .3 .0000103
SIF
100 1.09 1.09 .75
101 2.1 2.1 1
BRANCH 1 2 30 1
RUN 1 2 2.38 .218 1.350 2
RUN 2 3 2.38 .218 1.35 3
RUN 3 0 2.38 .154 1.25 3
ELBOW 5 2.0 3.03 .32 1.50 0 101
RUN 0 6 2.38 .154 1.25
CURVE 6 8 2.38 .154 1.25 100 1
RUN 8 9 2.38 .154 1.25 0
CURVE 9 11 2.38 .154 1.25 100 2
RUN 11 0 2.38 .154 1.25
ELBOW 13 2.0 3.03 .32 1.50 0 101
RUN 0 15 2.38 .154 1.25 1
RUN 15 16 2.38 .154 1.25 0
CURVE 16 18 2.38 .154 1.25 100 3
RUN 18 0 2.38 .154 1.25 2
ELBOW 19 2.0 3.03 .32 1.50 0 101
RUN 0 20 2.38 .154 1.25 1
FREQUENCY 9 9 1 1
2-CFG-104
3DOF 5 6 9 13 18
SPECTRUM NO ACCELERATION NC 9 386 .1
OBE + SRV  HORIZONTAL
S-CURVE 1 1 1.62 .25 .54 .143 .4 .125 .52 .083 .52
S-CURVE 1 .076 .4 .063 1.04 .056 1.04 .05 1.5 .037 1.5
S-CURVE 1 .033 .9 .029 .48 .025 .4 .021 .36 .019 .36
S-CURVE 1 .016 .33 .011 .33
```

```
S-CURVE 2 1 .8 .25 2 .2 .8 .167 .92 .125 3.1
S-CURVE 2 .091 3.1 .083 1.5 .071 .8 .056 .6 .05 1.2
S-CURVE 2 .038 1.2 .036 1.1 .034 .6 .031 .52 .025 .52
S-CURVE 2 .024 .5 .011 .5
FACTOR 1 1 0
FACTOR 2 1 0
FACTOR 3 0 1
DIRECTION 1 0 0
X-HORIZONTAL OBE+SRV
DIRECTION 0 1 0
Y-HORIZONTAL OBE+SRV
DIRECTION 0 0 1
Z-VERTICAL OBE+SRV
RMS 1 2 3
END OF JOB
```

```
******************* SUMMARY OF RESPONSE SPECTRUM ANALYSIS *******************

        OBE + SRV  HORIZONTAL

        PRINT INERTIA FORCES (YES=0, NO=1)     1

        TYPE OF RESPONSE SPECTRA CURVE (ACCELERATION=0, VELOCITY=1)     0

        INCLUDE LEFT-OUT-MASS (YES=0, NO=2)     2

        NUMBER OF MODE SHAPES TO BE USED     9

        VALUE OF GRAVITATIONAL ACCELERATION 0.38600E 03

        VALUE OF CLOSE MODE CRITERION 0.10000E 00
```

```
     8    31     0     0                                                    PD1
2-CFG-104
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0     0     1                                              P 1
2-CFG-104                                                                   P 2
    19    20    15     0     3     4     6     1     3     0     0     0    P 3
     0     1     0     0     1     0     0                                  P 4
     1    20     6     0     0     1     2                                  P 5
     1    16.20000     0.0       -28.20000                                  P 6
     2    18.12000    -1.80000     0.0                                      P 6
     3    43.20000     7.20000   -28.20000                                  P 6
     1     0.0         0.0         0.0         0                          P 7
     2     0.0         0.0        -4.00000     0                          P 7
     3     0.0         0.0        -6.00000     0                          P 7
     5     0.58579     0.0       -29.41420     0                          P 7
     6    12.00000     0.0       -30.00000     0                          P 7
     8    18.00000     0.0       -24.00000     0                          P 7
     9    18.00000     0.0        -6.00000     0                          P 7
    11    22.20000     4.20000     0.0         0                          P 7
    13    42.78577    24.78577    -0.58579     0                          P 7
    15    43.20000    25.20000   -15.00000     0                          P 7
    16    43.20000    25.20000   -24.00000     0                          P 7
    18    43.20000    19.20000   -30.00000     0                          P 7
    19    43.20000     1.78578   -29.41420     0                          P 7
    20    43.20000     1.20000   -27.00000     0                          P 7
    21     0.0         0.0       -28.00000     0                          P 7
    22     2.00000     0.0       -30.00000     0                          P 7
    23    41.78578    23.78578     0.0         0                          P 7
    24    43.20000    25.20000    -2.00000     0                          P 7
    25    43.20000     3.20000   -30.00000     0                          P 7
    26    43.20000     1.20000   -28.00000     0                          P 7
    40     2.00000     0.0       -28.00000     0                          P 7
    41    16.20000     0.0       -28.20000     0                          P 7
    42    18.12000    -1.80000     0.0         0                          P 7
    43    41.78578    23.78578    -2.00000     0                          P 7
    44    43.20000     7.20000   -28.20000     0                          P 7
    45    43.20000     3.20000   -28.00000     0                          P 7
  1  3     2.3800      0.2180      2.0000      0.0         0.0         0.0  P11D
  2  3     2.3800      0.1540      2.0000      0.0         0.0         0.0  P11D
  3  4     3.0300      0.3200      2.0000      0.0         0.0         0.0  P11D
  4  4     2.3800      0.1540      2.0000      0.0         0.0         0.0  P11D
   100    1.089999    1.089999     0.750000                                P 12.1
   101    2.099999    2.099999     1.000000                                P 12.1
   1.350    1.250     1.500     1.250
  1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14
       0.12000E 04 0.21500E 08 0.30000E 00 0.10300E-04     0.0  0.0  0.0  P14A
    30.00000     0.0         0.0         0.0         0.0         0.0      P15
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01         P18
 20  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01         P18
 15  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
   1   1   21001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1   2    1   0   0   1                                                  P21B
   2   2   31001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1   3    1   0   0   1                                                  P21B
   3   3  211001   1   1   1   2   2   1   1   0   0   0   0  0.0          P21
   1   3    1   0   0   1                                                  P21B
   4  21   5  40   1   2   1   3   3   1   1   0   0   0   0  0.0          P21
   1  101   1   0   0   1                                                  P21B
   5   5  22  40   1   2   1   3   3   1   1   0   0   0   0  0.0          P21
```

```
    1  101     1     0     0     1                                                  P21B
    6   22    61002   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    0     1     0     0     1                                                  P21B
    7    6    8  41   1     2     1     4     4     1     1     0     0     0     0  0.0   P21
    1  100     1     0     0     1                                                  P21B
    8    8    91001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    0     1     0     0     1                                                  P21B
    9    9   11  42   1     2     1     4     4     1     1     0     0     0     0  0.0   P21
    1  100     1     0     0     1                                                  P21B
   10   11   231001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    0     1     0     0     1                                                  P21B
   11   23   13  43   1     2     1     3     3     1     1     0     0     0     0  0.0   P21
    1  101     1     0     0     1                                                  P21B
   12   13   24  43   1     2     1     3     3     1     1     0     0     0     0  0.0   P21
    1  101     1     0     0     1                                                  P21B
   13   24   151001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    1     1     0     0     1                                                  P21B
   14   15   161001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    0     1     0     0     1                                                  P21B
   15   16   18  44   1     2     1     4     4     1     1     0     0     0     0  0.0   P21
    1  100     1     0     0     1                                                  P21B
   16   18   251001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    2     1     0     0     1                                                  P21B
   17   25   19  45   1     2     1     3     3     1     1     0     0     0     0  0.0   P21
    1  101     1     0     0     1                                                  P21B
   18   19   26  45   1     2     1     3     3     1     1     0     0     0     0  0.0   P21
    1  101     1     0     0     1                                                  P21B
   19   26   201001   1     1     1     2     2     1     1     0     0     0     0  0.0   P21
    1    1     1     0     0     1                                                  P21B
    5      0 0.10000E 01 0.10000E 01                                                P25
    5    6    9  13  18    0    0    0    0    0    0    0    0    0    0    0    0  P26
    0      0                                                                        P28
    0      0                                                                        P30
    0                                                                               P68
2-CFG-104                                                                           D1
    1     -1     9     0     1     0                                                D2
    4      0.00100     9                                                            D3
OBE + SRV  HORIZONTAL                                                               D1
    2     -1     9     1     1     2                                                D2
    9 0.10000E 00 0.0         0.0         0.0         0.0                           D4
    2      2     0 0.38600E 03                                                      D5
   17                                                                               D6
 0.10000E 01 0.16200E 01 0.25000E 00 0.54000E 00 0.14300E 00 0.40000E 00            D7
 0.12500E 00 0.52000E 00 0.83000E-01 0.52000E 00 0.76000E-01 0.40000E 00            D7
 0.63000E-01 0.10400E 01 0.56000E-01 0.10400E 01 0.50000E-01 0.15000E 01            D7
 0.37000E-01 0.15000E 01 0.33000E-01 0.90000E 00 0.29000E-01 0.48000E 00            D7
 0.25000E-01 0.40000E 00 0.21000E-01 0.36000E 00 0.19000E-01 0.36000E 00            D7
 0.16000E-01 0.33000E 00 0.11000E-01 0.33000E 00
   17                                                                               D6
 0.10000E 01 0.80000E 00 0.25000E 00 0.20000E 01 0.20000E 00 0.80000E 00            D7
 0.16700E 00 0.92000E 00 0.12500E 00 0.31000E 01 0.91000E-01 0.31000E 01            D7
 0.83000E-01 0.15000E 01 0.71000E-01 0.80000E 00 0.56000E-01 0.60000E 00            D7
 0.50000E-01 0.12000E 01 0.38000E-01 0.12000E 01 0.36000E-01 0.11000E 01            D7
 0.34000E-01 0.60000E 00 0.31000E-01 0.52000E 00 0.25000E-01 0.52000E 00            D7
 0.24000E-01 0.50000E 00 0.11000E-01 0.50000E 00
    3                                                                               D9
    1.00000     0.0         0.0         0.0         0.0         0.0                D9A
    1.00000     0.0         0.0         0.0         0.0         0.0                D9A
    0.0         1.00000     0.0         0.0         0.0         0.0                D9A
X-HORIZONTAL OBE+SRV                                                                D10
```

```
     1.00000      0.0          0.0                                                    D11
Y-HORIZONTAL OBE+SRV                                                                   D10
     0.0          1.00000      0.0                                                    D11
Z-VERTICAL OBE+SRV                                                                     D10
     0.0          0.0          1.00000                                                D11
     8      1                                                                          P1
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.                                   P2
    19     20      3      3      0      1      0                                       P43
     0                                                                                 P68
     0                                                                                 PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.13 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                             0.7                                 0.0                       0.7 *
```

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	19
TOTAL NUMBER OF STRUCTURAL JOINTS	20
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	6
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	15
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	3
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	3
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	4
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	20
TOTAL FICTIOUS JOINTS READ IN	6
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

ORIGIN OF AUXILIARY COORDINATE SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	16.199997	0.0	-28.199997
2	18.119995	-1.799999	0.0
3	43.199997	7.200000	-28.199997

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	0.0	-4.000000
3	0.0	0.0	-6.000000
5	0.585790	0.0	-29.414200
6	12.000000	0.0	-30.000000
8	18.000000	0.0	-24.000000
9	18.000000	0.0	-6.000000
11	22.199997	4.200000	0.0
13	42.785767	24.785767	-0.585790
15	43.199997	25.199997	-15.000000
16	43.199997	25.199997	-24.000000
18	43.199997	19.199997	-30.000000
19	43.199997	1.785780	-29.414200
20	43.199997	1.200000	-27.000000
21	0.0	0.0	-28.000000
22	2.000000	0.0	-30.000000
23	41.785767	23.785767	0.0
24	43.199997	25.199997	-2.000000
25	43.199997	3.200000	-30.000000
26	43.199997	1.200000	-28.000000
40	2.000000	0.0	-28.000000
41	16.199997	0.0	-28.199997
42	18.119995	-1.799999	0.0
43	41.785767	23.785767	-2.000000
44	43.199997	7.200000	-28.199997
45	43.199997	3.200000	-28.000000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	2.380	0.218	.1481E 01	.8739E 00	.1748E 01	.8739E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
2	S	2.380	0.154	.1077E 01	.6702E 00	.1340E 01	.6702E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
3	C	3.030	0.320	.2724E 01	.2536E 01	.2536E 01	.5072E 01	2.0	2.0	1.51	0.0	0.0	1.51	-1.51	0.0	0.0	-1.51
4	C	2.380	0.154	.1077E 01	.6702E 00	.6702E 00	.1340E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	0.0
1-A	1200.00	21500000.00	0.300000	0.000010300	0.0

PRESSURE DATA

TYPE	PRESSURE
1	30.00

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	20	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	15	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.22 ** LAST STEP "BEGP" TIME IS    0.13 ** DELTA TIME IS    0.09 *
* ELAPSED SECONDS                             1.4                                 0.7                        0.7 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   20


 BAND-WIDTH =    12  BY D.O.F.          BAND-WIDTH =     2  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.35 ** LAST STEP "DA3D" TIME IS    0.22 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                             3.3                                 1.4                        1.9 *
```

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 15

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	5	1	2	5	2	3	5	3	4	6	1	5	6	2
6	6	3	7	9	1	8	9	2	9	9	3	10	13	1
11	13	2	12	13	3	13	18	1	14	18	2	15	18	3

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.39 ** LAST STEP "JCSO" TIME IS    0.35 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                             3.7                                 3.3                        0.3 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.10325E 09) OCCURS AT THE 29TH DOF
MINIMUM VALUE (0.90028E 05) OCCURS AT THE 91TH DOF
RATIO OF MAX/MIN= 0.11469E 04

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    1.83 ** LAST STEP "INPT" TIME IS    0.39 ** DELTA TIME IS    1.44 *
* ELAPSED SECONDS                             8.5                                 3.7                        4.8 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.66 ** LAST STEP "EQ3D" TIME IS    1.83 ** DELTA TIME IS    0.83 *
* ELAPSED SECONDS                            13.5                                 8.5                        5.0 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE.	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	2	1001	1	1	1	1	2	1	1	1	4.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	2	3	1001	1	1	1	1	3	1	1	1	2.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
3	3	21	1001	1	1	1	1	3	1	1	2	22.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
4	21	5	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	1.000000	0.0	0.0
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
5	5	22	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.707109	0.0	0.707104
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707104	0.0	0.707109
6	22	6	1002	1	1	1	1	0	1	1	2	10.00000	1.25000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	6	8	41	1	2	1	1	100	1	1	4	2.38058	1.25000	RAD=	4.5695	0.919145	0.0	0.393920
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	0.393920	0.0	-0.919145
8	8	9	1001	1	1	1	1	0	1	1	2	18.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
9	9	11	42	1	2	1	1	100	1	1	4	1.30502	1.25000	RAD=	6.2653	0.019152	-0.287295	0.957651
														FLX=	1.0000	-0.813095	0.552905	0.182133
														ECC=	0.0	-0.581816	-0.782149	-0.223009
10	11	23	1001	1	1	1	1	0	1	1	2	27.69846	1.25000			0.707107	-0.707107	0.0
																-0.707107	-0.707107	0.0
																0.0	0.0	-1.000000
11	23	13	43	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.0	0.0	-1.000000
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.707107	-0.707107	0.0
12	13	24	43	1	2	1	1	101	1	1	3	0.78538	1.50000	RAD=	2.0000	-0.500001	-0.500001	-0.707106
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.499999	-0.499999	0.707108
13	24	15	1001	1	1	1	1	1	1	1	2	13.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0

ELM NO.	*** END 1	JOINTS' END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	15	16	1001	1	1	1	1	0	1	1	2	9.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
15	16	18.	44	1	2	1	1	100	1	1	4	0.91459	1.25000	RAD=	18.4835	0.0 -0.973841-0.227229
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 -0.227229 0.973841
16	18	25	1001	1	1	1	1	2	1	1	2	16.00000	1.25000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
17	25	19	45	1	2	1	1	101	1	1	3	0.78541	1.50000	RAD=	2.0000	0.0 0.0 1.000000
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 1.000000 0.0
18	19	26	45	1	2	1	1	101	1	1	3	0.78539	1.50000	RAD=	2.0000	0.0 0.707112 0.707102
														FLX=	1.0000	1.000000 0.0 0.0
														ECC=	0.0	0.0 0.707102-0.707112
19	26	20	1001	1	1	1	1	1	1	1	2	1.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  10 AND EQUALS 0.27698E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  19 AND EQUALS 0.10000E 01 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  12 AND EQUALS 0.51628E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  10 AND EQUALS 0.10195E 05

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    2.79 ** LAST STEP "SELT" TIME IS    2.66 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                            14.6                                13.5                      1.1 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS    3.93 ** LAST STEP "EDIT" TIME IS    2.79 ** DELTA TIME IS    1.14 *
* ELAPSED SECONDS                            48.8                                14.6                     34.2 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    3.97 ** LAST STEP "SLVR" TIME IS    3.93 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            49.2                                48.8                      0.4 *
```

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
1	0.0	0.0	0.0	2	0.10481E-01	0.10481E-01	0.10481E-01	3	0.39079E-01	0.39079E-01	0.39079E-01
5	0.60978E-02	0.60978E-02	0.60978E-02	6	0.33770E-01	0.33770E-01	0.33770E-01	8	0.46710E-01	0.46710E-01	0.46710E-01
9	0.42340E-01	0.42340E-01	0.42340E-01	11	0.58027E-01	0.58027E-01	0.58027E-01	13	0.60978E-02	0.60978E-02	0.60978E-02
15	0.0	0.0	0.35585E-01	16	0.41901E-01	0.41901E-01	0.41901E-01	18	0.53223E-01	0.53223E-01	0.53223E-01
19	0.60978E-02	0.60978E-02	0.60978E-02	20	0.0	0.0	0.0	21	0.38634E-01	0.38634E-01	0.38634E-01
22	0.19224E-01	0.19224E-01	0.19224E-01	23	0.47851E-01	0.47851E-01	0.47851E-01	24	0.24076E-01	0.24076E-01	0.24076E-01
25	0.28929E-01	0.28929E-01	0.28929E-01	26	0.46664E-02	0.46664E-02	0.46664E-02				

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.19686E-07) OCCURS AT DOF 5
MINIMUM VALUE (0.14772E-11) OCCURS AT DOF 14
RATIO OF MAX/MIN = 0.13326E 05

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS    4.15 ** LAST STEP "UPDT" TIME IS    3.97 ** DELTA TIME IS    0.18 *
* ELAPSED SECONDS                            54.3                                49.2                          5.0 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.42750E-03) OCCURS AT DOF 5
MINIMUM VALUE(0.11370E-05) OCCURS AT DOF 3
RATIO OF CMAX/CMIN= 0.37600E 03

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS    4.33 ** LAST STEP "MASM" TIME IS    4.15 ** DELTA TIME IS    0.18 *
* ELAPSED SECONDS                            58.6                                54.3                          4.4 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    4.36 ** LAST STEP "INFM" TIME IS    4.33 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            58.8                                58.6                          0.1 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    4.38 ** LAST STEP "BEGP" TIME IS    4.36 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            58.9                                58.8                          0.1 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS    4.41 ** LAST STEP "SRTL" TIME IS    4.38 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            59.2                                58.9                          0.3 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS    4.41 ** LAST STEP "SQRT" TIME IS    4.41 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                            59.2                                59.2                          0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS    4.43 ** LAST STEP "INYG" TIME IS    4.41 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            59.3                                59.2                          0.1 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS    4.65 ** LAST STEP "TQAD" TIME IS    4.43 ** DELTA TIME IS    0.22 *
* ELAPSED SECONDS                            60.5                                59.3                          1.2 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS    4.69 ** LAST STEP "JAMX" TIME IS    4.65 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            60.9                                60.5                          0.4 *

* CPU SECONDS ** THIS STEP "TRPL" TIME IS    4.74 ** LAST STEP "RENM" TIME IS    4.69 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                            61.0                                60.9                          0.1 *
```

2-CFG-104

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99995E 00
AVERAGE  DIAGONAL TERM........ 0.99999E 00
LARGEST OFF-DIAGONAL TERM..... 0.23737E-04
AVERAGE OFF-DIAGONAL TERM..... 0.13602E-05
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS    4.74 ** LAST STEP "TRPL" TIME IS    4.74 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                            61.0                                61.0                      0.0 *
```

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N								
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114	0.10960E-04	0.17317E-04	0.19459E-04	-0.25669E-04	-0.15218E-05	-0.43827E-04	-0.14816E-04	0.35576E-04	0.72843E-04
113	0.19722E-05	0.29552E-05	0.27455E-05	-0.41385E-05	-0.16677E-06	-0.87867E-05	-0.35551E-05	0.10569E-04	0.24040E-04
112	-0.16352E-04	0.81389E-06	0.11777E-04	0.75514E-04	0.13700E-05	-0.35499E-04	-0.89153E-05	-0.37272E-06	-0.34043E-05
111	-0.69011E-06	0.51750E-07	0.52624E-06	0.35079E-05	0.22623E-07	-0.16928E-05	-0.44123E-06	-0.26175E-07	-0.16816E-06
110	-0.50574E-05	0.17832E-05	0.60262E-05	0.46427E-04	-0.51551E-05	-0.24077E-04	-0.83878E-05	-0.38329E-05	-0.18080E-05
109	-0.16788E-05	-0.28594E-05	-0.40042E-05	0.63006E-05	0.59231E-06	0.11818E-04	0.45813E-05	-0.11102E-04	-0.24910E-04
108	0.15232E-04	0.24070E-04	0.27056E-04	-0.35661E-04	-0.21140E-05	-0.60815E-04	-0.20532E-04	0.49233E-04	0.10070E-03
107	0.23882E-05	0.34951E-05	0.29243E-05	-0.44764E-05	-0.11026E-06	-0.10084E-04	-0.42017E-05	0.13161E-04	0.30238E-04
106	-0.23534E-04	0.93046E-06	0.16575E-04	0.10505E-03	0.28457E-05	-0.49026E-04	-0.11946E-04	0.44185E-07	-0.47787E-05
105	-0.13301E-04	0.85747E-06	0.98883E-05	0.64492E-04	0.46073E-06	-0.30642E-04	-0.79726E-05	-0.71193E-06	-0.28984E-05
104	-0.31910E-04	0.37977E-05	0.26423E-04	0.18070E-03	-0.53525E-05	-0.88207E-04	-0.25521E-04	-0.60655E-05	-0.77453E-05
103	-0.13340E-04	-0.21161E-04	-0.24158E-04	0.34152E-04	0.22447E-05	0.62378E-04	0.22811E-04	-0.57833E-04	-0.12514E-03
102	0.18750E-04	0.29596E-04	0.33141E-04	-0.43564E-04	-0.25505E-05	-0.74213E-04	-0.24997E-04	0.60001E-04	0.12252E-03
101	0.28336E-05	0.40159E-05	0.28380E-05	-0.43662E-05	0.26394E-07	-0.10717E-04	-0.46159E-05	0.15525E-04	0.35977E-04
100	-0.30643E-04	0.82905E-06	0.20984E-04	0.13097E-03	0.50760E-05	-0.60527E-04	-0.14147E-04	0.96060E-06	-0.60209E-05
99	-0.53353E-04	0.24724E-05	0.38150E-04	0.24387E-03	0.52536E-05	-0.11445E-03	-0.28420E-04	-0.64035E-06	-0.11083E-04
98	-0.47067E-04	0.46558E-05	0.37502E-04	0.25229E-03	-0.44424E-05	-0.12203E-03	-0.34167E-04	-0.66424E-05	-0.10962E-04
97	-0.39451E-04	-0.62384E-04	-0.70371E-04	0.95820E-04	0.59250E-05	0.16920E-03	0.59521E-04	-0.14739E-03	-0.31089E-03
96	0.12025E-03	0.17613E-03	0.14580E-03	-0.15554E-03	0.32490E-05	-0.25575E-03	-0.72201E-04	0.21746E-03	0.39776E-03
95	0.33004E-04	0.43837E-04	0.18724E-04	-0.24163E-04	0.45298E-05	-0.77171E-04	-0.34640E-04	0.14424E-03	0.33409E-03
94	-0.15242E-03	-0.16037E-04	0.72460E-04	0.33287E-03	0.91552E-04	-0.11705E-03	0.40010E-05	0.45666E-04	-0.15981E-04

93	-0.19538E-02	-0.86506E-04	0.11181E-02	0.61704E-02	0.79257E-03	-0.26044E-02	-0.38829E-03	0.35584E-03	-0.29332E-03
92	-0.37712E-04	0.87842E-05	0.37915E-04	0.27830E-03	-0.21961E-04	-0.14101E-03	-0.45956E-04	-0.17581E-04	-0.11280E-04
91	-0.12335E-02	-0.18718E-02	-0.18136E-02	0.21898E-02	0.60606E-04	0.36882E-02	0.11691E-02	-0.30560E-02	-0.59996E-02
90	0.21379E-03	0.28458E-03	0.12067E-03	-0.40818E-04	0.43809E-04	-0.76238E-04	0.10812E-04	0.17976E-03	0.25701E-03
89	0.78902E-04	0.11958E-03	0.11506E-03	-0.13268E-03	-0.28964E-05	-0.21205E-03	-0.62005E-04	0.15606E-03	0.28461E-03
88	0.41952E-04	0.42015E-05	-0.20166E-04	-0.90257E-04	-0.24488E-04	0.29972E-04	-0.22822E-05	-0.12087E-04	0.36213E-05
87	-0.25231E-02	-0.16799E-03	0.13542E-02	0.70619E-02	0.12027E-02	-0.28358E-02	-0.29163E-03	0.56698E-03	-0.33554E-03
86	0.12668E-02	0.26313E-03	-0.39912E-03	-0.82340E-03	-0.11820E-02	-0.11457E-03	-0.46186E-03	-0.63722E-03	0.63180E-04
85	-0.86002E-03	-0.13621E-02	-0.15344E-02	0.17726E-02	0.89742E-04	0.25233E-02	0.64966E-03	-0.11309E-02	-0.15140E-02
84	0.26314E-03	0.34055E-03	0.10142E-03	0.28268E-04	0.66648E-04	0.28836E-04	0.57295E-04	0.16161E-03	0.19030E-03
83	0.11469E-03	0.18876E-03	0.23860E-03	-0.27587E-03	-0.19011E-04	-0.36185E-03	-0.83263E-04	0.81041E-04	0.76629E-05
82	0.25825E-03	0.62683E-04	-0.67430E-04	-0.40976E-04	-0.27039E-03	-0.91634E-04	-0.12056E-03	-0.14802E-03	0.96885E-05
81	-0.25286E-02	-0.16742E-03	0.13585E-02	0.70846E-02	0.12020E-02	-0.28437E-02	-0.29268E-03	0.56597E-03	-0.33536E-03
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78	0.33441E-03	0.42140E-03	0.73614E-04	0.12806E-03	0.99638E-04	0.18061E-03	0.12444E-03	0.13539E-03	0.93936E-04
77	0.15192E-03	0.25449E-03	0.34786E-03	-0.34923E-03	-0.15251E-03	-0.37605E-03	-0.59160E-04	-0.89914E-04	-0.18590E-03
76	0.53949E-03	0.10465E-03	-0.53375E-04	0.66113E-04	-0.34450E-03	-0.30316E-03	-0.19158E-03	-0.17687E-03	-0.48339E-04
75	-0.25367E-02	-0.16660E-03	0.13647E-02	0.71172E-02	0.12010E-02	-0.28552E-02	-0.29420E-03	0.56452E-03	-0.33510E-03
74	-0.54143E-02	-0.12666E-02	0.99603E-03	-0.47157E-03	0.49971E-02	0.27531E-02	0.24527E-02	0.27025E-02	0.78958E-04
73	0.17907E-02	0.30163E-02	0.40954E-02	-0.45331E-02	-0.83652E-03	-0.54379E-02	-0.10788E-02	-0.18745E-05	-0.20534E-02
72	0.33608E-03	0.42383E-03	0.72542E-04	0.13094E-03	0.10065E-03	0.18523E-03	0.12624E-03	0.13469E-03	0.91087E-04
71	0.15245E-03	0.25462E-03	0.34764E-03	-0.34561E-03	-0.16046E-03	-0.36800E-03	-0.56280E-04	-0.96048E-04	-0.17993E-03
70	0.54541E-03	0.10346E-03	-0.49937E-04	0.65573E-04	-0.33348E-03	-0.30765E-03	-0.18815E-03	-0.16984E-03	-0.52293E-04
69	-0.26997E-02	-0.10418E-03	0.15313E-02	0.69478E-02	0.12774E-02	-0.28837E-02	-0.23917E-03	0.59792E-03	-0.39117E-03
68	-0.63226E-02	-0.15906E-02	0.10410E-02	-0.61933E-03	0.54437E-02	0.31102E-02	0.26730E-02	0.28970E-02	0.11102E-03
67	0.21452E-02	0.35529E-02	0.46200E-02	-0.49729E-02	-0.10143E-02	-0.58944E-02	-0.11102E-02	-0.77247E-04	-0.22818E-02
66	0.33721E-03	0.42561E-03	0.71598E-04	0.13333E-03	0.10182E-03	0.18933E-03	0.12795E-03	0.13427E-03	0.89057E-04
65	0.15374E-03	0.25442E-03	0.34703E-03	-0.34158E-03	-0.16818E-03	-0.35890E-03	-0.52605E-04	-0.10151E-03	-0.17287E-03
64	0.55128E-03	0.10187E-03	-0.45616E-04	0.65392E-04	-0.32108E-03	-0.31142E-03	-0.18351E-03	-0.16264E-03	-0.55930E-04

63	-0.30965E-02	0.47735E-04	0.19278E-02	0.65390E-02	0.14377E-02	-0.29349E-02	-0.10760E-03	0.66073E-03	-0.51101E-03	
62	-0.69808E-02	-0.20766E-02	0.99837E-03	-0.79049E-03	0.55352E-02	0.31035E-02	0.26554E-02	0.28583E-02	0.53391E-04	
61	0.25713E-02	0.41274E-02	0.48962E-02	-0.50420E-02	-0.10087E-02	-0.59192E-02	-0.10150E-02	-0.17001E-05	-0.22954E-02	
60	0.31177E-03	0.32928E-03	0.68226E-04	0.16129E-03	0.18868E-03	0.20901E-03	0.23097E-03	-0.24597E-05	0.51772E-04	
59	0.44657E-03	0.21552E-03	0.17484E-03	-0.10975E-03	-0.24910E-03	-0.80857E-04	0.23379E-03	-0.99031E-05	0.44841E-06	
58	0.76850E-03	0.26459E-04	0.37946E-03	0.12153E-03	0.98313E-04	-0.18525E-03	0.12763E-03	-0.13914E-03	-0.56553E-05	
57	-0.11369E-01	0.35831E-02	0.46069E-02	0.63908E-03	-0.32312E-02	-0.84853E-04	0.20692E-02	-0.37568E-03	0.31040E-03	
56	-0.13740E-01	-0.10135E-01	-0.21100E-03	-0.41274E-02	0.26885E-02	-0.16380E-02	-0.96506E-03	0.11568E-02	-0.10577E-02	
55	0.93178E-02	0.12179E-01	0.61397E-02	-0.17135E-02	0.18592E-02	-0.11705E-02	0.26211E-02	0.16316E-02	-0.11699E-02	
54	0.26621E-03	0.22023E-03	0.92802E-04	0.12548E-03	0.22553E-03	0.13131E-03	0.26631E-03	-0.98062E-04	0.73872E-04	
53	0.57876E-03	0.19578E-03	0.10335E-03	-0.65696E-04	-0.12138E-03	-0.10585E-03	0.33079E-03	0.10545E-03	-0.39808E-04	
52	0.77706E-03	0.24880E-04	0.51117E-03	0.16073E-03	0.69259E-04	-0.44195E-04	0.19212E-03	-0.21838E-03	0.80768E-04	
51	-0.12125E-01	0.42463E-02	0.34686E-02	-0.15306E-03	-0.42060E-02	-0.91431E-04	0.25086E-02	0.51323E-03	0.64805E-04	
50	-0.10333E-01	-0.10972E-01	0.20251E-02	-0.38720E-02	0.24757E-02	-0.30123E-02	-0.97746E-03	0.31459E-03	-0.11155E-02	
49	0.74029E-02	0.11851E-01	0.56213E-02	-0.71294E-03	0.37912E-02	-0.98153E-04	0.19500E-02	0.11448E-02	-0.85898E-03	
48	0.11015E-03	-0.83652E-04	0.14247E-03	-0.17627E-05	0.29770E-03	-0.13339E-03	0.31760E-03	-0.34898E-03	0.13162E-03	
47	0.73136E-03	0.85654E-05	-0.69766E-04	-0.67043E-05	0.20035E-03	-0.46987E-04	0.82535E-04	0.79518E-04	-0.48016E-04	
46	0.69026E-03	-0.30828E-04	0.66669E-03	0.19778E-03	-0.60468E-04	0.17858E-03	0.17440E-03	-0.20438E-03	0.15060E-03	
45	-0.12121E-01	0.42421E-02	0.34654E-02	-0.15273E-03	-0.41800E-02	-0.72919E-04	0.24493E-02	0.48903E-03	0.73327E-04	
44	0.31832E-02	-0.10696E-01	0.12954E-01	-0.40051E-03	0.24232E-02	-0.13094E-02	0.27106E-02	-0.39987E-02	0.14080E-02	
43	-0.48707E-02	0.94703E-02	0.52227E-02	-0.14290E-03	0.30024E-02	0.17366E-02	-0.33212E-02	-0.14225E-02	0.31480E-03	
42	0.54037E-04	-0.21612E-03	0.20443E-03	-0.45440E-04	0.32032E-03	-0.22198E-03	0.38170E-03	-0.53127E-03	0.20643E-03	
41	0.70219E-03	-0.20247E-03	-0.18159E-03	0.10145E-04	0.26884E-03	0.89458E-05	-0.14973E-03	-0.27262E-04	-0.68896E-05	
40	0.55346E-03	-0.15360E-03	0.69817E-03	0.16304E-03	-0.11807E-03	0.21142E-03	0.71109E-04	-0.79524E-04	0.95990E-04	
39	-0.77205E-02	0.39545E-02	0.28475E-02	-0.15668E-03	-0.27049E-02	-0.18675E-03	0.23227E-02	0.71224E-03	-0.12431E-03	
38	0.62005E-02	-0.10662E-01	0.16234E-01	0.76306E-03	-0.53051E-04	0.96273E-03	0.13851E-02	-0.24244E-02	0.12741E-02	
37	-0.92066E-02	0.10281E-01	0.61243E-02	-0.18647E-03	0.14013E-02	0.17654E-02	-0.27859E-02	-0.14597E-02	0.44066E-03	
36	0.31825E-04	-0.24281E-03	0.21447E-03	-0.54294E-04	0.29170E-03	-0.22596E-03	0.36966E-03	-0.55123E-03	0.21887E-03	
35	0.58504E-03	-0.40906E-03	-0.26939E-03	0.12890E-04	0.14209E-03	-0.79455E-05	-0.12437E-03	-0.35891E-04	0.71542E-05	
34	0.37962E-03	-0.31196E-03	0.69284E-03	0.10201E-03	-0.16462E-03	0.19551E-03	-0.81181E-04	0.11279E-03	-0.11693E-04	

33	-0.11791E-02	0.84115E-03	0.55127E-03	-0.28143E-04	-0.31592E-03	-0.35598E-05	0.32031E-03	0.10748E-03	-0.27146E-04
32	0.57950E-02	-0.82130E-02	0.14030E-01	0.13046E-02	-0.32172E-02	0.33291E-02	-0.25496E-02	0.33198E-02	-0.99325E-03
31	-0.92077E-02	0.10271E-01	0.61204E-02	-0.18668E-03	0.13931E-02	0.17643E-02	-0.27822E-02	-0.14609E-02	0.44194E-03
30	0.31900E-04	-0.24014E-03	0.21255E-03	-0.53565E-04	0.28833E-03	-0.22333E-03	0.36574E-03	-0.54549E-03	0.21669E-03
29	0.57802E-03	-0.41636E-03	-0.27213E-03	0.12731E-04	0.13004E-03	-0.12306E-04	-0.11034E-03	-0.30275E-04	0.57438E-05
28	0.37277E-03	-0.31833E-03	0.69272E-03	0.99570E-04	-0.16623E-03	0.19475E-03	-0.86981E-04	0.12013E-03	-0.15860E-04
27	-0.35494E-03	0.25604E-03	0.16749E-03	-0.98320E-05	-0.11859E-03	-0.15059E-04	0.14438E-03	0.55913E-04	-0.16380E-04
26	0.55308E-02	-0.76833E-02	0.13320E-01	0.13229E-02	-0.35323E-02	0.35350E-02	-0.30231E-02	0.40325E-02	-0.12953E-02
25	-0.88673E-02	0.10027E-01	0.59609E-02	-0.17915E-03	0.14723E-02	0.17587E-02	-0.28522E-02	-0.14813E-02	0.44618E-03
24	0.31951E-04	-0.23634E-03	0.20965E-03	-0.52608E-04	0.28416E-03	-0.21996E-03	0.36072E-03	-0.53793E-03	0.21377E-03
23	0.57055E-03	0.42257E-03	-0.27430E-03	0.12524E-04	0.11749E-03	-0.17046E-04	-0.94777E-04	-0.23854E-04	0.40252E-05
22	0.36699E-03	-0.32312E-03	0.69203E-03	0.97566E-04	-0.16750E-03	0.19411E-03	-0.91770E-04	0.12630E-03	-0.19359E-04
21	-0.16985E-04	0.93216E-05	0.67642E-05	-0.23195E-05	-0.44065E-04	-0.22726E-04	0.80770E-04	0.38412E-04	-0.12969E-04
20	0.49892E-02	-0.70862E-02	0.12213E-01	0.12149E-02	-0.34629E-02	0.33893E-02	-0.31076E-02	0.41731E-02	-0.13953E-02
19	-0.80545E-02	0.94292E-02	0.55723E-02	-0.16123E-03	0.16450E-02	0.17370E-02	-0.29950E-02	-0.15187E-02	0.45293E-03
18	0.55270E-05	-0.40882E-04	0.36265E-04	-0.91001E-05	0.49155E-04	-0.38049E-04	0.62397E-04	-0.93051E-04	0.36978E-04
17	0.11090E-03	-0.18866E-03	-0.10560E-03	0.19552E-05	-0.78767E-04	-0.49332E-04	0.11484E-03	0.52427E-04	-0.14895E-04
16	0.65436E-04	-0.14045E-03	0.20967E-03	0.13967E-04	-0.66335E-04	0.57690E-04	-0.73566E-04	0.98056E-04	-0.38270E-04
15	-0.28115E-05	0.15430E-05	0.11197E-05	-0.38395E-06	-0.72940E-05	-0.37618E-05	0.13370E-04	0.63583E-05	-0.21467E-05
14	0.19733E-03	-0.46566E-03	0.67615E-03	0.40377E-04	-0.21859E-03	0.18571E-03	-0.25094E-03	0.33411E-03	-0.13312E-03
13	-0.33908E-03	0.62656E-03	0.34727E-03	-0.57549E-05	0.28824E-03	0.17231E-03	-0.41330E-03	-0.18692E-03	0.52858E-04
12	0.36847E-05	-0.27254E-04	0.24177E-04	-0.60667E-05	0.32770E-04	-0.25366E-04	0.41598E-04	-0.62034E-04	0.24652E-04
11	0.74632E-04	-0.13243E-03	-0.73746E-04	0.12913E-05	-0.58217E-04	-0.35559E-04	0.84114E-04	0.38207E-04	-0.10828E-04
10	0.43736E-04	-0.98500E-04	0.14496E-03	0.91441E-05	-0.46375E-04	0.39849E-04	-0.52366E-04	0.69758E-04	-0.27524E-04
9	-0.18743E-05	0.10287E-05	0.74645E-06	-0.25596E-06	-0.48627E-05	-0.25079E-05	0.89132E-05	0.42389E-05	-0.14311E-05
8	0.87968E-04	-0.21843E-03	0.31272E-03	0.17551E-04	-0.10222E-03	0.85810E-04	-0.11936E-03	0.15883E-03	-0.63901E-04
7	-0.15236E-03	0.29415E-03	0.16223E-03	-0.25291E-05	0.14155E-03	0.82876E-04	-0.20149E-03	-0.90750E-04	0.25608E-04
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MODE NUMBER 1 NAT. FREQUENCY 0.126130E 03 RAD/SEC ; 0.200743E 02 HERTZ PERIOD 0.498150E-01 SEC
NORMALIZING FACTOR 0.121254E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.731302679	5	2	2	0.456129849	5	3	3	-0.029272333
6	4	1	-0.759284019	6	5	2	0.511364102	6	6	3	-0.636719525
9	7	1	0.610528409	9	8	2	-0.852167547	9	9	3	-1.000000000
13	10	1	0.176916122	13	11	2	-0.521432102	13	12	3	-0.222648025
18	13	1	-0.101729035	18	14	2	-0.003110209	18	15	3	-0.161131859

MODE NUMBER 2 NAT. FREQUENCY 0.132707E 03 RAD/SEC ; 0.211209E 02 HERTZ PERIOD 0.473465E-01 SEC
NORMALIZING FACTOR 0.118511E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.846071124	5	2	2	-0.648317039	5	3	3	0.021604404
6	4	1	0.867491245	6	5	2	-0.899689257	6	6	3	0.333680212
9	7	1	1.000000000	9	8	2	-0.925792456	9	9	3	0.358307004
13	10	1	0.299792588	13	11	2	-0.134217560	13	12	3	-0.008790985
18	13	1	-0.157944739	18	14	2	0.000741216	18	15	3	-0.007299438

MODE NUMBER 3 NAT. FREQUENCY 0.156485E 03 RAD/SEC ; 0.249053E 02 HERTZ PERIOD 0.401520E-01 SEC
NORMALIZING FACTOR 0.162339E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.367191315	5	2	2	0.820502758	5	3	3	0.010317273
6	4	1	0.377254367	6	5	2	1.000000000	6	6	3	0.175406158
9	7	1	0.346267700	9	8	2	0.124746501	9	9	3	0.213663459
13	10	1	0.284587562	13	11	2	0.064122677	13	12	3	0.094326735
18	13	1	-0.111714661	18	14	2	0.002335543	18	15	3	0.068875015

MODE NUMBER 4 NAT. FREQUENCY 0.269597E 03 RAD/SEC ; 0.429076E 02 HERTZ PERIOD 0.233059E-01 SEC
NORMALIZING FACTOR 0.694779E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.025785033	5	2	2	0.190402389	5	3	3	-0.001415137
6	4	1	-0.026839469	6	5	2	0.109828055	6	6	3	-0.022550706
9	7	1	-0.102614462	9	8	2	-0.557306290	9	9	3	-0.022030775
13	10	1	-0.715757251	13	11	2	-0.089141250	13	12	3	1.000000000
18	13	1	0.315174103	18	14	2	0.040055189	18	15	3	0.888111353

MODE NUMBER 5 NAT. FREQUENCY 0.348431E 03 RAD/SEC ; 0.554545E 02 HERTZ PERIOD 0.180328E-01 SEC
NORMALIZING FACTOR 0.544371E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.270461679	5	2	2	-0.648870170	5	3	3	-0.021784712
6	4	1	0.257415831	6	5	2	-0.009745438	6	6	3	-0.496884704
9	7	1	0.696434081	9	8	2	0.454783738	9	9	3	-0.772641182
13	10	1	-0.186323404	13	11	2	1.000000000	13	12	3	0.234664917
18	13	1	0.011133131	18	14	2	-0.004034180	18	15	3	0.145593166

MODE NUMBER 6 NAT. FREQUENCY 0.356865E 03 RAD/SEC ; 0.567967E 02 HERTZ PERIOD 0.176066E-01 SEC
NORMALIZING FACTOR 0.589436E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.298370957	5	2	2	0.599718988	5	3	3	-0.002554708
6	4	1	0.299512625	6	5	2	0.163329899	6	6	3	-0.031682517
9	7	1	-0.016652487	9	8	2	-0.511050642	9	9	3	-0.015511356
13	10	1	-1.000000000	13	11	2	0.527655900	13	12	3	-0.489233434
18	13	1	0.625708163	18	14	2	-0.023922428	18	15	3	-0.441844165

MODE NUMBER 7 NAT. FREQUENCY 0.463454E 03 RAD/SEC ; 0.737609E 02 HERTZ PERIOD 0.135573E-01 SEC
NORMALIZING FACTOR 0.302312E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.943478584	5	2	2	-1.000000000	5	3	3	0.047757320
6	4	1	-0.921539962	6	5	2	0.458160937	6	6	3	0.768316627
9	7	1	0.645030856	9	8	2	-0.323327601	9	9	3	0.829812467
13	10	1	-0.367235541	13	11	2	0.884179115	13	12	3	-0.079113007
18	13	1	0.386734366	18	14	2	-0.015201464	18	15	3	-0.128441632

MODE NUMBER 8 NAT. FREQUENCY 0.510697E 03 RAD/SEC ; 0.812800E 02 HERTZ PERIOD 0.123031E-01 SEC
NORMALIZING FACTOR 0.403247E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.367337823	5	2	2	1.000000000	5	3	3	0.013865624
6	4	1	-0.361987412	6	5	2	-0.601215363	6	6	3	0.176625729
9	7	1	0.283884883	9	8	2	0.078016818	9	9	3	0.127273500
13	10	1	-0.019156795	13	11	2	0.718426228	13	12	3	0.148276627
18	13	1	-0.757855654	18	14	2	-0.004359823	18	15	3	0.088243604

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MODE NUMBER 9 NAT. FREQUENCY 0.583045E 03 RAD/SEC ; 0.927945E 02 HERTZ PERIOD 0.107765E-01 SEC
NORMALIZING FACTOR 0.599958E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.074368060	5	2	2	-0.215904891	5	3	3	-0.002730124
6	4	1	0.073448479	6	5	2	0.212371945	6	6	3	-0.020720132
9	7	1	-0.143173873	9	8	2	-0.185936034	9	9	3	0.010801993
13	10	1	-0.380320966	13	11	2	0.018505003	13	12	3	-0.065199256
18	13	1	-1.000000000	18	14	2	-0.001880060	18	15	3	-0.048889715

MODE NO.	FREQUENCY (RAD/SEC)
10	0.17284724E 04
11	0.23202356E 04
12	0.24282114E 04
13	0.37924756E 04
14	0.44268672E 04

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MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	-0.165074E-03	-0.983633E-03	-0.255265E-02
2	0.278159E-02	-0.253919E-02	0.717674E-03
3	0.162765E-02	0.214395E-02	0.984352E-03
4	-0.340648E-03	-0.378570E-03	0.142797E-02
5	0.500606E-03	0.512930E-03	-0.420001E-03
6	0.452581E-04	0.190677E-03	-0.608616E-03
7	-0.209381E-03	0.568679E-04	0.372043E-03
8	-0.291939E-03	0.267766E-03	0.162677E-03
9	-0.609435E-03	-0.797723E-04	-0.580877E-04
10	0.138850E-04	-0.926378E-05	-0.202620E-04
11	-0.120777E-04	0.974437E-05	0.468550E-04
12	0.305825E-05	0.972806E-04	0.128031E-04
13	-0.207508E-06	0.722957E-04	0.164864E-05
14	0.609103E-06	0.258143E-06	0.566983E-04

MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.433508E-03	(0.09%)	0.153924E-01	(3.03%)	0.103663E 00	(19.10%)	0.200743E 02
2	0.136261E 00	(26.95%)	0.113547E 00	(25.42%)	0.907065E-02	(20.77%)	0.211209E 02
3	0.648731E-01	(39.74%)	0.112558E 00	(47.61%)	0.237272E-01	(25.14%)	0.249053E 02
4	0.843413E-02	(41.40%)	0.104165E-01	(49.67%)	0.148206E 00	(52.45%)	0.429076E 02
5	0.304246E-01	(47.40%)	0.319410E-01	(55.96%)	0.214158E-01	(56.39%)	0.554545E 02
6	0.260854E-03	(47.45%)	0.463023E-02	(56.88%)	0.471730E-01	(65.08%)	0.567967E 02
7	0.941649E-02	(49.31%)	0.694620E-03	(57.01%)	0.297303E-01	(70.56%)	0.737609E 02
8	0.222285E-01	(53.69%)	0.186998E-01	(60.70%)	0.690205E-02	(71.83%)	0.812800E 02
9	0.126258E 00	(78.59%)	0.216326E-02	(61.13%)	0.114702E-02	(72.04%)	0.927945E 02
10	0.575993E-03	(78.70%)	0.256390E-03	(61.18%)	0.122656E-02	(72.27%)	0.275095E 03
11	0.785291E-03	(78.85%)	0.511177E-03	(61.28%)	0.118189E-01	(74.44%)	0.369277E 03
12	0.551465E-04	(78.86%)	0.557988E-01	(72.28%)	0.966502E-03	(74.62%)	0.386462E 03
13	0.619317E-06	(78.86%)	0.751744E-01	(87.10%)	0.390927E-04	(74.63%)	0.603591E 03
14	0.727069E-05	(78.87%)	0.130592E-05	(87.10%)	0.629990E-01	(86.24%)	0.704558E 03
SUM OF 14 MODES	0.400014E 00	(78.87%)	0.441784E 00	(87.10%)	0.468084E 00	(86.24%)	
TOTAL LUMPED MASS	0.507205E 00		0.507205E 00		0.542790E 00		

TOTAL NUMBER OF MEANINGFUL MODES = 14

ACCUM=ACCUMULATED PERCENT

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* CPU SECONDS ** THIS STEP "FRQM" TIME IS    5.25 ** LAST STEP "ORTH" TIME IS    4.74 ** DELTA TIME IS    0.51 *
* ELAPSED SECONDS                            66.1                                61.0                      5.1 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    5.27 ** LAST STEP "FRQM" TIME IS    5.25 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            66.3                                66.1                      0.1 *
```

***THERE ARE 2 GROUP OF CLOSELY SPACED MODES DETERMINED IN ACCORDANCE WITH CRITERIA = 10.00 PERCENT
BY GROUPING METHOD, SECTION 1.2.1, REG. GUIDE 1.92, REVISION 1, FEB., 1976 ***

GROUP	MODES	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.
1	2	(1* 126.130)	(2* 132.707)				
2	2	(5* 348.431)	(6* 356.865)				

SPECTRAL ACCEL(IN/SEC**2)

MODE	PERIOD	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	0.0498	0.57900E 03	0.57900E 03	0.46320E 03
2	0.0473	0.57900E 03	0.57900E 03	0.46320E 03
3	0.0402	0.57900E 03	0.57900E 03	0.46320E 03
4	0.0233	0.14799E 03	0.14799E 03	0.19300E 03
5	0.0180	0.13533E 03	0.13533E 03	0.19300E 03
6	0.0176	0.13370E 03	0.13370E 03	0.19300E 03
7	0.0136	0.12738E 03	0.12738E 03	0.19300E 03
8	0.0123	0.12738E 03	0.12738E 03	0.19300E 03
9	0.0108	0.12738E 03	0.12738E 03	0.19300E 03

LOAD NO. 1

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.10000E 01 IN DIRECTION 1
P(2)= 0.0 IN DIRECTION 2
P(3)= 0.0 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    5.84 ** LAST STEP "SRTL" TIME IS    5.27 ** DELTA TIME IS    0.57 *
* ELAPSED SECONDS                            95.6                                66.3                     29.3 *
```

LOAD NO. 2

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.0 IN DIRECTION 1
P(2)= 0.10000E 01 IN DIRECTION 2
P(3)= 0.0 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    6.37 ** LAST STEP "IFOR" TIME IS    5.84 ** DELTA TIME IS    0.53 *
* ELAPSED SECONDS                           124.9                                95.6                      29.3 *
```

LOAD NO. 3

```
*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
                 AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

                    P(1)= 0.0          IN DIRECTION 1
                    P(2)= 0.0          IN DIRECTION 2
                    P(3)= 0.10000E 01  IN DIRECTION 3

* CPU SECONDS ** THIS STEP "IFOR" TIME IS    6.92 ** LAST STEP "IFOR" TIME IS    6.37 ** DELTA TIME IS    0.55 *
* ELAPSED SECONDS                           150.3                               124.9                      25.4 *

* CPU SECONDS ** THIS STEP "ERQK" TIME IS    6.92 ** LAST STEP "IFOR" TIME IS    6.92 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           150.3                               150.3                       0.0 *

* CPU SECONDS ** THIS STEP "RESP" TIME IS    6.92 ** LAST STEP "ERQK" TIME IS    6.92 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           150.3                               150.3                       0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    6.96 ** LAST STEP "RESP" TIME IS    6.92 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           150.5                               150.3                       0.2 *
```

SUPERPOSITION OF DYNAMIC LOADS

NUMBER OF ELEMENT ---------- 19
NUMBER OF JOINT ---------- 20
NUMBER OF INERTIA LOADS ----- 9

```
* CPU SECONDS ** THIS STEP "RESO" TIME IS    7.75 ** LAST STEP "BEGP" TIME IS    6.96 ** DELTA TIME IS    0.79 *
* ELAPSED SECONDS                           171.1                               150.5                      20.6 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS    7.80 ** LAST STEP "RESO" TIME IS    7.75 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           171.5                               171.1                       0.4 *
```

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** X-HORIZONTAL OBE+SRV

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

	DISPLACEMENT (INCHES)			ROTATION (RADIANS)			ACCELERATION (PERCENT G)		
JOINT	X1	X2	X3	R1	R2	R3	A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0005132	0.0004721	0.0000021	0.0002150	0.0002316	0.0000494	2.480	2.573	0.024
3	0.0010944	0.0010116	0.0000031	0.0003083	0.0003303	0.0000741	5.282	5.524	0.036
5	0.0179012	0.0180047	0.0004735	0.0008420	0.0007696	0.0004351	85.315	100.251	2.287
7	0.0183685	0.0234450	0.0075992	0.0007018	0.0004255	0.0004190	87.517	126.745	37.009
8	0.0165081	0.0217640	0.0086401	0.0006441	0.0001056	0.0002510	78.583	112.306	42.614
9	0.0204928	0.0187575	0.0086451	0.0005200	0.0004011	0.0003297	96.676	86.185	42.672
10	0.0217214	0.0180406	0.0081184	0.0004048	0.0004632	0.0005338	100.708	80.609	42.077
12	0.0073616	0.0033398	0.0015488	0.0002272	0.0005391	0.0007593	42.057	21.418	12.291
14	0.0	0.0	0.0014294	0.0001412	0.0003872	0.0006103	0.0	0.0	11.550
15	0.0027181	0.0006696	0.0014261	0.0000227	0.0002307	0.0005124	17.626	4.680	11.521
16	0.0036024	0.0000424	0.0011485	0.0000817	0.0000795	0.0003311	45.495	0.382	9.539
18	0.0000424	0.0000281	0.0000102	0.0000169	0.0000067	0.0000478	0.896	0.248	0.089
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0168003	0.0165696	0.0000188	0.0008466	0.0007789	0.0004284	80.118	92.411	0.220
6	0.0183523	0.0190882	0.0015572	0.0008355	0.0007586	0.0004398	87.440	105.576	7.471
11	0.0083416	0.0041814	0.0018877	0.0002248	0.0005392	0.0007624	46.061	24.121	14.218
13	0.0063290	0.0027336	0.0014337	0.0002289	0.0005386	0.0007550	36.727	18.750	11.593
17	0.0001242	0.0000394	0.0000390	0.0000213	0.0000076	0.0000587	2.253	0.346	0.340
19	0.0000062	0.0000070	0.0000005	0.0000121	0.0000057	0.0000344	0.176	0.064	0.005

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	70.	22.	59.	1448.	235.	1572.	1.00	82.	2928.	3010.
			2	70.	22.	59.	1212.	235.	1291.	1.57	82.	3831.	3912.
2	TAN	1	2	70.	22.	59.	1212.	235.	1291.	1.57	82.	3831.	3912.
			3	70.	22.	59.	1094.	235.	1150.	1.57	82.	3442.	3524.
3	TAN	1	3	70.	22.	59.	1094.	235.	1150.	1.57	116.	4488.	4604.
			21	70.	22.	59.	317.	235.	447.	1.57	116.	1667.	1783.
4	BEND	1	21	58.	46.	22.	317.	447.	235.	1.57	71.	561.	632.
			5	56.	46.	29.	155.	538.	397.	1.57	71.	646.	717.
5	BEND	1	5	54.	45.	28.	155.	538.	397.	1.57	71.	646.	717.
			22	22.	45.	56.	146.	595.	397.	1.57	71.	687.	758.
6	TAN	1	22	38.	50.	21.	595.	397.	146.	1.00	116.	1296.	1412.
			6	38.	50.	21.	761.	397.	243.	1.00	116.	1585.	1701.
7	BEND	1	6	42.	26.	6.	459.	761.	86.	1.00	116.	1586.	1701.
			8	30.	26.	32.	459.	607.	72.	1.00	116.	1357.	1473.
8	TAN	1	8	28.	9.	19.	242.	397.	607.	1.00	116.	1357.	1473.
			9	28.	9.	19.	260.	397.	221.	1.00	116.	929.	1045.
9	BEND	1	9	4.	10.	18.	372.	324.	194.	1.00	116.	941.	1057.
			11	18.	10.	6.	64.	398.	434.	1.00	116.	1053.	1169.
10	TAN	1	11	20.	22.	10.	387.	122.	430.	1.00	116.	1049.	1165.
			23	20.	22.	10.	189.	122.	119.	1.00	116.	451.	567.
11	BEND	1	23	11.	26.	26.	119.	189.	122.	1.57	71.	239.	310.
			13	25.	26.	14.	114.	167.	162.	1.57	71.	244.	315.
12	BEND	1	13	26.	27.	14.	114.	167.	162.	1.57	71.	244.	315.
			24	27.	27.	12.	108.	131.	170.	1.57	71.	226.	297.
13	TAN	1	24	28.	12.	31.	158.	170.	64.	1.57	116.	674.	789.
			15	28.	12.	31.	319.	170.	403.	1.00	116.	961.	1077.
14	TAN	1	15	13.	14.	14.	319.	170.	403.	1.00	116.	961.	1077.
			16	13.	14.	14.	204.	170.	287.	1.00	116.	694.	810.
15	BEND	1	16	15.	15.	14.	304.	204.	137.	1.00	116.	694.	810.
			18	13.	15.	16.	85.	89.	195.	1.00	116.	410.	525.

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	19.	15.	17.	89.	66.	203.	1.00	116.	410.	525.
			25	19.	15.	17.	191.	66.	465.	1.57	116.	1418.	1534.
17	BEND	1	25	17.	19.	15.	465.	191.	66.	1.57	71.	477.	548.
			19	17.	19.	14.	398.	213.	297.	1.57	71.	508.	579.
18	BEND	1	19	17.	19.	14.	398.	213.	297.	1.57	71.	508.	579.
			26	15.	19.	17.	100.	227.	502.	1.57	71.	527.	598.
19	TAN	1	26	19.	17.	15.	227.	502.	100.	1.57	116.	1565.	1681.
			20	19.	17.	15.	231.	502.	118.	1.00	116.	1003.	1119.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL OBE+SRV

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.021721419	0.018040579	0.008118384
2	6	0.018368475	0.023444954	0.007599164
3	9	0.020492848	0.018757481	0.008645080

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	4488.	3	4604.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	70.	59.	22.	1448.	1572.	235.
15	41.	43.	0.	0.	0.	0.
20	19.	15.	17.	231.	118.	502.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "LODC" TIME IS    8.49 ** LAST STEP "REDA" TIME IS    7.80 ** DELTA TIME IS    0.69 *
* ELAPSED SECONDS                          181.3                                171.5                      9.8 *

* CPU SECONDS ** THIS STEP "RESO" TIME IS    9.01 ** LAST STEP "LODC" TIME IS    8.49 ** DELTA TIME IS    0.52 *
* ELAPSED SECONDS                          194.2                                181.3                     12.9 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS    9.09 ** LAST STEP "RESO" TIME IS    9.01 ** DELTA TIME IS    0.08 *
* ELAPSED SECONDS                          194.8                                194.2                      0.6 *
```

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** Y-HORIZONTAL OBE+SRV

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

JOINT	DISPLACEMENT (INCHES) X1	X2	X3	ROTATION (RADIANS) R1	R2	R3	ACCELERATION (PERCENT G) A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0005585	0.0005461	0.0000028	0.0002507	0.0002547	0.0000513	2.694	3.014	0.021
3	0.0011975	0.0011748	0.0000042	0.0003608	0.0003653	0.0000770	5.769	6.499	0.031
5	0.0211303	0.0219594	0.0006149	0.0010825	0.0010001	0.0004519	99.976	123.979	2.888
7	0.0217318	0.0278392	0.0108072	0.0009930	0.0007284	0.0004487	102.773	154.229	50.365
8	0.0179588	0.0242790	0.0138325	0.0009445	0.0004343	0.0003116	85.947	129.656	63.794
9	0.0227385	0.0221608	0.0138388	0.0008297	0.0006551	0.0004224	106.874	99.549	63.851
10	0.0249346	0.0232117	0.0130720	0.0007194	0.0006623	0.0006340	114.490	100.643	62.782
12	0.0086347	0.0060964	0.0025788	0.0004707	0.0006351	0.0008683	47.332	31.216	16.669
14	0.0	0.0	0.0024246	0.0002531	0.0004533	0.0006963	0.0	0.0	15.719
15	0.0031586	0.0012192	0.0024195	0.0000399	0.0002652	0.0005840	16.971	6.515	15.679
16	0.0041280	0.0000606	0.0018969	0.0001442	0.0000862	0.0003789	23.176	0.476	12.757
18	0.0000481	0.0000418	0.0000155	0.0000260	0.0000073	0.0000549	0.318	0.312	0.113
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0197064	0.0201682	0.0000256	0.0010848	0.0010053	0.0004452	93.351	113.868	0.189
6	0.0217173	0.0232194	0.0020280	0.0010787	0.0009929	0.0004566	102.701	130.707	9.494
11	0.0097316	0.0072013	0.0030420	0.0004716	0.0006356	0.0008716	52.039	35.242	19.226
13	0.0074434	0.0050951	0.0024310	0.0004692	0.0006343	0.0008635	41.287	26.946	15.777
17	0.0001418	0.0000592	0.0000599	0.0000329	0.0000081	0.0000674	0.892	0.437	0.434
19	0.0000069	0.0000097	0.0000008	0.0000185	0.0000063	0.0000395	0.053	0.079	0.006

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	69.	30.	63.	1676.	244.	1713.	1.00	82.	3280.	3361.
			2	69.	30.	63.	1425.	244.	1437.	1.57	82.	4371.	4453.
2	TAN	1	2	69.	30.	63.	1425.	244.	1437.	1.57	82.	4371.	4453.
			3	69.	30.	63.	1300.	244.	1299.	1.57	82.	3976.	4058.
3	TAN	1	3	68.	30.	62.	1300.	244.	1299.	1.57	116.	5184.	5300.
			21	68.	30.	62.	406.	244.	579.	1.57	116.	2093.	2209.
4	BEND	1	21	55.	47.	30.	406.	579.	244.	1.57	71.	704.	775.
			5	59.	47.	34.	233.	660.	443.	1.57	71.	779.	850.
5	BEND	1	5	57.	45.	33.	233.	660.	443.	1.57	71.	779.	850.
			22	30.	45.	54.	156.	700.	481.	1.57	71.	813.	884.
6	TAN	1	22	39.	49.	29.	700.	481.	156.	1.00	116.	1534.	1650.
			6	39.	49.	29.	773.	481.	258.	1.00	116.	1681.	1797.
7	BEND	1	6	40.	27.	13.	540.	773.	105.	1.00	116.	1686.	1801.
			8	33.	27.	36.	507.	594.	133.	1.00	116.	1407.	1522.
8	TAN	1	8	31.	11.	24.	317.	417.	594.	1.00	116.	1407.	1522.
			9	31.	11.	24.	342.	417.	337.	1.00	116.	1130.	1246.
9	BEND	1	9	5.	14.	23.	435.	434.	257.	1.00	116.	1182.	1298.
			11	23.	14.	7.	176.	532.	482.	1.00	116.	1312.	1428.
10	TAN	1	11	22.	29.	15.	524.	209.	462.	1.00	116.	1295.	1411.
			23	22.	29.	15.	260.	209.	141.	1.00	116.	644.	760.
11	BEND	1	23	18.	30.	35.	141.	260.	209.	1.57	71.	341.	412.
			13	35.	30.	17.	205.	241.	207.	1.57	71.	356.	427.
12	BEND	1	13	35.	31.	17.	205.	241.	207.	1.57	71.	356.	427.
			24	35.	31.	18.	195.	209.	199.	1.57	71.	328.	399.
13	TAN	1	24	33.	19.	39.	278.	199.	76.	1.57	116.	979.	1095.
			15	33.	19.	39.	547.	199.	478.	1.00	116.	1337.	1453.
14	TAN	1	15	15.	21.	21.	547.	199.	478.	1.00	116.	1337.	1453.
			16	15.	21.	21.	368.	199.	341.	1.00	116.	958.	1074.
15	BEND	1	16	20.	18.	22.	356.	368.	170.	1.00	116.	958.	1074.
			18	25.	18.	19.	92.	109.	223.	1.00	116.	470.	586.

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	22.	22.	25.	109.	71.	231.	1.00	116.	470.	586.
			25	22.	22.	25.	308.	71.	534.	1.57	116.	1734.	1850.
17	BEND	1	25	25.	22.	22.	534.	308.	71.	1.57	71.	584.	655.
			19	20.	22.	26.	454.	333.	344.	1.57	71.	621.	692.
18	BEND	1	19	20.	22.	26.	454.	333.	344.	1.57	71.	621.	692.
			26	22.	22.	25.	109.	350.	576.	1.57	71.	642.	713.
19	TAN	1	26	22.	25.	22.	350.	576.	109.	1.57	116.	1909.	2025.
			20	22.	25.	22.	352.	576.	129.	1.00	116.	1220.	1336.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL OBE+SRV

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.024934635	0.023211684	0.013071988
2	6	0.021731809	0.027839161	0.010807179
3	9	0.022738472	0.022160817	0.013838846

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	5184.	3	5300.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	69.	63.	30.	1676.	1713.	244.
15	49.	57.	0.	0.	0.	0.
20	22.	22.	25.	352.	129.	576.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "LODC" TIME IS    9.71 ** LAST STEP "REDA" TIME IS   9.09 ** DELTA TIME IS    0.62 *
* ELAPSED SECONDS                          204.6                              194.8                       9.9 *

* CPU SECONDS ** THIS STEP "RESO" TIME IS   10.20 ** LAST STEP "LODC" TIME IS   9.71 ** DELTA TIME IS    0.49 *
* ELAPSED SECONDS                          218.1                              204.6                      13.5 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS   10.27 ** LAST STEP "RESO" TIME IS  10.20 ** DELTA TIME IS    0.07 *
* ELAPSED SECONDS                          218.8                              218.1                       0.7 *
```

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** Z-VERTICAL OBE+SRV

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

	DISPLACEMENT (INCHES)			ROTATION (RADIANS)			ACCELERATION (PERCENT G)		
JOINT	X1	X2	X3	R1	R2	R3	A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0002894	0.0002325	0.0000028	0.0001094	0.0001371	0.0000185	1.669	1.449	0.044
3	0.0006327	0.0005065	0.0000041	0.0001594	0.0002004	0.0000278	3.555	3.132	0.066
5	0.0140880	0.0109666	0.0005108	0.0006258	0.0008316	0.0001625	62.950	61.304	2.280
7	0.0145785	0.0131585	0.0105277	0.0007606	0.0008975	0.0001815	64.900	66.678	46.019
8	0.0092705	0.0096168	0.0158274	0.0008806	0.0008664	0.0001903	45.525	52.280	67.883
9	0.0129551	0.0159372	0.0158327	0.0009797	0.0007742	0.0003515	58.032	72.572	67.969
10	0.0157038	0.0200156	0.0148100	0.0009756	0.0006463	0.0004627	68.439	86.216	63.501
12	0.0045544	0.0080636	0.0038421	0.0006857	0.0003298	0.0005757	42.035	44.131	41.326
14	0.0	0.0	0.0036995	0.0003285	0.0002427	0.0004507	0.0	0.0	41.552
15	0.0017412	0.0016193	0.0036916	0.0000585	0.0001514	0.0003686	16.073	8.943	41.429
16	0.0023643	0.0000937	0.0029598	0.0002114	0.0000556	0.0002212	23.295	1.592	35.760
18	0.0000275	0.0000653	0.0000246	0.0000414	0.0000044	0.0000310	0.382	1.024	0.364
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0129174	0.0100009	0.0000250	0.0006214	0.0008249	0.0001605	58.322	56.867	0.401
6	0.0145766	0.0115416	0.0016939	0.0006307	0.0008374	0.0001640	64.882	62.838	7.364
11	0.0052285	0.0090347	0.0042144	0.0006925	0.0003310	0.0005778	43.711	47.320	40.510
13	0.0038960	0.0068637	0.0037090	0.0006787	0.0003293	0.0005726	37.840	38.632	41.729
17	0.0000805	0.0000928	0.0000952	0.0000527	0.0000051	0.0000380	1.034	1.427	1.380
19	0.0000040	0.0000150	0.0000013	0.0000294	0.0000038	0.0000223	0.071	0.268	0.020

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	22.	29.	20.	715.	88.	890.	1.00	82.	1559.	1641.
			2	22.	29.	20.	638.	88.	805.	1.57	82.	2210.	2292.
2	TAN	1	2	22.	29.	20.	638.	88.	805.	1.57	82.	2210.	2292.
			3	22.	29.	20.	600.	88.	762.	1.57	82.	2089.	2171.
3	TAN	1	3	22.	29.	19.	600.	88.	762.	1.57	116.	2724.	2840.
			21	22.	29.	19.	347.	88.	505.	1.57	116.	1732.	1848.
4	BEND	1	21	15.	15.	29.	347.	505.	88.	1.57	71.	583.	654.
			5	28.	15.	25.	249.	512.	270.	1.57	71.	593.	664.
5	BEND	1	5	27.	15.	25.	249.	512.	270.	1.57	71.	593.	664.
			22	29.	15.	15.	68.	491.	369.	1.57	71.	582.	653.
6	TAN	1	22	14.	16.	28.	491.	369.	68.	1.00	116.	1097.	1213.
			6	14.	16.	28.	307.	369.	126.	1.00	116.	881.	997.
7	BEND	1	6	13.	15.	23.	387.	307.	66.	1.00	116.	886.	1002.
			8	20.	15.	24.	304.	191.	184.	1.00	116.	716.	832.
8	TAN	1	8	21.	10.	16.	285.	212.	191.	1.00	116.	716.	832.
			9	21.	10.	16.	143.	212.	341.	1.00	116.	756.	872.
9	BEND	1	9	6.	11.	10.	288.	251.	234.	1.00	116.	795.	911.
			11	9.	11.	7.	307.	265.	283.	1.00	116.	878.	994.
10	TAN	1	11	13.	16.	17.	317.	265.	259.	1.00	116.	866.	982.
			23	13.	16.	17.	221.	265.	108.	1.00	116.	642.	758.
11	BEND	1	23	21.	21.	21.	108.	221.	265.	1.57	71.	340.	411.
			13	24.	21.	16.	272.	244.	147.	1.57	71.	370.	441.
12	BEND	1	13	24.	22.	17.	272.	244.	147.	1.57	71.	370.	441.
			24	22.	22.	21.	286.	256.	143.	1.57	71.	385.	456.
13	TAN	1	24	19.	24.	30.	372.	143.	95.	1.57	116.	1145.	1261.
			15	19.	24.	30.	694.	143.	231.	1.00	116.	1323.	1438.
14	TAN	1	15	7.	28.	27.	694.	143.	231.	1.00	116.	1323.	1438.
			16	7.	28.	27.	481.	143.	172.	1.00	116.	942.	1058.
15	BEND	1	16	27.	9.	34.	185.	481.	125.	1.00	116.	942.	1058.
			18	33.	9.	28.	66.	180.	148.	1.00	116.	430.	546.

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL OBE+SRV

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	13.	28.	40.	180.	46.	155.	1.00	116.	430.	546.
			25	13.	28.	40.	490.	46.	302.	1.57	116.	1615.	1731.
17	BEND	1	25	40.	13.	28.	302.	490.	46.	1.57	71.	544.	615.
			19	33.	13.	36.	260.	540.	190.	1.57	71.	592.	663.
18	BEND	1	19	33.	13.	36.	260.	540.	190.	1.57	71.	592.	663.
			26	28.	13.	40.	66.	558.	325.	1.57	71.	611.	682.
19	TAN	1	26	13.	40.	28.	558.	325.	66.	1.57	116.	1815.	1931.
			20	13.	40.	28.	556.	325.	77.	1.00	116.	1152.	1268.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL OBE+SRV

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.015703790	0.020015594	0.014809985
2	11	0.015703790	0.020015594	0.014809985
3	9	0.012955137	0.015937176	0.015832711

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	2724.	3	2840.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	22.	20.	29.	715.	890.	88.
15	25.	56.	0.	0.	0.	0.
20	13.	28.	40.	556.	77.	325.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "LODC" TIME IS   10.88 ** LAST STEP "REDA" TIME IS   10.27 ** DELTA TIME IS    0.61 *
* ELAPSED SECONDS                           228.5                               218.8                        9.8 *

* CPU SECONDS ** THIS STEP "SUPT" TIME IS   11.00 ** LAST STEP "LODC" TIME IS   10.88 ** DELTA TIME IS    0.12 *
* ELAPSED SECONDS                           231.1                               228.5                        2.6 *

* CPU SECONDS ** THIS STEP "SSMC" TIME IS   11.00 ** LAST STEP "SUPT" TIME IS   11.00 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           231.1                               231.1                        0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   11.03 ** LAST STEP "SSMC" TIME IS   11.00 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           231.2                               231.1                        0.1 *
```

```
START NC3600 NO PRODUCTION NO TAPE 31
2-CFG-104
GEOMETRY
2-CFG-104
CENTERS
1 16.2 0 -28.2
2 18.12 -1.8
3 43.2 7.2 -28.2
COORDINATE INCHES
1 0 0 0
2 0 0 -4 1
3 0 0 -2 2
5 0 0 -24 3
6 12 0 0 5
8 6 0 6 6
9 0 0 18 8
11 4.2 4.2 6 9
13 21 21 0 11
15 0 0 -15 13
16 0 0 -9 15
18 0 -6 -6 16
19 0 -18 0 18
20 0 0 3 19
BOUNDARY
1 ANCHOR
20 ANCHOR
15 XYSTOP
MATERIAL 2
70 28300000 .3 .0000091
1200 21500000 .3 .0000103
SIF
100 1.09 1.09 .75
101 2.1 2.1 1
BRANCH 1 2 30 1
RUN 1 2 2.38 .218 1.350 2
RUN 2 3 2.38 .218 1.35 3
RUN 3 0 2.38 .154 1.25 3
ELBOW 5 2.0 3.03 .32 1.50 0 101
RUN 0 6 2.38 .154 1.25
CURVE 6 8 2.38 .154 1.25 100 1
RUN 8 9 2.38 .154 1.25 0
CURVE 9 11 2.38 .154 1.25 100 2
RUN 11 0 2.38 .154 1.25
ELBOW 13 2.0 3.03 .32 1.50 0 101
RUN 0 15 2.38 .154 1.25 1
RUN 15 16 2.38 .154 1.25 0
CURVE 16 18 2.38 .154 1.25 100 3
RUN 18 0 2.38 .154 1.25 2
ELBOW 19 2.0 3.03 .32 1.50 0 101
RUN 0 20 2.38 .154 1.25 1
FREQUENCY 9 9 1 1
2-CFG-104
3DOF 5 6 9 13 18
SPECTRUM NO ACCELERATION NO 9 386 .1
SSE+SRV+CHUG HORIZONTAL
S-CURVES 1 1 1.98 .5 .48 .25 .5 .125 .45 .11 .5
S-CURVES 1 .083 .5 .077 .45 .063 .9 .059 .92 .05 1.32
S-CURVES 1 .042 1.32 .037 1.35 .031 .95 .028 .68 .02 .6
S-CURVES 1 .019 .56 .016 .5 .014 .5 .013 .46 .011 .46
```

```
S-CURVES 2 1 1.2 .5 1.9 .33 1.98 .25 1.95 .2 1
S-CURVES 2 .167 1.25 .143 2.6 .091 2.62 .083 1.25 .063 .75
S-CURVES 2 .056 .78 .05 1.25 .043 1.4 .037 1.4 .036 1.1
S-CURVES 2 .031 .9 .028 .82 .026 .82 .025 .85 .024 .82
S-CURVES 2 .021 .82 .02 .95 .015 .95 .013 .75 .011 .65
FACTOR 1 1 0
FACTOR 2 1 0
FACTOR 3 0 1
DIRECTION 1 0 0
X-HORIZONTAL SSE+SRV+CHUG
DIRECTION 0 1 0
Y-HORIZONTAL SSE+SRV+CHUG .
DIRECTION 0 0 1
Z-VERTICAL SSE+SRV+CHUG
DIRECTION 0 0 -1
Z-VERTICAL SSE+SRV+CHUG
RUN 1 2 3 4
END OF JOB
```

```
******************** SUMMARY OF RESPONSE SPECTRUM ANALYSIS ********************

        SSE+SRV+CHUG HORIZONTAL

        PRINT INERTIA FORCES (YES=0, NO=1)      1

        TYPE OF RESPONSE SPECTRA CURVE (ACCELERATION=0, VELOCITY=1)      0

        INCLUDE LEFT-OUT-MASS (YES=0, NO=2)      2

        NUMBER OF MODE SHAPES TO BE USED      9

        VALUE OF GRAVITATIONAL ACCELERATION 0.38600E 03

        VALUE OF CLOSE MODE CRITERION 0.10000E 00
```

```
     8    31     0     0                                                  PD1
2-CFG-104
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0     0     1                                            P 1
2-CFG-104                                                                 P 2
    19    20    15     0     3     4     6     1     3     0     0     0  P 3
     0     1     0     0     1     0     0                                P 4
     1    20     6     0     0     1     2                                P 5
     1    16.20000     0.0       -28.20000                               P 6
     2    18.12000    -1.80000     0.0                                   P 6
     3    43.20000     7.20000   -28.20000                               P 6
     1     0.0         0.0         0.0         0                        P 7
     2     0.0         0.0        -4.00000     0                        P 7
     3     0.0         0.0        -6.00000     0                        P 7
     5     0.58579     0.0       -29.41420     0                        P 7
     6    12.00000     0.0       -30.00000     0                        P 7
     8    18.00000     0.0       -24.00000     0                        P 7
     9    18.00000     0.0        -6.00000     0                        P 7
    11    22.20000     4.20000     0.0         0                        P 7
    13    42.78577    24.78577    -0.58579     0                        P 7
    15    43.20000    25.20000   -15.00000     0                        P 7
    16    43.20000    25.20000   -24.00000     0                        P 7
    18    43.20000    19.20000   -30.00000     0                        P 7
    19    43.20000     1.78578   -29.41420     0                        P 7
    20    43.20000     1.20000   -27.00000     0                        P 7
    21     0.0         0.0       -28.00000     0                        P 7
    22     2.00000     0.0       -30.00000     0                        P 7
    23    41.78578    23.78578     0.0         0                        P 7
    24    43.20000    25.20000    -2.00000     0                        P 7
    25    43.20000     3.20000   -30.00000     0                        P 7
    26    43.20000     1.20000   -28.00000     0                        P 7
    40     2.00000     0.0       -28.00000     0                        P 7
    41    16.20000     0.0       -28.20000     0                        P 7
    42    18.12000    -1.80000     0.0         0                        P 7
    43    41.78578    23.78578    -2.00000     0                        P 7
    44    43.20000     7.20000   -28.20000     0                        P 7
    45    43.20000     3.20000   -28.00000     0                        P 7
  1  3     2.3800      0.2180     2.0000      0.0         0.0         0.0  P11D
  2  3     2.3800      0.1540     2.0000      0.0         0.0         0.0  P11D
  3  4     3.0300      0.3200     2.0000      0.0         0.0         0.0  P11D
  4  4     2.3800      0.1540     2.0000      0.0         0.0         0.0  P11D
  100     1.089999    1.089999    0.750000                                P 12.1
  101     2.099999    2.099999    1.000000                                P 12.1
   1.350    1.250     1.500     1.250
  1  2 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0  P14
       0.12000E 04 0.21500E 08 0.30000E 00 0.10300E-04     0.0  0.0  0.0  P14A
   30.00000     0.0         0.0         0.0         0.0         0.0       P15
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01         P18
 20  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01         P18
 15  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
   1   1   21001   1   1   1   1   1   1   1   0   0   0   0  0.0         P21
    1   2   1   0   0   1                                                 P21B
   2   2   31001   1   1   1   1   1   1   1   0   0   0   0  0.0         P21
    1   3   1   0   0   1                                                 P21B
   3   3  211001   1   1   1   2   2   1   1   0   0   0   0  0.0         P21
    1   3   1   0   0   1                                                 P21B
   4  21   5  40   1   2   1   3   3   1   1   0   0   0   0  0.0         P21
    1  101   1   0   0   1                                                 P21B
   5   5  22  40   1   2   1   3   3   1   1   0   0   0   0  0.0         P21
```

```
  1  101     1     0     0     1                                                    P21B
  6   22   61002   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    0     1     0     0     1                                                    P21B
  7    6    8  41   1   2   1   4   4   1   1   0   0   0   0  0.0                    P21
  1  100     1     0     0     1                                                    P21B
  8    8   91001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    0     1     0     0     1                                                    P21B
  9    9   11  42   1   2   1   4   4   1   1   0   0   0   0  0.0                    P21
  1  100     1     0     0     1                                                    P21B
 10   11  231001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    0     1     0     0     1                                                    P21B
 11   23   13  43   1   2   1   3   3   1   1   0   0   0   0  0.0                    P21
  1  101     1     0     0     1                                                    P21B
 12   13   24  43   1   2   1   3   3   1   1   0   0   0   0  0.0                    P21
  1  101     1     0     0     1                                                    P21B
 13   24  151001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    1     1     0     0     1                                                    P21B
 14   15  161001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    0     1     0     0     1                                                    P21B
 15   16   18  44   1   2   1   4   4   1   1   0   0   0   0  0.0                    P21
  1  100     1     0     0     1                                                    P21B
 16   18  251001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    2     1     0     0     1                                                    P21B
 17   25   19  45   1   2   1   3   3   1   1   0   0   0   0  0.0                    P21
  1  101     1     0     0     1                                                    P21B
 18   19   26  45   1   2   1   3   3   1   1   0   0   0   0  0.0                    P21
  1  101     1     0     0     1                                                    P21B
 19   26  201001   1   1   1   2   2   1   1   0   0   0   0  0.0                    P21
  1    1     1     0     0     1                                                    P21B
    5     0 0.10000E 01 0.10000E 01                                                 P25
  5   6    9  13  18   0   0   0   0   0   0   0   0   0   0   0   0   0            P26
    0     0                                                                         P28
    0     0                                                                         P30
    0                                                                               P68
2-CFG-104                                                                           D1
    1    -1     9     0     1     0                                                 D2
    4     0.00100     9                                                            D3
SSE+SRV+CHUG HORIZONTAL                                                             D1
    2    -1     9     1     1     2                                                 D2
    9 0.10000E 00 0.0         0.0         0.0         0.0                           D4
    2     2     0 0.38600E 03                                                       D5
   20                                                                               D6
 0.10000E 01 0.19800E 01 0.50000E 00 0.48000E 00 0.25000E 00 0.50000E 00            D7
 0.12500E 00 0.45000E 00 0.11000E 00 0.50000E 00 0.83000E-01 0.50000E 00            D7
 0.77000E-01 0.45000E 00 0.63000E-01 0.90000E 00 0.59000E-01 0.92000E 00            D7
 0.50000E-01 0.13200E 01 0.42000E-01 0.13200E 01 0.37000E-01 0.13500E 01            D7
 0.31000E-01 0.95000E 00 0.28000E-01 0.68000E 00 0.20000E-01 0.60000E 00            D7
 0.19000E-01 0.56000E 00 0.16000E-01 0.50000E 00 0.14000E-01 0.50000E 00            D7
 0.13000E-01 0.46000E 00 0.11000E-01 0.46000E 00
   25                                                                               D6
 0.10000E 01 0.12000E 01 0.50000E 00 0.19000E 01 0.33000E 00 0.19800E 01            D7
 0.25000E 00 0.19500E 01 0.20000E 00 0.10000E 01 0.16700E 00 0.12500E 01            D7
 0.14300E 00 0.26000E 01 0.91000E-01 0.26200E 01 0.83000E-01 0.12500E 01            D7
 0.63000E-01 0.75000E 00 0.56000E-01 0.78000E 00 0.50000E-01 0.12500E 01            D7
 0.43000E-01 0.14000E 01 0.37000E-01 0.14000E 01 0.36000E-01 0.11000E 01            D7
 0.31000E-01 0.90000E 00 0.28000E-01 0.82000E 00 0.26000E-01 0.82000E 00            D7
 0.25000E-01 0.85000E 00 0.24000E-01 0.82000E 00 0.21000E-01 0.82000E 00            D7
 0.20000E-01 0.95000E 00 0.15000E-01 0.95000E 00 0.13000E-01 0.75000E 00            D7
 0.11000E-01 0.65000E 00
    4                                                                               D9
```

```
     1.00000     0.0         0.0         0.0         0.0         0.0        D9A
     1.00000     0.0         0.0         0.0         0.0         0.0        D9A
     0.0         1.00000     0.0         0.0         0.0         0.0        D9A
X-HORIZONTAL SSE+SRV+CHUG                                                   D10
     1.00000     0.0         0.0                                            D11
Y-HORIZONTAL SSE+SRV+CHUG                                                   D10
     0.0         1.00000     0.0                                            D11
Z-VERTICAL SSE+SRV+CHUG                                                     D10
     0.0         0.0         1.00000                                        D11
Z-VERTICAL SSE+SRV+CHUG                                                     D10
     0.0         0.0        -1.00000                                        D11
     8     1                                                                P1
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.                        P2
    19    20     4     4     0     1     0                                  P43
     0                                                                      P68
     0                                                                      PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.13 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                             0.9                              0.0                          0.9 *
```

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	19
TOTAL NUMBER OF STRUCTURAL JOINTS	20
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	6
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	15
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	3
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	3
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	4
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	20
TOTAL FICTIOUS JOINTS READ IN	6
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

ORIGIN OF AUXILIARY COORDINATE SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	16.199997	0.0	-28.199997
2	18.119995	-1.799999	0.0
3	43.199997	7.200000	-28.199997

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	0.0	-4.000000
3	0.0	0.0	-6.000000
5	0.585790	0.0	-29.414200
6	12.000000	0.0	-30.000000
8	18.000000	0.0	-24.000000
9	18.000000	0.0	-6.000000
11	22.199997	4.200000	0.0
13	42.785767	24.785767	-0.585790
15	43.199997	25.199997	-15.000000
16	43.199997	25.199997	-24.000000
18	43.199997	19.199997	-30.000000
19	43.199997	1.785780	-29.414200
20	43.199997	1.200000	-27.000000
21	0.0	0.0	-28.000000
22	2.000000	0.0	-30.000000
23	41.785767	23.785767	0.0
24	43.199997	25.199997	-2.000000
25	43.199997	3.200000	-30.000000
26	43.199997	1.200000	-28.000000
40	2.000000	0.0	-28.000000
41	16.199997	0.0	-28.199997
42	18.119995	-1.799999	0.0
43	41.785767	23.785767	-2.000000
44	43.199997	7.200000	-28.199997
45	43.199997	3.200000	-28.000000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN
1	S	2.380	0.218	.1481E 01	.8739E 00	.1748E 01	.8739E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.1
2	S	2.380	0.154	.1077E 01	.6702E 00	.1340E 01	.6702E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.1
3	C	3.030	0.320	.2724E 01	.2536E 01	.2536E 01	.5072E 01	2.0	2.0	1.51	0.0	0.0	1.51	-1.51	0.0	0.0	-1.5
4	C	2.380	0.154	.1077E 01	.6702E 00	.6702E 00	.1340E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.1

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	0.0
1-A	1200.00	21500000.00	0.300000	0.000010300	0.0

PRESSURE DATA

TYPE	PRESSURE
1	30.00

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 0
2	20	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 0
3	15	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.22 ** LAST STEP "BEGP" TIME IS    0.13 ** DELTA TIME IS    0.09 *
* ELAPSED SECONDS                             1.8                                 0.9                        0.8 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   20


 BAND-WIDTH =    12  BY D.O.F.          BAND-WIDTH =     2  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.32 ** LAST STEP "DA3D" TIME IS    0.22 ** DELTA TIME IS    0.10 *
* ELAPSED SECONDS                             4.6                                 1.8                        2.8 *
```

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 15

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	5	1	2	5	2	3	5	3	4	6	1	5	6	2
6	6	3	7	9	1	8	9	2	9	9	3	10	13	1
11	13	2	12	13	3	13	18	1	14	18	2	15	18	3

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.34 ** LAST STEP "JCSO" TIME IS    0.32 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                             4.8                                 4.6                        0.3 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.10325E 09) OCCURS AT THE 29TH DOF
MINIMUM VALUE (0.90028E 05) OCCURS AT THE 91TH DOF
RATIO OF MAX/MIN= 0.11469E 04

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    1.78 ** LAST STEP "INPT" TIME IS    0.34 ** DELTA TIME IS    1.44 *
* ELAPSED SECONDS                             9.8                                 4.8                        5.0 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.61 ** LAST STEP "EQ3D" TIME IS    1.78 ** DELTA TIME IS    0.83 *
* ELAPSED SECONDS                            15.4                                 9.8                        5.6 *
```

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	2	1001	1	1	1	1	2	1	1	1	4.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	2	3	1001	1	1	1	1	3	1	1	1	2.00000	1.35000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
3	3	21	1001	1	1	1	1	3	1	1	2	22.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
4	21	5	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	1.000000	0.0	0.0
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
5	5	22	40	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.707109	0.0	0.707104
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707104	0.0	0.707109
6	22	6	1002	1	1	1	1	0	1	1	2	10.00000	1.25000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
7	6	8	41	1	2	1	1	100	1	1	4	2.38058	1.25000	RAD=	4.5695	0.919145	0.0	0.393920
														FLX=	1.0000	0.0	-1.000000	0.0
														ECC=	0.0	0.393920	0.0	-0.919145
8	8	9	1001	1	1	1	1	0	1	1	2	18.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
9	9	11	42	1	2	1	1	100	1	1	4	1.30502	1.25000	RAD=	6.2653	0.019152	-0.287295	0.957651
														FLX=	1.0000	-0.813095	0.552905	0.182133
														ECC=	0.0	-0.581816	-0.782149	-0.223009
10	11	23	1001	1	1	1	1	0	1	1	2	27.69846	1.25000			0.707107	-0.707107	0.0
																-0.707107	-0.707107	0.0
																0.0	0.0	-1.000000
11	23	13	43	1	2	1	1	101	1	1	3	0.78540	1.50000	RAD=	2.0000	0.0	0.0	-1.000000
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.707107	-0.707107	0.0
12	13	24	43	1	2	1	1	101	1	1	3	0.78538	1.50000	RAD=	2.0000	-0.500001	-0.500001	-0.707106
														FLX=	1.0000	0.707107	-0.707107	0.0
														ECC=	0.0	-0.499999	-0.499999	0.707108
13	24	15	1001	1	1	1	1	1	1	1	2	13.00000	1.25000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	15	16	1001	1	1	1	1	0	1	1	2	9.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
15	16	18	44	1	2	1	1	100	1	1	4	0.91459	1.25000	RAD= FLX= ECC=	18.4835 1.0000 0.0	0.0 -0.973841-0.227229 1.000000 0.0 0.0 0.0 -0.227229 0.973841
16	18	25	1001	1	1	1	1	2	1	1	2	16.00000	1.25000			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
17	25	19	45	1	2	1	1	101	1	1	3	0.78541	1.50000	RAD= FLX= ECC=	2.0000 1.0000 0.0	0.0 0.0 1.000000 1.000000 0.0 0.0 0.0 1.000000 0.0
18	19	26	45	1	2	1	1	101	1	1	3	0.78539	1.50000	RAD= FLX= ECC=	2.0000 1.0000 0.0	0.0 0.707112 0.707102 1.000000 0.0 0.0 0.0 0.707102-0.707112
19	26	20	1001	1	1	1	1	1	1	1	2	1.00000	1.25000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  10 AND EQUALS 0.27698E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  19 AND EQUALS 0.10000E 01 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  12 AND EQUALS 0.51628E 03
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  10 AND EQUALS 0.10195E 05

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    2.73 ** LAST STEP "SELT" TIME IS    2.61 ** DELTA TIME IS    0.12 *
* ELAPSED SECONDS                            16.9                                15.4                      1.5 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS    3.78 ** LAST STEP "EDIT" TIME IS    2.73 ** DELTA TIME IS    1.05 *
* ELAPSED SECONDS                            47.4                                16.9                     30.5 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    3.81 ** LAST STEP "SLVR" TIME IS    3.78 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            47.9                                47.4                      0.5 *
```

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
1	0.0	0.0	0.0	2	0.10481E-01	0.10481E-01	0.10481E-01	3	0.39079E-01	0.39079E-01	0.39079E-01
5	0.60978E-02	0.60978E-02	0.60978E-02	6	0.33770E-01	0.33770E-01	0.33770E-01	8	0.46710E-01	0.46710E-01	0.46710E-01
9	0.42340E-01	0.42340E-01	0.42340E-01	11	0.58027E-01	0.58027E-01	0.58027E-01	13	0.60978E-02	0.60978E-02	0.60978E-02
15	0.0	0.0	0.35585E-01	16	0.41901E-01	0.41901E-01	0.41901E-01	18	0.53223E-01	0.53223E-01	0.53223E-01
19	0.60978E-02	0.60978E-02	0.60978E-02	20	0.0	0.0	0.0	21	0.38634E-01	0.38634E-01	0.38634E-01
22	0.19224E-01	0.19224E-01	0.19224E-01	23	0.47851E-01	0.47851E-01	0.47851E-01	24	0.24076E-01	0.24076E-01	0.24076E-01
25	0.28929E-01	0.28929E-01	0.28929E-01	26	0.46664E-02	0.46664E-02	0.46664E-02				

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.19686E-07) OCCURS AT DOF 5
MINIMUM VALUE (0.14772E-11) OCCURS AT DOF 14
RATIO OF MAX/MIN = 0.13326E 05

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS    3.96 ** LAST STEP "UPDT" TIME IS    3.81 ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                            50.5                                47.9                      2.5 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.42750E-03) OCCURS AT DOF 5
MINIMUM VALUE(0.11370E-05) OCCURS AT DOF 3
RATIO OF CMAX/CMIN= 0.37600E 03

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS    4.11 ** LAST STEP "MASM" TIME IS    3.96 ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                            52.6                                50.5                      2.2 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    4.13 ** LAST STEP "INFM" TIME IS    4.11 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            52.8                                52.6                      0.2 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    4.14 ** LAST STEP "BEGP" TIME IS    4.13 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                            52.9                                52.8                      0.1 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS    4.16 ** LAST STEP "SRTL" TIME IS    4.14 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            53.3                                52.9                      0.4 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS    4.16 ** LAST STEP "SQRT" TIME IS    4.16 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                            53.3                                53.3                      0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS    4.17 ** LAST STEP "INYG" TIME IS    4.16 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                            53.4                                53.3                      0.1 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS    4.32 ** LAST STEP "TQAD" TIME IS    4.17 ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                            54.4                                53.4                      1.0 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS    4.35 ** LAST STEP "JAMX" TIME IS    4.32 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            54.6                                54.4                      0.2 *

* CPU SECONDS ** THIS STEP "TRPL" TIME IS    4.37 ** LAST STEP "RENM" TIME IS    4.35 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                            54.7                                54.6                      0.1 *
```

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99995E 00
AVERAGE  DIAGONAL TERM........ 0.99999E 00
LARGEST OFF-DIAGONAL TERM..... 0.23737E-04
AVERAGE OFF-DIAGONAL TERM..... 0.13602E-05
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS    4.37 ** LAST STEP "TRPL" TIME IS    4.37 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                            54.7                                54.7                      0.0 *
```

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N								
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114	0.10960E-04	0.17317E-04	0.19459E-04	-0.25669E-04	-0.15218E-05	-0.43827E-04	-0.14816E-04	0.35576E-04	0.72843E-04
113	0.19722E-05	0.29552E-05	0.27455E-05	-0.41385E-05	-0.16677E-06	-0.87867E-05	-0.35551E-05	0.10569E-04	0.24040E-04
112	-0.16352E-04	0.81389E-06	0.11777E-04	0.75514E-04	0.13700E-05	-0.35499E-04	-0.89153E-05	-0.37272E-06	-0.34043E-05
111	-0.69011E-06	0.51750E-07	0.52624E-06	0.35079E-05	0.22623E-07	-0.16928E-05	-0.44123E-06	-0.26175E-07	-0.16816E-06
110	-0.50574E-05	0.17832E-05	0.60262E-05	0.46427E-04	-0.51551E-05	-0.24077E-04	-0.83878E-05	-0.38329E-05	-0.18080E-05
109	-0.16788E-05	-0.28594E-05	-0.40042E-05	0.63006E-05	0.59231E-06	0.11818E-04	0.45813E-05	-0.11102E-04	-0.24910E-04
108	0.15232E-04	0.24070E-04	0.27056E-04	-0.35661E-04	-0.21140E-05	-0.60815E-04	-0.20532E-04	0.49233E-04	0.10070E-03
107	0.23882E-05	0.34951E-05	0.29243E-05	-0.44764E-05	-0.11026E-06	-0.10084E-04	-0.42017E-05	0.13161E-04	0.30238E-04
106	-0.23534E-04	0.93046E-06	0.16575E-04	0.10505E-03	0.28457E-05	-0.49026E-04	-0.11946E-04	0.44185E-07	-0.47787E-05
105	-0.13301E-04	0.85747E-06	0.98883E-05	0.64492E-04	0.46073E-06	-0.30642E-04	-0.79726E-05	-0.71193E-06	-0.28984E-05
104	-0.31910E-04	0.37977E-05	0.26423E-04	0.18070E-03	-0.53525E-05	-0.88207E-04	-0.25521E-04	-0.60655E-05	-0.77453E-05
103	-0.13340E-04	-0.21161E-04	-0.24158E-04	0.34152E-04	0.22447E-05	0.62378E-04	0.22811E-04	-0.57833E-04	-0.12514E-03
102	0.18750E-04	0.29596E-04	0.33141E-04	-0.43564E-04	-0.25505E-05	-0.74213E-04	-0.24997E-04	0.60001E-04	0.12252E-03
101	0.28336E-05	0.40159E-05	0.28380E-05	-0.43662E-05	0.26394E-07	-0.10717E-04	-0.46159E-05	0.15525E-04	0.35977E-04
100	-0.30643E-04	0.82905E-06	0.20984E-04	0.13097E-03	0.50760E-05	-0.60527E-04	-0.14147E-04	0.96060E-06	-0.60209E-05
99	-0.53353E-04	0.24724E-05	0.38150E-04	0.24387E-03	0.52556E-05	-0.11445E-03	-0.28420E-04	-0.64035E-06	-0.11083E-04
98	-0.47067E-04	0.46558E-05	0.37502E-04	0.25229E-03	-0.44424E-05	-0.12203E-03	-0.34167E-04	-0.66424E-05	-0.10962E-04
97	-0.39451E-04	-0.62384E-04	-0.70371E-04	0.95820E-04	0.59250E-05	0.16920E-03	0.59521E-04	-0.14739E-03	-0.31089E-03
96	0.12025E-03	0.17613E-03	0.14580E-03	-0.15554E-03	0.32490E-05	-0.25575E-03	-0.72201E-04	0.21746E-03	0.39776E-03
95	0.33004E-04	0.43837E-04	0.18724E-04	-0.24163E-04	0.45298E-05	-0.77171E-04	-0.34640E-04	0.14424E-03	0.33409E-03
94	-0.15242E-03	-0.16037E-04	0.72460E-04	0.33287E-03	0.91552E-04	-0.11705E-03	0.40010E-05	0.45666E-04	-0.15981E-04

93	-0.19538E-02	-0.86506E-04	0.11181E-02	0.61704E-02	0.79257E-03	-0.26044E-02	-0.38829E-03	0.35584E-03	-0.29332E-03
92	-0.37712E-04	0.87842E-05	0.37915E-04	0.27830E-03	-0.21961E-04	-0.14101E-03	-0.45956E-04	-0.17581E-04	-0.11280E-04
91	-0.12335E-02	-0.18718E-02	-0.18136E-02	0.21898E-02	0.60606E-04	0.36882E-02	0.11691E-02	-0.30560E-02	-0.59996E-02
90	0.21379E-03	0.28458E-03	0.12067E-03	-0.40818E-04	0.43809E-04	-0.76238E-04	0.10812E-04	0.17976E-03	0.25701E-03
89	0.78902E-04	0.11958E-03	0.11506E-03	-0.13268E-03	-0.28964E-05	-0.21205E-03	-0.62005E-04	0.15606E-03	0.28461E-03
88	0.41952E-04	0.42015E-05	-0.20166E-04	-0.90257E-04	-0.24488E-04	0.29972E-04	-0.22822E-05	-0.12087E-04	0.36213E-05
87	-0.25231E-02	-0.16799E-03	0.13542E-02	0.70619E-02	0.12027E-02	-0.28358E-02	-0.29163E-03	0.56698E-03	-0.33554E-03
86	0.12668E-02	0.26313E-03	-0.39912E-03	-0.82340E-03	-0.11820E-02	-0.11457E-03	-0.46186E-03	-0.63722E-03	0.63180E-04
85	-0.86002E-03	-0.13621E-02	-0.15344E-02	0.17726E-02	0.89742E-04	0.25233E-02	0.64966E-03	-0.11309E-02	-0.15140E-02
84	0.26314E-03	0.34055E-03	0.10142E-03	0.28268E-04	0.66648E-04	0.28836E-04	0.57295E-04	0.16161E-03	0.19030E-03
83	0.11469E-03	0.18876E-03	0.23860E-03	-0.27587E-03	-0.19011E-04	-0.36185E-03	-0.83263E-04	0.81041E-04	0.76629E-05
82	0.25825E-03	0.62683E-04	-0.67430E-04	-0.40976E-04	-0.27039E-03	-0.91634E-04	-0.12056E-03	-0.14802E-03	0.96885E-05
81	-0.25286E-02	-0.16742E-03	0.13585E-02	0.70846E-02	0.12020E-02	-0.28437E-02	-0.29268E-03	0.56597E-03	-0.33536E-03
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78	0.33441E-03	0.42140E-03	0.73614E-04	0.12806E-03	0.99638E-04	0.18061E-03	0.12444E-03	0.13539E-03	0.93936E-04
77	0.15192E-03	0.25449E-03	0.34786E-03	-0.34923E-03	-0.15251E-03	-0.37605E-03	-0.59160E-04	-0.89914E-04	-0.18590E-03
76	0.53949E-03	0.10465E-03	-0.53375E-04	0.66113E-04	-0.34450E-03	-0.30316E-03	-0.19158E-03	-0.17687E-03	-0.48339E-04
75	-0.25367E-02	-0.16660E-03	0.13647E-02	0.71172E-02	0.12010E-02	-0.28552E-02	-0.29420E-03	0.56452E-03	-0.33510E-03
74	-0.54143E-02	-0.12666E-02	0.99603E-03	-0.47157E-03	0.49971E-02	0.27531E-02	0.24527E-02	0.27025E-02	0.78958E-04
73	0.17907E-02	0.30163E-02	0.40954E-02	-0.45331E-02	-0.83652E-03	-0.54379E-02	-0.10788E-02	-0.18745E-05	-0.20534E-02
72	0.33608E-03	0.42383E-03	0.72542E-04	0.13094E-03	0.10065E-03	0.18523E-03	0.12624E-03	0.13469E-03	0.91087E-04
71	0.15245E-03	0.25462E-03	0.34764E-03	-0.34561E-03	-0.16046E-03	-0.36800E-03	-0.56280E-04	-0.96048E-04	-0.17993E-03
70	0.54541E-03	0.10346E-03	-0.49937E-04	0.65573E-04	-0.33343E-03	-0.30765E-03	-0.18815E-03	-0.16984E-03	-0.52293E-04
69	-0.26997E-02	-0.10418E-03	0.15313E-02	0.69478E-02	0.12774E-02	-0.28837E-02	-0.23917E-03	0.59792E-03	-0.39117E-03
68	-0.63226E-02	-0.15906E-02	0.10410E-02	-0.61933E-03	0.54437E-02	0.31102E-02	0.26730E-02	0.28970E-02	0.11102E-03
67	0.21452E-02	0.35529E-02	0.46200E-02	-0.49729E-02	-0.10143E-02	-0.58944E-02	-0.11102E-02	-0.77247E-04	-0.22818E-02
66	0.33721E-03	0.42561E-03	0.71598E-04	0.13333E-03	0.10132E-03	0.18933E-03	0.12795E-03	0.13427E-03	0.89057E-04
65	0.15374E-03	0.25442E-03	0.34703E-03	-0.34158E-03	-0.16818E-03	-0.35890E-03	-0.52605E-04	-0.10151E-03	-0.17287E-03
64	0.55128E-03	0.10187E-03	-0.45616E-04	0.65392E-04	-0.32168E-03	-0.31142E-03	-0.18351E-03	-0.16264E-03	-0.55930E-04

63	-0.30965E-02	0.47735E-04	0.19278E-02	0.65390E-02	0.14377E-02	-0.29349E-02	-0.10760E-03	0.66073E-03	-0.51101E-03
62	-0.69808E-02	-0.20766E-02	0.99837E-03	-0.79049E-03	0.55352E-02	0.31035E-02	0.26554E-02	0.28583E-02	0.53391E-04
61	0.25713E-02	0.41274E-02	0.48962E-02	-0.50420E-02	-0.10087E-02	-0.59192E-02	-0.10150E-02	-0.17001E-05	-0.22954E-02
60	0.31177E-03	0.32923E-03	0.68226E-04	0.16129E-03	0.18868E-03	0.20901E-03	0.23097E-03	-0.24597E-05	0.51772E-04
59	0.44657E-03	0.21552E-03	0.17484E-03	-0.10975E-03	-0.24910E-03	-0.80857E-04	0.23379E-03	-0.99031E-05	0.44841E-06
58	0.76850E-03	0.26459E-04	0.37946E-03	0.12153E-03	0.98313E-04	-0.18525E-03	0.12763E-03	-0.13914E-03	-0.56553E-05
57	-0.11369E-01	0.35831E-02	0.46069E-02	0.63908E-03	-0.32312E-02	-0.84853E-04	0.20692E-02	-0.37568E-03	0.31040E-03
56	-0.13740E-01	-0.10135E-01	-0.21100E-03	-0.41274E-02	0.26885E-02	-0.16380E-02	-0.96506E-03	0.11568E-02	-0.10577E-02
55	0.93178E-02	0.12179E-01	0.61397E-02	-0.17135E-02	0.18592E-02	-0.11705E-02	0.26211E-02	0.16316E-02	-0.11699E-02
54	0.26621E-03	0.22023E-03	0.92802E-04	0.12548E-03	0.22553E-03	0.13131E-03	0.26631E-03	-0.98062E-04	0.73872E-04
53	0.57876E-03	0.19578E-03	0.10335E-03	-0.65696E-04	-0.12138E-03	-0.10585E-03	0.33079E-03	0.10545E-03	-0.39808E-04
52	0.77706E-03	0.24880E-04	0.51117E-03	0.16073E-03	0.69259E-04	-0.44195E-04	0.19212E-03	-0.21838E-03	0.80768E-04
51	-0.12125E-01	0.42463E-02	0.34686E-02	-0.15306E-03	-0.42060E-02	-0.91431E-04	0.25086E-02	0.51323E-03	0.64805E-04
50	-0.10333E-01	-0.10972E-01	0.20251E-02	-0.38720E-02	0.24757E-02	-0.30123E-02	-0.97746E-03	0.31459E-03	-0.11155E-02
49	0.74029E-02	0.11851E-01	0.56213E-02	-0.71294E-03	0.37912E-02	-0.98153E-04	0.19500E-02	0.11448E-02	-0.85898E-03
48	0.11015E-03	-0.83652E-04	0.14247E-03	-0.17627E-05	0.29770E-03	-0.13339E-03	0.31760E-03	-0.34898E-03	0.13162E-03
47	0.73136E-03	0.85654E-05	-0.69766E-04	-0.67043E-05	0.20035E-03	-0.46987E-04	0.82535E-04	0.79518E-04	-0.48016E-04
46	0.69026E-03	-0.30828E-04	0.66669E-03	0.19778E-03	-0.60468E-04	0.17858E-03	0.17440E-03	-0.20438E-03	0.15060E-03
45	-0.12121E-01	0.42421E-02	0.34654E-02	-0.15273E-03	-0.41800E-02	-0.72919E-04	0.24493E-02	0.48903E-03	0.73327E-04
44	0.31832E-02	-0.10696E-01	0.12954E-01	-0.40051E-03	0.24232E-02	-0.13094E-02	0.27106E-02	-0.39987E-02	0.14080E-02
43	-0.48707E-02	0.94703E-02	0.52227E-02	-0.14290E-03	0.30024E-02	0.17366E-02	-0.33212E-02	-0.14225E-02	0.31480E-03
42	0.54037E-04	-0.21612E-03	0.20443E-03	-0.45440E-04	0.32032E-03	-0.22198E-03	0.38170E-03	-0.53127E-03	0.20643E-03
41	0.70219E-03	-0.20247E-03	-0.18159E-03	0.10145E-04	0.26884E-03	0.89458E-05	-0.14973E-03	-0.27262E-04	-0.68896E-05
40	0.55346E-03	-0.15360E-03	0.69817E-03	0.16304E-03	-0.11807E-03	0.21142E-03	0.71109E-04	-0.79524E-04	0.95990E-04
39	-0.77205E-02	0.39545E-02	0.28475E-02	-0.15663E-03	-0.27049E-02	-0.13675E-03	0.23227E-02	0.71224E-03	-0.12431E-03
38	0.62005E-02	-0.10662E-01	0.16234E-01	0.76306E-03	-0.53051E-04	0.96273E-03	0.13851E-02	-0.24244E-02	0.12741E-02
37	-0.92066E-02	0.10231E-01	0.61243E-02	-0.18647E-03	0.14013E-02	0.17654E-02	-0.27859E-02	-0.14597E-02	0.44066E-03
36	0.31825E-04	-0.24281E-03	0.21447E-03	-0.54294E-04	0.29170E-03	-0.22596E-03	0.36966E-03	-0.55123E-03	0.21887E-03
35	0.58504E-03	-0.40906E-03	-0.26939E-03	0.12890E-04	0.14299E-03	-0.79455E-05	-0.12437E-03	-0.35891E-04	0.71542E-05
34	0.37962E-03	-0.31196E-03	0.69284E-03	0.10201E-03	-0.16462E-03	0.19551E-03	-0.81181E-04	0.11279E-03	-0.11693E-04

33	-0.11791E-02	0.84115E-03	0.55127E-03	-0.28143E-04	-0.31592E-03	-0.35598E-05	0.32031E-03	0.10748E-03	-0.27146E-04
32	0.57950E-02	-0.82130E-02	0.14030E-01	0.13046E-02	-0.32172E-02	0.33291E-02	-0.25496E-02	0.33198E-02	-0.99325E-03
31	-0.92077E-02	0.10271E-01	0.61204E-02	-0.18668E-03	0.13931E-02	0.17643E-02	-0.27822E-02	-0.14609E-02	0.44194E-03
30	0.31900E-04	-0.24014E-03	0.21255E-03	-0.53565E-04	0.28033E-03	-0.22333E-03	0.36574E-03	-0.54549E-03	0.21669E-03
29	0.57802E-03	-0.41636E-03	-0.27213E-03	0.12731E-04	0.13004E-03	-0.12306E-04	-0.11034E-03	-0.30275E-04	0.57438E-05
28	0.37277E-03	-0.31833E-03	0.69272E-03	0.99570E-04	-0.16623E-03	0.19475E-03	-0.86981E-04	0.12013E-03	-0.15860E-04
27	-0.35494E-03	0.25604E-03	0.16749E-03	-0.98320E-05	-0.11859E-03	-0.15059E-04	0.14438E-03	0.55913E-04	-0.16380E-04
26	0.55308E-02	-0.76833E-02	0.13320E-01	0.13229E-02	-0.35323E-02	0.35350E-02	-0.30231E-02	0.40325E-02	-0.12953E-02
25	-0.88673E-02	0.10027E-01	0.59609E-02	-0.17915E-03	0.14723E-02	0.17587E-02	-0.28522E-02	-0.14813E-02	0.44618E-03
24	0.31951E-04	-0.23634E-03	0.20965E-03	-0.52608E-04	0.28416E-03	-0.21996E-03	0.36072E-03	-0.53793E-03	0.21377E-03
23	0.57055E-03	-0.42257E-03	-0.27430E-03	0.12524E-04	0.11749E-03	-0.17046E-04	-0.94777E-04	-0.23854E-04	0.40252E-05
22	0.36699E-03	-0.32312E-03	0.69203E-03	0.97566E-04	-0.16750E-03	0.19411E-03	-0.91770E-04	0.12630E-03	-0.19359E-04
21	-0.16985E-04	0.93216E-05	0.67642E-05	-0.23195E-05	-0.44065E-04	-0.22726E-04	0.80770E-04	0.38412E-04	-0.12969E-04
20	0.49892E-02	-0.70862E-02	0.12213E-01	0.12149E-02	-0.34629E-02	0.33893E-02	-0.31076E-02	0.41731E-02	-0.13953E-02
19	-0.80545E-02	0.94292E-02	0.55723E-02	-0.16123E-03	0.16450E-02	0.17370E-02	-0.29950E-02	-0.15187E-02	0.45293E-03
18	0.55270E-05	-0.40882E-04	0.36265E-04	-0.91001E-05	0.49155E-04	-0.38049E-04	0.62397E-04	-0.93051E-04	0.36978E-04
17	0.11090E-03	-0.18866E-03	-0.10560E-03	0.19552E-05	-0.78767E-04	-0.49332E-04	0.11484E-03	0.52427E-04	-0.14895E-04
16	0.65436E-04	-0.14045E-03	0.20967E-03	0.13967E-04	-0.66335E-04	0.57690E-04	-0.73566E-04	0.98056E-04	-0.38270E-04
15	-0.28115E-05	0.15430E-05	0.11197E-05	-0.38395E-06	-0.72940E-05	-0.37618E-05	0.13370E-04	0.63583E-05	-0.21467E-05
14	0.19733E-03	-0.46566E-03	0.67615E-03	0.40377E-04	-0.21859E-03	0.18571E-03	-0.25094E-03	0.33411E-03	-0.13312E-03
13	-0.33908E-03	0.62656E-03	0.34727E-03	-0.57549E-05	0.28824E-03	0.17231E-03	-0.41330E-03	-0.18692E-03	0.52858E-04
12	0.36847E-05	-0.27254E-04	0.24177E-04	-0.60667E-05	0.32770E-04	-0.25366E-04	0.41598E-04	-0.62034E-04	0.24652E-04
11	0.74632E-04	-0.13243E-03	-0.73746E-04	0.12913E-05	-0.58217E-04	-0.35559E-04	0.84114E-04	0.38207E-04	-0.10828E-04
10	0.43736E-04	-0.98500E-04	0.14496E-03	0.91441E-05	-0.46375E-04	0.39849E-04	-0.52366E-04	0.69758E-04	-0.27524E-04
9	-0.18743E-05	0.10287E-05	0.74645E-06	-0.25596E-06	-0.48627E-05	-0.25079E-05	0.89132E-05	0.42389E-05	-0.14311E-05
8	0.87968E-04	-0.21843E-03	0.31272E-03	0.17551E-04	-0.10222E-03	0.85810E-04	-0.11936E-03	0.15883E-03	-0.63901E-04
7	-0.15236E-03	0.29415E-03	0.16223E-03	-0.25291E-05	0.14155E-03	0.82876E-04	-0.20149E-03	-0.90750E-04	0.25608E-04
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MODE NUMBER 1 NAT. FREQUENCY 0.126130E 03 RAD/SEC ; 0.200743E 02 HERTZ PERIOD 0.498150E-01 SEC
NORMALIZING FACTOR 0.121254E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.731302679	5	2	2	0.456129849	5	3	3	-0.029272333
6	4	1	-0.759284019	6	5	2	0.511364102	6	6	3	-0.636719525
9	7	1	0.610528409	9	8	2	-0.852167547	9	9	3	-1.000000000
13	10	1	0.176916122	13	11	2	-0.521432102	13	12	3	-0.222648025
18	13	1	-0.101729035	18	14	2	-0.003110209	18	15	3	-0.161131859

MODE NUMBER 2 NAT. FREQUENCY 0.132707E 03 RAD/SEC ; 0.211209E 02 HERTZ PERIOD 0.473465E-01 SEC
NORMALIZING FACTOR 0.118511E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.846071124	5	2	2	-0.648317039	5	3	3	0.021604404
6	4	1	0.867491245	6	5	2	-0.899689257	6	6	3	0.333680212
9	7	1	1.000000000	9	8	2	-0.925792456	9	9	3	0.358307004
13	10	1	0.299792588	13	11	2	-0.134217560	13	12	3	-0.008790985
18	13	1	-0.157944739	18	14	2	0.000741216	18	15	3	-0.007299438

MODE NUMBER 3 NAT. FREQUENCY 0.156485E 03 RAD/SEC ; 0.249053E 02 HERTZ PERIOD 0.401520E-01 SEC
NORMALIZING FACTOR 0.162339E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.367191315	5	2	2	0.820502758	5	3	3	0.010317273
6	4	1	0.377254367	6	5	2	1.000000000	6	6	3	0.175406158
9	7	1	0.346267700	9	8	2	0.124746501	9	9	3	0.213663459
13	10	1	0.284587562	13	11	2	0.064122677	13	12	3	0.094326735
18	13	1	-0.111714661	18	14	2	0.002335543	18	15	3	0.068875015

MODE NUMBER 4 NAT. FREQUENCY 0.269597E 03 RAD/SEC ; 0.429076E 02 HERTZ PERIOD 0.233059E-01 SEC
NORMALIZING FACTOR 0.694779E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.025785033	5	2	2	0.190402389	5	3	3	-0.001415137
6	4	1	-0.026839469	6	5	2	0.109828055	6	6	3	-0.022550706
9	7	1	-0.102614462	9	8	2	-0.557306290	9	9	3	-0.022030775
13	10	1	-0.715757251	13	11	2	-0.089141250	13	12	3	1.000000000
18	13	1	0.315174103	18	14	2	0.040055189	18	15	3	0.888111353

MODE NUMBER 5 NAT. FREQUENCY 0.348431E 03 RAD/SEC ; 0.554545E 02 HERTZ PERIOD 0.180328E-01 SEC
NORMALIZING FACTOR 0.544371E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.270461679	5	2	2	-0.648870170	5	3	3	-0.021784712
6	4	1	0.257415831	6	5	2	-0.009745438	6	6	3	-0.496884704
9	7	1	0.696434081	9	8	2	0.454783738	9	9	3	-0.772641182
13	10	1	-0.186323404	13	11	2	1.000000000	13	12	3	0.234664917
18	13	1	0.011133131	18	14	2	-0.004034180	18	15	3	0.145593166

MODE NUMBER 6 NAT. FREQUENCY 0.356865E 03 RAD/SEC ; 0.567967E 02 HERTZ PERIOD 0.176066E-01 SEC
NORMALIZING FACTOR 0.589436E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.298370957	5	2	2	0.599718988	5	3	3	-0.002554708
6	4	1	0.299512625	6	5	2	0.163329899	6	6	3	-0.031682517
9	7	1	-0.016652487	9	8	2	-0.511050642	9	9	3	-0.015511356
13	10	1	-1.000000000	13	11	2	0.527655900	13	12	3	-0.489233434
18	13	1	0.625708163	18	14	2	-0.023922428	18	15	3	-0.441844165

MODE NUMBER 7 NAT. FREQUENCY 0.463454E 03 RAD/SEC ; 0.737609E 02 HERTZ PERIOD 0.135573E-01 SEC
NORMALIZING FACTOR 0.502312E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.943478584	5	2	2	-1.000000000	5	3	3	0.047757320
6	4	1	-0.921539962	6	5	2	0.458160937	6	6	3	0.768316627
9	7	1	0.645030856	9	8	2	-0.323327601	9	9	3	0.829812467
13	10	1	-0.367235541	13	11	2	0.884179115	13	12	3	-0.079113007
18	13	1	0.386734366	18	14	2	-0.015201464	18	15	3	-0.128441632

MODE NUMBER 8 NAT. FREQUENCY 0.510697E 03 RAD/SEC ; 0.812800E 02 HERTZ PERIOD 0.123031E-01 SEC
NORMALIZING FACTOR 0.403247E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	-0.367337823	5	2	2	1.000000000	5	3	3	0.013865624
6	4	1	-0.361987412	6	5	2	-0.601215363	6	6	3	0.176625729
9	7	1	0.283884883	9	8	2	0.078016818	9	9	3	0.127273500
13	10	1	-0.019156795	13	11	2	0.718426228	13	12	3	0.148276627
18	13	1	-0.757855654	18	14	2	-0.004359823	18	15	3	0.088243604

MODE NUMBER 9 NAT. FREQUENCY 0.583045E 03 RAD/SEC ; 0.927945E 02 HERTZ PERIOD 0.107765E-01 SEC
NORMALIZING FACTOR 0.599958E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
5	1	1	0.074363060	5	2	2	-0.215904891	5	3	3	-0.002730124
6	4	1	0.073448479	6	5	2	0.212371945	6	6	3	-0.020720132
9	7	1	-0.143173873	9	8	2	-0.185936034	9	9	3	0.010801993
13	10	1	-0.380320966	13	11	2	0.018505003	13	12	3	-0.065199256
18	13	1	-1.000000000	18	14	2	-0.001880060	18	15	3	-0.048889715

MODE NO.	FREQUENCY (RAD/SEC)
10	0.17284724E 04
11	0.23202356E 04
12	0.24282114E 04
13	0.37924756E 04
14	0.44268672E 04

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MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	-0.165074E-03	-0.983633E-03	-0.255265E-02
2	0.278159E-02	-0.253919E-02	0.717674E-03
3	0.162765E-02	0.214395E-02	0.984352E-03
4	-0.340648E-03	-0.378570E-03	0.142797E-02
5	0.500606E-03	0.512930E-03	-0.420001E-03
6	0.452581E-04	0.190677E-03	-0.608616E-03
7	-0.209381E-03	0.568679E-04	0.372043E-03
8	-0.291939E-03	0.267766E-03	0.162677E-03
9	-0.609435E-03	-0.797723E-04	-0.580877E-04
10	0.138850E-04	-0.926378E-05	-0.202620E-04
11	-0.120777E-04	0.974437E-05	0.468550E-04
12	0.305825E-05	0.972806E-04	0.128031E-04
13	-0.207508E-06	0.722957E-04	0.164864E-05
14	0.609103E-06	0.258143E-06	0.566983E-04

MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.433508E-03	(0.09%)	0.153924E-01	(3.03%)	0.103663E 00	(19.10%)	0.200743E 02
2	0.136261E 00	(26.95%)	0.113547E 00	(25.42%)	0.907065E-02	(20.77%)	0.211209E 02
3	0.648731E-01	(39.74%)	0.112553E 00	(47.61%)	0.237272E-01	(25.14%)	0.249053E 02
4	0.843413E-02	(41.40%)	0.104165E-01	(49.67%)	0.148206E 00	(52.45%)	0.429076E 02
5	0.304246E-01	(47.40%)	0.319410E-01	(55.96%)	0.214158E-01	(56.39%)	0.554545E 02
6	0.260854E-03	(47.45%)	0.463023E-02	(56.88%)	0.471730E-01	(65.03%)	0.567967E 02
7	0.941649E-02	(49.31%)	0.694620E-03	(57.01%)	0.297303E-01	(70.56%)	0.737609E 02
8	0.222285E-01	(53.69%)	0.186998E-01	(60.70%)	0.690205E-02	(71.83%)	0.812800E 02
9	0.126258E 00	(78.59%)	0.216326E-02	(61.13%)	0.114702E-02	(72.04%)	0.927945E 02
10	0.575993E-03	(78.70%)	0.256390E-03	(61.18%)	0.122656E-02	(72.27%)	0.275095E 03
11	0.785291E-03	(78.85%)	0.511177E-03	(61.28%)	0.118189E-01	(74.44%)	0.369277E 03
12	0.551465E-04	(78.86%)	0.557988E-01	(72.28%)	0.966502E-03	(74.62%)	0.386462E 03
13	0.619317E-06	(78.86%)	0.751744E-01	(87.10%)	0.390927E-04	(74.63%)	0.603591E 03
14	0.727069E-05	(78.87%)	0.130592E-05	(87.10%)	0.629990E-01	(86.24%)	0.704558E 03
SUM OF 14 MODES	0.400014E 00	(78.87%)	0.441784E 00	(87.10%)	0.468084E 00	(86.24%)	
TOTAL LUMPED MASS	0.507205E 00		0.507205E 00		0.542790E 00		

TOTAL NUMBER OF MEANINGFUL MODES = 14

ACCUM=ACCUMULATED PERCENT

```
* CPU SECONDS ** THIS STEP "FRQM" TIME IS    4.83 ** LAST STEP "ORTH" TIME IS    4.37 ** DELTA TIME IS    0.46 *
* ELAPSED SECONDS                            58.1                                54.7                      3.4 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    4.84 ** LAST STEP "FRQM" TIME IS    4.83 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                            58.5                                58.1                      0.4 *
```

***THERE ARE 2 GROUP OF CLOSELY SPACED MODES DETERMINED IN ACCORDANCE WITH CRITERIA = 10.00 PERCENT
BY GROUPING METHOD, SECTION 1.2.1, REG. GUIDE 1.92, REVISION 1, FEB., 1976 ***

GROUP	MODES	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.)	(NO.* NAT. FREQ.
1	2	(1* 126.130)	(2* 132.707)				
2	2	(5* 348.431)	(6* 356.865)				

SPECTRAL ACCEL(IN/SEC**2)

MODE	PERIOD	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	0.0498	0.50952E 03	0.50952E 03	0.48385E 03
2	0.0473	0.50952E 03	0.50952E 03	0.50268E 03
3	0.0402	0.51360E 03	0.51360E 03	0.54040E 03
4	0.0233	0.24516E 03	0.24516E 03	0.31652E 03
5	0.0180	0.20884E 03	0.20884E 03	0.36670E 03
6	0.0176	0.20557E 03	0.20557E 03	0.36670E 03
7	0.0136	0.18615E 03	0.18615E 03	0.31029E 03
8	0.0123	0.17756E 03	0.17756E 03	0.27615E 03
9	0.0108	0.17756E 03	0.17756E 03	0.25090E 03

LOAD NO. 1

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.10000E 01 IN DIRECTION 1
P(2)= 0.0 IN DIRECTION 2
P(3)= 0.0 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    5.35 ** LAST STEP "SRTL" TIME IS    4.84 ** DELTA TIME IS    0.51 *
* ELAPSED SECONDS                            83.6                                58.5                     25.1 *
```

LOAD NO. 2

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.0 IN DIRECTION 1
P(2)= 0.10000E 01 IN DIRECTION 2
P(3)= 0.0 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    5.78 ** LAST STEP "IFOR" TIME IS    5.35 ** DELTA TIME IS    0.43 *
* ELAPSED SECONDS                           107.6                                83.6                          24.0 *
```

LOAD NO. 3

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.0 IN DIRECTION 1
P(2)= 0.0 IN DIRECTION 2
P(3)= 0.10000E 01 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    6.23 ** LAST STEP "IFOR" TIME IS    5.78 ** DELTA TIME IS    0.45 *
* ELAPSED SECONDS                           132.3                               107.6                      24.7 *
```

LOAD NO. 4

*** COEFFICIENTS TO DEFINE THE BASE ACCELERATION DIRECTION
AND THE MAGNITUDE RELATIVE TO INPUT SPECTRA

P(1)= 0.0 IN DIRECTION 1
P(2)= 0.0 IN DIRECTION 2
P(3)=-0.10000E 01 IN DIRECTION 3

```
* CPU SECONDS ** THIS STEP "IFOR" TIME IS    6.64 ** LAST STEP "IFOR" TIME IS    6.23 ** DELTA TIME IS    0.41 *
* ELAPSED SECONDS                           162.2                               132.3                      29.9 *

* CPU SECONDS ** THIS STEP "ERQK" TIME IS    6.64 ** LAST STEP "IFOR" TIME IS    6.64 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           162.2                               162.2                       0.0 *

* CPU SECONDS ** THIS STEP "RESP" TIME IS    6.64 ** LAST STEP "ERQK" TIME IS    6.64 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           162.2                               162.2                       0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    6.66 ** LAST STEP "RESP" TIME IS    6.64 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           162.5                               162.2                       0.3 *
```

SUPERPOSITION OF DYNAMIC LOADS

```
NUMBER OF ELEMENT -----------   19
NUMBER OF JOINT -------------   20
NUMBER OF INERTIA LOADS -----    9

* CPU SECONDS ** THIS STEP "RESO" TIME IS    7.38 ** LAST STEP "BEGP" TIME IS    6.66 ** DELTA TIME IS    0.72 *
* ELAPSED SECONDS                           212.2                                162.5                     49.7 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS    7.42 ** LAST STEP "RESO" TIME IS    7.38 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           214.0                                212.2                      1.8 *
```

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** X-HORIZONTAL SSE+SRV+CHUG

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

JOINT	DISPLACEMENT (INCHES) X1	X2	X3	ROTATION (RADIANS) R1	R2	R3	ACCELERATION (PERCENT G) A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0004522	0.0004170	0.0000019	0.0001900	0.0002040	0.0000438	2.270	2.390	0.034
3	0.0009642	0.0008936	0.0000029	0.0002723	0.0002910	0.0000657	4.823	5.121	0.050
5	0.0157666	0.0159111	0.0004172	0.0007446	0.0006780	0.0003856	75.653	90.625	2.066
7	0.0161780	0.0207027	0.0066985	0.0006219	0.0003757	0.0003720	77.560	112.679	33.751
8	0.0145407	0.0192067	0.0076210	0.0005716	0.0000950	0.0002252	70.148	100.687	39.491
9	0.0180467	0.0165122	0.0076254	0.0004616	0.0003536	0.0002915	86.136	76.861	39.574
10	0.0191278	0.0158810	0.0071668	0.0003591	0.0004089	0.0004704	89.551	72.075	38.431
12	0.0065102	0.0029856	0.0014643	0.0002026	0.0004770	0.0006685	41.583	26.082	15.242
14	0.0	0.0	0.0013683	0.0001271	0.0003423	0.0005374	0.0	0.0	14.754
15	0.0024060	0.0006040	0.0013652	0.0000212	0.0002053	0.0004517	19.593	5.698	14.717
16	0.0032220	0.0000425	0.0011111	0.0000767	0.0000751	0.0002941	60.442	0.525	12.350
18	0.0000390	0.0000280	0.0000101	0.0000167	0.0000064	0.0000431	1.227	0.336	0.120
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0147971	0.0146434	0.0000173	0.0007487	0.0006861	0.0003796	71.159	83.965	0.305
6	0.0161638	0.0168661	0.0013719	0.0007390	0.0006683	0.0003898	77.492	94.699	6.672
11	0.0073712	0.0037182	0.0017432	0.0002004	0.0004771	0.0006711	44.805	27.950	16.522
13	0.0055992	0.0024534	0.0013722	0.0002043	0.0004765	0.0006647	36.544	23.382	14.808
17	0.0001130	0.0000393	0.0000387	0.0000210	0.0000073	0.0000530	3.066	0.468	0.455
19	0.0000059	0.0000071	0.0000005	0.0000120	0.0000055	0.0000310	0.243	0.089	0.007

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RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	62.	20.	53.	1279.	208.	1386.	1.00	82.	2583.	2665.
			2	62.	20.	53.	1070.	208.	1137.	1.57	82.	3379.	3461.
2	TAN	1	2	62.	20.	52.	1070.	208.	1137.	1.57	82.	3379.	3461.
			3	62.	20.	52.	967.	208.	1013.	1.57	82.	3037.	3119.
3	TAN	1	3	61.	20.	52.	967.	208.	1013.	1.57	116.	3960.	4076.
			21	61.	20.	52.	279.	208.	397.	1.57	116.	1478.	1594.
4	BEND	1	21	51.	41.	20.	279.	397.	208.	1.57	71.	497.	568.
			5	49.	41.	26.	139.	477.	350.	1.57	71.	572.	643.
5	BEND	1	5	48.	39.	25.	139.	477.	350.	1.57	71.	572.	643.
			22	20.	39.	49.	130.	526.	350.	1.57	71.	607.	678.
6	TAN	1	22	34.	44.	19.	526.	350.	130.	1.00	116.	1145.	1261.
			6	34.	44.	19.	670.	350.	214.	1.00	116.	1396.	1512.
7	BEND	1	6	37.	23.	7.	404.	670.	77.	1.00	116.	1397.	1513.
			8	27.	23.	28.	404.	536.	69.	1.00	116.	1198.	1314.
8	TAN	1	8	24.	8.	17.	214.	350.	536.	1.00	116.	1198.	1314.
			9	24.	8.	17.	232.	350.	198.	1.00	116.	824.	940.
9	BEND	1	9	4.	9.	17.	328.	290.	172.	1.00	116.	835.	951.
			11	16.	9.	5.	59.	354.	383.	1.00	116.	932.	1048.
10	TAN	1	11	17.	20.	9.	344.	109.	378.	1.00	116.	929.	1045.
			23	17.	20.	9.	180.	109.	106.	1.00	116.	419.	535.
11	BEND	1	23	11.	23.	25.	106.	180.	109.	1.57	71.	222.	293.
			13	23.	23.	14.	102.	162.	144.	1.57	71.	225.	296.
12	BEND	1	13	23.	24.	14.	102.	162.	144.	1.57	71.	225.	296.
			24	25.	24.	11.	97.	129.	150.	1.57	71.	208.	279.
13	TAN	1	24	26.	12.	28.	146.	150.	69.	1.57	116.	618.	734.
			15	26.	12.	28.	288.	150.	364.	1.00	116.	866.	982.
14	TAN	1	15	13.	13.	13.	288.	150.	364.	1.00	116.	866.	982.
			16	13.	13.	13.	184.	150.	255.	1.00	116.	619.	735.
15	BEND	1	16	15.	14.	13.	270.	184.	122.	1.00	116.	619.	735.
			18	12.	14.	16.	81.	90.	172.	1.00	116.	373.	489.

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	18.	14.	17.	90.	62.	180.	1.00	116.	373.	489.
			25	18.	14.	17.	187.	62.	418.	1.57	116.	1293.	1409.
17	BEND	1	25	17.	18.	14.	418.	187.	62.	1.57	71.	435.	506.
			19	17.	18.	13.	361.	209.	266.	1.57	71.	466.	537.
18	BEND	1	19	17.	18.	13.	361.	209.	266.	1.57	71.	466.	537.
			26	14.	18.	17.	95.	225.	453.	1.57	71.	484.	555.
19	TAN	1	26	18.	17.	14.	225.	453.	95.	1.57	116.	1438.	1554.
			20	18.	17.	14.	229.	453.	112.	1.00	116.	923.	1039.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: X-HORIZONTAL SSE+SRV+CHUG

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.019127831	0.015830957	0.007166769
2	6	0.016178016	0.020702701	0.006698512
3	9	0.018046714	0.016512204	0.007625438

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	3960.	3	4076.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	62.	53.	20.	1279.	1385.	208.
15	39.	39.	0.	0.	0.	0.
20	18.	14.	17.	229.	112.	453.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "LODC" TIME IS    7.99 ** LAST STEP "REDA" TIME IS    7.42 ** DELTA TIME IS    0.57 *
* ELAPSED SECONDS                           227.1                                214.0                     13.1 *

* CPU SECONDS ** THIS STEP "RESO" TIME IS    8.51 ** LAST STEP "LODC" TIME IS    7.99 ** DELTA TIME IS    0.52 *
* ELAPSED SECONDS                           259.1                                227.1                     32.0 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS    8.58 ** LAST STEP "RESO" TIME IS    8.51 ** DELTA TIME IS    0.07 *
* ELAPSED SECONDS                           259.8                                259.1                      0.7 *
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RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** Y-HORIZONTAL SSE+SRV+CHUG

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

	DISPLACEMENT (INCHES)			ROTATION (RADIANS)			ACCELERATION (PERCENT G)		
JOINT	X1	X2	X3	R1	R2	R3	A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0004923	0.0004828	0.0000025	0.0002216	0.0002245	0.0000455	2.436	2.723	0.027
3	0.0010554	0.0010386	0.0000038	0.0003190	0.0003220	0.0000683	5.204	5.868	0.040
5	0.0186140	0.0194177	0.0005417	0.0009575	0.0008810	0.0004005	88.424	111.047	2.573
7	0.0191437	0.0246017	0.0095217	0.0008791	0.0006420	0.0003982	90.867	136.620	45.101
8	0.0158239	0.0214473	0.0121878	0.0008366	0.0003828	0.0002778	76.549	115.397	57.440
9	0.0200280	0.0195085	0.0121934	0.0007341	0.0005769	0.0003730	94.830	88.393	57.510
10	0.0219609	0.0204313	0.0115250	0.0006357	0.0005840	0.0005587	101.224	89.303	56.153
12	0.0076406	0.0053993	0.0023528	0.0004162	0.0005622	0.0007643	43.507	33.870	19.201
14	0.0	0.0	0.0022225	0.0002247	0.0004011	0.0006130	0.0	0.0	18.578
15	0.0027935	0.0010825	0.0022178	0.0000562	0.0002344	0.0005143	15.826	6.969	18.531
16	0.0036499	0.0000582	0.0017520	0.0001306	0.0000762	0.0003345	23.187	0.627	15.359
18	0.0000426	0.0000397	0.0000147	0.0000245	0.0000064	0.0000486	0.349	0.400	0.142
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0173601	0.0178344	0.0000231	0.0009595	0.0008856	0.0003946	82.643	102.200	0.244
6	0.0191309	0.0205296	0.0017865	0.0009542	0.0008746	0.0004047	90.802	116.667	8.420
11	0.0086045	0.0063672	0.0027480	0.0004169	0.0005626	0.0007673	47.526	36.913	20.883
13	0.0065890	0.0045180	0.0022283	0.0004149	0.0005615	0.0007602	38.047	29.846	18.647
17	0.0001257	0.0000562	0.0000565	0.0000309	0.0000072	0.0000597	0.951	0.556	0.544
19	0.0000062	0.0000094	0.0000008	0.0000174	0.0000056	0.0000350	0.062	0.106	0.008

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	61.	27.	56.	1481.	216.	1510.	1.00	82.	2895.	2977.
			2	61.	27.	56.	1260.	216.	1266.	1.57	82.	3858.	3940.
2	TAN	1	2	61.	27.	55.	1260.	216.	1266.	1.57	82.	3858.	3940.
			3	61.	27.	55.	1149.	216.	1145.	1.57	82.	3509.	3591.
3	TAN	1	3	60.	27.	55.	1149.	216.	1145.	1.57	116.	4576.	4692.
			21	60.	27.	55.	358.	216.	513.	1.57	116.	1851.	1966.
4	BEND	1	21	48.	42.	27.	358.	513.	216.	1.57	71.	623.	694.
			5	52.	42.	30.	207.	583.	390.	1.57	71.	688.	759.
5	BEND	1	5	51.	40.	29.	207.	583.	390.	1.57	71.	688.	759.
			22	27.	40.	47.	139.	619.	424.	1.57	71.	718.	789.
6	TAN	1	22	34.	43.	26.	619.	424.	139.	1.00	116.	1354.	1470.
			6	34.	43.	26.	681.	424.	227.	1.00	116.	1480.	1596.
7	BEND	1	6	35.	24.	13.	476.	681.	93.	1.00	116.	1485.	1600.
			8	29.	24.	32.	446.	525.	120.	1.00	116.	1242.	1358.
8	TAN	1	8	28.	10.	21.	280.	368.	525.	1.00	116.	1242.	1358.
			9	28.	10.	21.	305.	368.	300.	1.00	116.	1001.	1117.
9	BEND	1	9	5.	12.	21.	384.	386.	227.	1.00	116.	1047.	1163.
			11	20.	12.	6.	156.	472.	425.	1.00	116.	1161.	1277.
10	TAN	1	11	19.	26.	14.	465.	186.	407.	1.00	116.	1146.	1262.
			23	19.	26.	14.	241.	186.	126.	1.00	116.	585.	701.
11	BEND	1	23	16.	27.	32.	126.	241.	186.	1.57	71.	310.	381.
			13	31.	27.	16.	182.	225.	183.	1.57	71.	322.	393.
12	BEND	1	13	32.	28.	17.	182.	225.	183.	1.57	71.	322.	393.
			24	32.	28.	16.	173.	195.	175.	1.57	71.	295.	366.
13	TAN	1	24	30.	17.	35.	250.	175.	80.	1.57	116.	882.	998.
			15	30.	17.	35.	487.	175.	424.	1.00	116.	1189.	1305.
14	TAN	1	15	14.	19.	20.	487.	175.	424.	1.00	116.	1189.	1305.
			16	14.	19.	20.	327.	175.	302.	1.00	116.	850.	966.
15	BEND	1	16	19.	16.	20.	315.	327.	151.	1.00	116.	850.	966.
			18	22.	16.	19.	82.	109.	197.	1.00	116.	425.	541.

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	20.	20.	24.	109.	63.	203.	1.00	116.	425.	541.
			25	20.	20.	24.	286.	63.	472.	1.57	116.	1555.	1671.
17	BEND	1	25	24.	20.	20.	472.	286.	63.	1.57	71.	523.	594.
			19	20.	20.	23.	402.	312.	305.	1.57	71.	558.	629.
18	BEND	1	19	20.	20.	23.	402.	312.	305.	1.57	71.	558.	629.
			26	20.	20.	24.	97.	329.	510.	1.57	71.	579.	650.
19	TAN	1	26	20.	24.	20.	329.	510.	97.	1.57	116.	1720.	1835.
			20	20.	24.	20.	332.	510.	115.	1.00	116.	1100.	1216.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: Y-HORIZONTAL SSE+SRV+CHUG

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.021960907	0.020431269	0.011524964
2	6	0.019143734	0.024601735	0.009521682
3	9	0.020027958	0.019508451	0.012193400

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	4576.	3	4692.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	61.	56.	27.	1481.	1510.	216.
15	43.	52.	0.	0.	0.	0.
20	20.	20.	24.	332.	115.	510.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "LODC" TIME IS    9.03 ** LAST STEP "REDA" TIME IS    8.58 ** DELTA TIME IS    0.45 *
* ELAPSED SECONDS                          273.3                                259.8                      13.5 *

* CPU SECONDS ** THIS STEP "RESO" TIME IS    9.51 ** LAST STEP "LODC" TIME IS    9.03 ** DELTA TIME IS    0.48 *
* ELAPSED SECONDS                          292.9                                273.3                      19.6 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS    9.58 ** LAST STEP "RESO" TIME IS    9.51 ** DELTA TIME IS    0.07 *
* ELAPSED SECONDS                          293.5                                292.9                       0.6 *
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RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** Z-VERTICAL SSE+SRV+CHUG

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

JOINT	DISPLACEMENT (INCHES) X1	X2	X3	ROTATION (RADIANS) R1	R2	R3	ACCELERATION (PERCENT G) A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0003110	0.0002586	0.0000032	0.0001214	0.0001468	0.0000227	2.306	1.971	0.073
3	0.0006788	0.0005628	0.0000048	0.0001767	0.0002144	0.0000341	4.843	4.243	0.110
5	0.0149272	0.0120294	0.0005389	0.0006802	0.0008769	0.0001994	70.471	78.756	2.579
7	0.0154436	0.0143923	0.0110792	0.0008162	0.0009421	0.0002200	72.320	75.135	51.279
8	0.0099172	0.0106599	0.0166210	0.0009373	0.0009060	0.0002189	56.247	63.060	74.415
9	0.0137669	0.0168793	0.0166268	0.0010338	0.0008137	0.0003773	64.822	85.646	74.600
10	0.0166529	0.0211103	0.0155654	0.0010263	0.0006829	0.0004956	76.262	97.054	69.146
12	0.0053600	0.0085508	0.0047542	0.0007252	0.0003868	0.0006111	68.624	63.648	66.892
14	0.0	0.0	0.0046526	0.0003488	0.0002886	0.0004766	0.0	0.0	67.469
15	0.0020407	0.0017335	0.0046424	0.0000699	0.0001738	0.0003909	26.320	12.409	67.269
16	0.0027354	0.0001412	0.0038214	0.0002530	0.0006609	0.0002471	37.784	2.659	58.404
18	0.0000339	0.0000946	0.0000347	0.0000576	0.0000353	0.0000373	0.633	1.698	0.601
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0136952	0.0109830	0.0000290	0.0006759	0.0008700	0.0001969	66.126	74.045	0.663
6	0.0154413	0.0126472	0.0017862	0.0006852	0.0003828	0.0002013	72.288	78.705	8.053
11	0.0060272	0.0095641	0.0050324	0.0007322	0.0003873	0.0006134	70.073	66.383	64.898
13	0.0046404	0.0072881	0.0046642	0.0007182	0.0003868	0.0006077	62.264	56.569	67.759
17	0.0000980	0.0001332	0.0001329	0.0000726	0.0000059	0.0000458	1.716	2.363	2.278
19	0.0000053	0.0000232	0.0000019	0.0000411	0.0000045	0.0000269	0.120	0.449	0.033

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	26.	34.	23.	795.	108.	956.	1.00	82.	1700.	1782.
			2	26.	34.	23.	706.	108.	860.	1.57	82.	2397.	2479.
2	TAN	1	2	26.	34.	23.	706.	108.	860.	1.57	82.	2397.	2479.
			3	26.	34.	23.	662.	108.	812.	1.57	82.	2260.	2341.
3	TAN	1	3	25.	34.	22.	662.	108.	812.	1.57	116.	2946.	3062.
			21	25.	34.	22.	367.	108.	546.	1.57	116.	1865.	1981.
4	BEND	1	21	17.	17.	33.	367.	546.	108.	1.57	71.	627.	698.
			5	31.	17.	29.	265.	554.	288.	1.57	71.	638.	709.
5	BEND	1	5	30.	16.	29.	265.	554.	288.	1.57	71.	638.	709.
			22	33.	16.	17.	84.	530.	390.	1.57	71.	624.	695.
6	TAN	1	22	17.	18.	33.	530.	390.	84.	1.00	116.	1178.	1294.
			6	17.	18.	33.	333.	390.	137.	1.00	116.	942.	1058.
7	BEND	1	6	14.	17.	26.	410.	333.	72.	1.00	116.	947.	1063.
			8	23.	17.	26.	325.	234.	202.	1.00	116.	796.	912.
8	TAN	1	8	23.	14.	17.	303.	234.	234.	1.00	116.	796.	912.
			9	23.	14.	17.	187.	234.	365.	1.00	116.	838.	954.
9	BEND	1	9	9.	12.	13.	310.	296.	252.	1.00	116.	883.	999.
			11	12.	12.	9.	327.	304.	303.	1.00	116.	957.	1073.
10	TAN	1	11	14.	20.	20.	352.	285.	280.	1.00	116.	946.	1061.
			23	14.	20.	20.	287.	285.	133.	1.00	116.	756.	872.
11	BEND	1	23	24.	23.	29.	133.	287.	285.	1.57	71.	401.	472.
			13	26.	23.	26.	297.	305.	157.	1.57	71.	427.	498.
12	BEND	1	13	27.	25.	27.	297.	305.	157.	1.57	71.	427.	498.
			24	30.	25.	25.	303.	306.	160.	1.57	71.	433.	504.
13	TAN	1	24	27.	29.	36.	402.	160.	156.	1.57	116.	1285.	1401.
			15	27.	29.	36.	754.	160.	289.	1.00	116.	1462.	1578.
14	TAN	1	15	8.	36.	35.	754.	160.	289.	1.00	116.	1462.	1578.
			16	8.	36.	35.	511.	160.	217.	1.00	116.	1026.	1142.
15	BEND	1	16	38.	11.	43.	222.	511.	153.	1.00	116.	1026.	1142.
			18	35.	11.	46.	75.	293.	157.	1.00	116.	605.	721.

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AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	18.	36.	57.	293.	50.	167.	1.00	116.	605.	721.
			25	18.	36.	57.	647.	50.	360.	1.57	116.	2075.	2191.
17	BEND	1	25	57.	18.	36.	360.	647.	50.	1.57	71.	698.	769.
			19	54.	18.	41.	309.	728.	232.	1.57	71.	776.	847.
18	BEND	1	19	54.	18.	41.	309.	728.	232.	1.57	71.	776.	847.
			26	36.	18.	57.	78.	774.	392.	1.57	71.	819.	890.
19	TAN	1	26	18.	57.	36.	774.	392.	78.	1.57	116.	2435.	2551.
			20	18.	57.	36.	784.	392.	94.	1.00	116.	1565.	1681.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.016652867	0.021110348	0.015565410
2	11	0.016652867	0.021110348	0.015565410
3	9	0.013766859	0.016879302	0.016626775

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	2946.	3	3062.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	26.	23.	34.	795.	956.	108.
15	34.	69.	0.	0.	0.	0.
20	18.	36.	57.	784.	94.	392.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "LODC" TIME IS   10.17 ** LAST STEP "REDA" TIME IS    9.58 ** DELTA TIME IS    0.59 *
* ELAPSED SECONDS                           304.3                                293.5                    10.8 *

* CPU SECONDS ** THIS STEP "RESO" TIME IS   10.63 ** LAST STEP "LODC" TIME IS   10.17 ** DELTA TIME IS    0.46 *
* ELAPSED SECONDS                           318.2                                304.3                    13.9 *

* CPU SECONDS ** THIS STEP "REDA" TIME IS   10.68 ** LAST STEP "RESO" TIME IS   10.63 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           319.0                                318.2                     0.8 *
```

2-CFG-194
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** Z-VERTICAL SSE+SRV+CHUG

R M S RESULTANT DISPLACEMENTS AND ACCELERATIONS
(IN GLOBAL COORDINATE SYSTEM)

JOINT	DISPLACEMENT (INCHES) X1	X2	X3	ROTATION (RADIANS) R1	R2	R3	ACCELERATION (PERCENT G) A1	A2	A3
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0003110	0.0002586	0.0000032	0.0001214	0.0001468	0.0000227	2.306	1.971	0.073
3	0.0006788	0.0005628	0.0000048	0.0001767	0.0002144	0.0000341	4.843	4.243	0.110
5	0.0149272	0.0120294	0.0005389	0.0006802	0.0008769	0.0001994	70.471	78.756	2.579
7	0.0154436	0.0143923	0.0110792	0.0008162	0.0009421	0.0002260	72.320	75.135	51.279
8	0.0099172	0.0106599	0.0166210	0.0009373	0.0009060	0.0002189	56.247	63.060	74.415
9	0.0137669	0.0168793	0.0166268	0.0010338	0.0008137	0.0003773	64.822	85.646	74.600
10	0.0166529	0.0211103	0.0155654	0.0010263	0.0006829	0.0004956	76.262	97.054	69.146
12	0.0053600	0.0085508	0.0047542	0.0007252	0.0003868	0.0006111	68.624	63.648	66.892
14	0.0	0.0	0.0046526	0.0003488	0.0002886	0.0004766	0.0	0.0	67.469
15	0.0020407	0.0017335	0.0046424	0.0000699	0.0001738	0.0003909	26.320	12.409	67.269
16	0.0027354	0.0001412	0.0038214	0.0002530	0.0000609	0.0002471	37.784	2.659	58.404
18	0.0000339	0.0000946	0.0000347	0.0000576	0.0000053	0.0000373	0.633	1.698	0.601
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0136952	0.0109830	0.0000290	0.0006759	0.0008700	0.0001969	66.126	74.045	0.663
6	0.0154413	0.0126472	0.0017862	0.0006852	0.0008828	0.0002013	72.238	78.705	8.053
11	0.0050272	0.0095641	0.0050324	0.0007322	0.0003873	0.0006134	70.073	66.383	64.898
13	0.0046404	0.0072881	0.0046642	0.0007182	0.0003868	0.0006077	62.264	56.569	67.759
17	0.0000980	0.0001332	0.0001329	0.0000726	0.0000059	0.0000458	1.716	2.363	2.278
19	0.0000053	0.0000232	0.0000019	0.0000411	0.0000045	0.0000269	0.120	0.449	0.033

2-CFG-104
RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	26.	34.	23.	795.	108.	956.	1.00	82.	1700.	1782.
			2	26.	34.	23.	706.	108.	860.	1.57	82.	2397.	2479.
2	TAN	1	2	26.	34.	23.	706.	108.	860.	1.57	82.	2397.	2479.
			3	26.	34.	23.	662.	108.	812.	1.57	82.	2260.	2341.
3	TAN	1	3	25.	34.	22.	662.	108.	812.	1.57	116.	2946.	3062.
			21	25.	34.	22.	367.	108.	546.	1.57	116.	1865.	1981.
4	BEND	1	21	17.	17.	33.	367.	546.	108.	1.57	71.	627.	698.
			5	31.	17.	29.	265.	554.	288.	1.57	71.	638.	709.
5	BEND	1	5	30.	16.	29.	265.	554.	288.	1.57	71.	638.	709.
			22	33.	16.	17.	84.	530.	390.	1.57	71.	624.	695.
6	TAN	1	22	17.	18.	33.	530.	390.	84.	1.00	116.	1178.	1294.
			6	17.	18.	33.	333.	390.	137.	1.00	116.	942.	1058.
7	BEND	1	6	14.	17.	26.	410.	333.	72.	1.00	116.	947.	1063.
			8	23.	17.	26.	325.	234.	202.	1.00	116.	796.	912.
8	TAN	1	8	23.	14.	17.	303.	234.	234.	1.00	116.	796.	912.
			9	23.	14.	17.	187.	234.	365.	1.00	116.	838.	954.
9	BEND	1	9	9.	12.	13.	310.	296.	252.	1.00	116.	883.	999.
			11	12.	12.	9.	327.	304.	303.	1.00	116.	957.	1073.
10	TAN	1	11	14.	20.	20.	352.	285.	280.	1.00	116.	946.	1061.
			23	14.	20.	20.	287.	285.	133.	1.00	116.	756.	872.
11	BEND	1	23	24.	23.	29.	133.	287.	285.	1.57	71.	401.	472.
			13	26.	23.	26.	297.	305.	157.	1.57	71.	427.	498.
12	BEND	1	13	27.	25.	27.	297.	305.	157.	1.57	71.	427.	498.
			24	30.	25.	25.	303.	306.	160.	1.57	71.	433.	504.
13	TAN	1	24	27.	29.	36.	402.	160.	156.	1.57	116.	1285.	1401.
			15	27.	29.	36.	754.	160.	289.	1.00	116.	1462.	1578.
14	TAN	1	15	8.	36.	35.	754.	160.	289.	1.00	116.	1462.	1578.
			16	3.	36.	35.	511.	160.	217.	1.00	116.	1026.	1142.
15	BEND	1	16	38.	11.	43.	222.	511.	153.	1.00	116.	1026.	1142.
			18	35.	11.	46.	75.	293.	157.	1.00	116.	605.	721.

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

LOAD NUMBER 4 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	18	18.	36.	57.	293.	50.	167.	1.00	116.	605.	721.
			25	18.	36.	57.	647.	50.	360.	1.57	116.	2075.	2191.
17	BEND	1	25	57.	18.	36.	360.	647.	50.	1.57	71.	698.	769.
			19	54.	18.	41.	309.	728.	232.	1.57	71.	776.	847.
18	BEND	1	19	54.	18.	41.	309.	728.	232.	1.57	71.	776.	847.
			26	36.	18.	57.	78.	774.	392.	1.57	71.	819.	890.
19	TAN	1	26	18.	57.	36.	774.	392.	78.	1.57	116.	2435.	2551.
			20	18.	57.	36.	784.	392.	94.	1.00	116.	1565.	1681.

RMS STRESS COMPUTATIONS FOR THE EARTHQUAKE ANALYSES.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: Z-VERTICAL SSE+SRV+CHUG

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	11	0.016652867	0.021110348	0.015565410
2	11	0.016652867	0.021110348	0.015565410
3	9	0.013766859	0.016879302	0.016626775

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	3	2946.	3	3062.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	26.	23.	34.	795.	956.	108.
15	34.	69.	0.	0.	0.	0.
20	18.	36.	57.	784.	94.	392.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 15 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "LODC" TIME IS   11.25 ** LAST STEP "REDA" TIME IS   10.68 ** DELTA TIME IS    0.57 *
* ELAPSED SECONDS                           327.7                                319.0                       8.7 *

* CPU SECONDS ** THIS STEP "SUPT" TIME IS   11.34 ** LAST STEP "LODC" TIME IS   11.25 ** DELTA TIME IS    0.09 *
* ELAPSED SECONDS                           330.6                                327.7                       2.9 *

* CPU SECONDS ** THIS STEP "SSMC" TIME IS   11.34 ** LAST STEP "SUPT" TIME IS   11.34 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           330.6                                330.6                       0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   11.36 ** LAST STEP "SSMC" TIME IS   11.34 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           330.8                                330.6                       0.1 *
```

[illegible]

River [illegible]

MECHANICAL DESIGN REPORT
00-4-1371-54.30-04A
Addenda No. 1

Post LOCA Hydrogen Recombiner System
Washington Public Power Supply System
WPPSS Nuclear Proj. #2 - Contract #2808-71

Air Products & Chemicals, Inc.

Computer Output
Book 2 of 3

2"-CFG-105-SS.5N-SP
2"-CW-112-CS.3N-SP2
2"-CFG-115-SS.5N-SP
1/2"-CW-117-CS.3N-SP2

GROUP 5

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS 00-4-1371 GROUP 5
GEOMETRY
GROUP 5 LINES 105 112 115 117
COORDINATES FEET
1 0 0 0
63 0 0 -.59
64 0 0 -.84
65 0 .13 -.72
4 0 0 -2.39
7 -1 0 0 4
8 -1 0 -.5 4
9 0 0 -1 7
11 1.3 0 0 9
13 .73 0 0 11
15 0 .6 0 13
16 0 .516 -.72
18 0 .333 0 16
19 0 .5 0 18
20 0 1.042 0 18
21 .5 0 0 20
22 .7 0 0 20
23 .23 0 0 22
26 .19 -.5 0 101
28 0 -2.7 0 26
30 0 0 .75 28
104 0 0 1.33 30
32 0 0 1 104
44 .19 1.45 0 101
47 .75 0 -2.8 44
48 0 -.44 0 47
46 -.1 0 .36 47
66 0 -1.22 0 47
68 0 -1.34 -.13 47
67 0 -1.47 0 47
50 0 -.47 0 67
52 0 0 -.74 68
54 0 -2.31 0 52
56 0 -2.25 0 54
58 0 0 2.7 56
59 0 0 3.07 58
61 0 0 .5 59
62 0 0 .48 61
69 0 .48 0 18
70 0 0 -.42  69
101 .74 0 0 20
100 .19 -.19 0 101
102 .19 .19 0 101
BOUNDARY
1 ANCHOR
11 YSTOP
15 ANCHOR
22 YZSTOP
26 ZXSTOP
30 XYSTOP
32 SPECIAL 1 1 1 0 0 0
50 ANCHOR
54 ZXSTOP
58 XYSTOP
```

```
62 SPECIAL 1 1 1 0 0 0
MATERIAL SA106GR.B
70 27900000 .3 .00000607
96 27900000 .3 .00000613
150 27700000 .3 .00000625
212 27700000 .3 .00000638
MATERIAL SA312
70 28300000 .3 .00000911
150 28300000 .3 .00000925
180 28300000 .3 .0000093
212 28300000 .3 .00000934
SIF
100 2.1 2.1
101 2.1 2.1
BRANCH 1 SA312 23.9 1
RUN 1 63 2.375 .154 3.65 2
TEE RUN 1 63 WELDED 100
FULL 2.375 .218 5.02
TEE RUN 1 64 WELDED 100
FULL
TEE BRANCH 1 65 WELDED 100
FULL
RUN 64 0 2.375 .154 3.65 2
ELBOW 4 .13 2.375 .218 5.02 0 101
RUN 0 0 2.375 .154 3.65
ELBOW 7 .5 2.375 .154 3.65 0 101 0 SPECIAL 0 8
ELBOW 9 .5 2.375 .154 3.65 0 101 0 SPECIAL 8 0
RUN 0 11
RUN 11 0 0 0 0 2
ELBOW 13 .13 2.375 .218 5.02 0 101
RUN 0 15 2.375 .154 3.65 2
RUN 65 16 2.375 .154 3.65 3
RUN 16 18 2.375 .218 5.02 3
BRANCH 2 SA312 23 2
RUN 18 69 1.9 .145 2.72 1
RUN 69 19 1.9 .145 2.72 2
RUN 69 70 1.05 .113 .231
RUN 19 20 2.375 .218 5.02 1
RUN 20 21 0 0 0 2
RUN 21 22 3.5 .216 7.58 1
RUN 22 101 0 0 0 2
TEE BRANCH 2 101 WELDED 100
FULL 3.5 .3 10.3
TEE RUN 2 102 WELDED 100
FULL
TEE RUN 2 100 WELDED 100
FULL
RUN 100 26 3.5 .216 7.58 1
RUN 26 0 0 0 0 0 0 2
ELBOW 28 .5
RUN 0 30
RUN 30 104
RUN 104 32
BRANCH 3 SA106GR.B 23 3
RUN 102 0 2.375 .218 5.02
ELBOW 44 .5
RUN 0 46 0 0 0 3
BRANCH 4 SA106GR.B 220 4
RUN 46 47 2.375 .5 6.3 1
RUN 47 48 2.375 .5 6.3 2
```

```
RUN 48 66 1.315 .179 2.43 3
TEE RUN 3 66 WELDED 100
FULL 2.375 .218 6.3
TEE RUN 3 67 WELDED 100
FULL
TEE BRANCH 3 68 WELDED 100
FULL
RUN 67 50 2.375 .218 6.3 3
RUN 68 0 0 0 0 3
ELBOW 52 .13 2.375 .218 6.3 0 101
RUN 0 54 2.375 .218 6.3 1 0 2
RUN 54 0 0 0 0 0 0 2
ELBOW 56 .5
RUN 0 58 0 0 0 0 0 2
RUN 58 59 0 0 0 0 0 2
VALVE 59 61 2.375 .5 47 3
RUN 61 62 2.375 .218 6.3
LOAD 1
DESIGN
DEADWEIGHT -Y 1.0
FORCE 16 0 12
FORCE 20 0 62
FORCE 47 0 51
FORCE 70 0 5
LOAD 2
VERTICAL +Y
DEADWEIGHT +Y 1.0
FORCE 16 0 12
FORCE 20 0 62
FORCE 47 0 51
FORCE 70 0 5
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
FORCE 16 12
FORCE 20 62
FORCE 47 51
FORCE 70 5
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
FORCE 16 12
FORCE 20 62
FORCE 47 51
FORCE 70 5
LOAD 5
HORIZONTAL +Z
DEADWEIGHT +Z 1.0
FORCE 16 0 0 12
FORCE 20 0 0 62
FORCE 47 0 0 51
FORCE 70 0 0 5
LOAD 6
HORIZONTAL -Z
DEADWEIGHT -Z 1.0
FORCE 16 0 0 12
FORCE 20 0 0 62
FORCE 47 0 0 51
FORCE 70 0 0 5
LOAD 7
```

```
THERMAL
THERMAL 1 180 0 0 0 70
THERMAL 2 212 0 0 0 70
THERMAL 3 212 0 0 0 70
THERMAL 4 150 0 0 0 70
MOVEMENT 1 0 .023
MOVEMENT 15 -.003
MOVEMENT 22 0 .05
MOVEMENT 50 .007
SUPERPOSITION
GROUP-5
16 2 1 -4
OBE + SRV XY
3
1 1.0 2 2.16 3 2.20
OBE + SRV X-Y
2
1 3.16 3 2.2
OBE + SRV ZY
3
1 1.0 2 2.16 5 2.2
OBE + SRV Z-Y
2
1 3.16 5 2.2
OBE + SRV -XY
3
1 1.0 2 2.16 4 2.2
OBE + SRV -X-Y
2
1 3.16 4 2.2
OBE + SRV -ZY
3
1 1.0 2 2.16 6 2.2
OBE + SRV -Z-Y
2
1 3.16 6 2.2
SSE + SRV + LOCA XY
3
1 1.0 2 2.26 3 2.3
SSE + SRV + LOCA X-Y
2
1 3.26 3 2.3
SSE + SRV + LOCA ZY
3
1 1.0 2 2.26 5 2.3
SSE + SRV + LOCA Z-Y
2
1 3.26 5 2.3
SSE + SRV + LOCA -XY
3
1 1.0 2 2.26 4 2.3
SSE + SRV + LOCA -X-Y
2
1 3.26 4 2.3
SSE + SRV + LOCA -ZY
3
1 1.0 2 2.260 6 2.3
SSE + SRV + LOCA -Z-Y
2
1 3.26 6 2.3
```

END OF JOB

```
     1    31     0     0                                                    PD1
WPPSS 00-4-1371 GROUP 5
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                              P 1
GROUP 5 LINES 105 112 115 117                                               P 2
    64    66     7     0    11    14     8     2     0     4     4     0   P 3
     6     3     1     2     1     0     0                                 P 4
     1    66     8     0     0   105     2                                 P 5
     1   0.0          0.0          0.0          0                         P 7
     4  -0.45691      0.0       -28.22305       0                         P 7
     7 -10.24264      0.0       -30.43735       0                         P 7
     8 -12.00000      0.0       -34.67999       0                         P 7
     9 -10.24264      0.0       -38.92262       0                         P 7
    11   3.59999      0.0       -40.67999       0                         P 7
    13  11.90308      0.45691   -40.67999       0                         P 7
    15  12.35999      7.20000   -40.67999       0                         P 7
    16   0.0          6.19200    -8.64000       0                         P 7
    18   0.0         10.18800    -8.64000       0                         P 7
    19   0.0         16.18799    -8.64000       0                         P 7
    20   0.0         22.69199    -8.64000       0                         P 7
    21   6.00000     22.69199    -8.64000       0                         P 7
    22   8.40000     22.69199    -8.64000       0                         P 7
    23  11.16000     22.69199    -8.64000       0                         P 7
    26  11.16000     16.69199    -8.64000       0                         P 7
    28  11.16000    -13.95065    -6.88264       0                         P 7
    30  11.16000    -15.70801     0.36000       0                         P 7
    32  11.16000    -15.70801    28.31999       0                         P 7
    44  11.61237     38.33461   -10.33814       0                         P 7
    46  18.95998     40.09198   -37.91998       0                         P 7
    47  20.15999     40.09198   -42.23999       0                         P 7
    48  20.15999     34.81197   -42.23999       0                         P 7
    50  20.15999     16.81200   -42.23999       0                         P 7
    52  20.15999     23.55505   -52.22304       0                         P 7
    54  20.15999     -3.70799   -52.67998       0                         P 7
    56  20.15999    -28.95062   -50.92261       0                         P 7
    58  20.15999    -30.70799   -20.27998       0                         P 7
    59  20.15999    -30.70799    16.56001       0                         P 7
    61  20.15999    -30.70799    22.56001       0                         P 7
    62  20.15999    -30.70799    28.32001       0                         P 7
    63   0.0          0.0        -7.08000       0                         P 7
    64   0.0          0.0       -10.08000       0                         P 7
    65   0.0          1.56000    -8.64000       0                         P 7
    66  20.15999     25.45198   -42.23999       0                         P 7
    67  20.15999     22.45200   -42.23999       0                         P 7
    68  20.15999     24.01199   -43.79999       0                         P 7
    69   0.0         15.94800    -8.64000       0                         P 7
    70   0.0         15.94800   -13.68000       0                         P 7
   100  11.16000     20.41197    -8.64000       0                         P 7
   101   8.88000     22.69199    -8.64000       0                         P 7
   102  11.16000     24.97198    -8.64000       0                         P 7
   104  11.16000    -15.70801    16.31999       0                         P 7
   105   0.0          0.0        -8.57999       0                         P 7
   106   0.0          0.0       -27.11998       0                         P 7
   107  -1.56000      0.0       -28.67999       0                         P 7
   108  -6.00000      0.0       -28.67999       0                         P 7
   109  -6.00000      0.0       -40.67999       0                         P 7
   110  10.79999      0.0       -40.67999       0                         P 7
   111  12.35999      1.56000   -40.67999       0                         P 7
   112  11.16000     22.69197    -8.64000       0                         P 7
```

```
  113    11.16000     3.49199    -8.64000     0                                P 7
  114    11.16000    -9.70801    -8.64000     0                                P 7
  115    11.16000   -15.70801    -2.64000     0                                P 7
  116    11.16000    34.09198    -8.64000     0                                P 7
  117    12.70449    40.09198   -14.43780     0                                P 7
  118    20.15999    23.95198   -42.23999     0                                P 7
  119    20.15999    24.01199   -51.11996     0                                P 7
  120    20.15999    22.45198   -52.67998     0                                P 7
  121    20.15999     9.37199   -52.67998     0                                P 7
  122    20.15999   -14.20799   -52.67998     0                                P 7
  123    20.15999   -24.70799   -52.67998     0                                P 7
  124    20.15999   -30.70799   -46.67998     0                                P 7
  125    20.15999.  -30.70799   -33.47998     0                                P 7
  126    20.15999   -30.70799    -1.85999     0                                P 7
  127    20.15999   -30.70799    19.56001     0                                P 7
  140    -1.56000     0.0       -27.11998     0                                P 7
  141    -6.00000     0.0       -34.67999     0                                P 7
  142    -6.00000     0.0       -34.67999     0                                P 7
  143    10.79999     1.56000   -40.67999     0                                P 7
  144    11.16000    -9.70801    -2.64000     0                                P 7
  145    12.70449    34.09198   -14.43780     0                                P 7
  146    20.15999    22.45198   -51.11996     0                                P 7
  147    20.15999   -24.70799   -46.67998     0                                P 7
 1  3     2.3750      0.1540     2.0000      0.0         0.0         0.0       P11D
 2  3     2.3750      0.2180     2.0000      0.0         0.0         0.0       P11D
 3  4     2.3750      0.2180     2.0000      0.0         0.0         0.0       P11D
 4  4     2.3750      0.1540     2.0000      0.0         0.0         0.0       P11D
 5  3     1.9000      0.1450     2.0000      0.0         0.0         0.0       P11D
 6  3     1.0500      0.1130     2.0000      0.0         0.0         0.0       P11D
 7  3     3.5000      0.2160     2.0000      0.0         0.0         0.0       P11D
 8  3     3.5000      0.3000     2.0000      0.0         0.0         0.0       P11D
 9  4     3.5000      0.2160     2.0000      0.0         0.0         0.0       P11D
10  3     2.3750      0.5000     2.0000      0.0         0.0         0.0       P11D
11  3     1.3150      0.1790     2.0000      0.0         0.0         0.0       P11D
12  3     2.3750      0.2180     2.0000      0.0         0.0         0.0       P11D
13  4     2.3750      0.2180     2.0000      0.0         0.0         0.0       P11D
14  3     2.3750      0.5000     2.0000      0.0         0.0         0.0       P11D
 1  5     2.3750      0.2180     2.3750      0.2180      0.0         0.0       P12
 2  5     3.5000      0.3000     3.5000      0.3000      0.0         0.0       P12
  100    2.099999    2.099999   -1.000000                                      P 12.1
  101    2.099999    2.099999   -1.000000                                      P 12.1
   0.304    0.418     0.418     0.304     0.227     0.019     0.632     0.858  P13
   0.632    0.525     0.207     0.525     0.525     7.833
 1  4 0.70000E 02 0.27900E 08 0.30000E 00 0.60700E-05     0.0   0.0   0.0      P14
      0.96000E 02 0.27900E 08 0.30000E 00 0.61300E-05     0.0   0.0   0.0      P14A
      0.15000E 03 0.27700E 08 0.30000E 00 0.62500E-05     0.0   0.0   0.0      P14A
      0.21200E 03 0.27700E 08 0.30000E 00 0.63800E-05     0.0   0.0   0.0      P14A
 2  4 0.70000E 02 0.28300E 08 0.30000E 00 0.91100E-05     0.0   0.0   0.0      P14
      0.15000E 03 0.28300E 08 0.30000E 00 0.92500E-05     0.0   0.0   0.0      P14A
      0.18000E 03 0.28300E 08 0.30000E 00 0.93000E-05     0.0   0.0   0.0      P14A
      0.21200E 03 0.28300E 08 0.30000E 00 0.93400E-05     0.0   0.0   0.0      P14A
   23.89999    23.00000   220.00000     0.0         0.0         0.0            P15
   0.0                                                                          P16A
   1                                                                            P16B
   1   180.00000     0.0         0.0         0.0         70.00000             P16C
   2   212.00000     0.0         0.0         0.0         70.00000             P16C
   3   212.00000     0.0         0.0         0.0         70.00000             P16C
   4   150.00000     0.0         0.0         0.0         70.00000             P16C
   1     0.0        -1.00000     0.0                                          P17
   2     0.0         1.00000     0.0                                          P17
```

```
    3     1.00000      0.0          0.0                                    P17
    4    -1.00000      0.0          0.0                                    P17
    5     0.0          0.0          1.00000                                P17
    6     0.0          0.0         -1.00000                                P17
 1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
11  0 0.0       0.100E 01 0.0       0.0       0.0       0.0               P18
15  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
22  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0               P18
26  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0               P18
30  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
32  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0               P18
50  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
54  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0               P18
58  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
62  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0               P18
    4                                                                     P20
    1 0.0       0.230E-01 0.0       0.0       0.0       0.0               P20A
    2-0.300E-02 0.0       0.0       0.0       0.0       0.0               P20A
    3 0.0       0.500E-01 0.0       0.0       0.0       0.0               P20A
    4 0.700E-02 0.0       0.0       0.0       0.0       0.0               P20A
  1   1  631001   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    2    1    0   0   1                                              P21B
  2  63 105  65   2   1   1   2   2   2   1   0   0   0   0  0.0          P21
   1  100    1    1   1   1                                              P21B
  3  64 105  65   2   1   1   2   2   2   1   0   0   0   0  0.0          P21
   1  100    1    1   1   1                                              P21B
  4  65 105  63   2   1   1   2   2   2   1   0   0   0   0  0.0          P21
   1  100    1    2   1   1                                              P21B
  5  64 1061001   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    2    1    0   0   1                                              P21B
  6 106    4 140   2   2   1   3   3   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
  7   4 107 140   2   2   1   3   3   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
  8 107 1081002   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    0    1    0   0   1                                              P21B
  9 108    7 141   2   2   1   4   4   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 10   7    8 141   2   2   1   4   4   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 11   8    9 142   2   2   1   4   4   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 12   9 109 142   2   2   1   4   4   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 13 109  111002   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    0    1    0   0   1                                              P21B
 14  11 1101002   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    2    1    0   0   1                                              P21B
 15 110   13 143   2   2   1   3   3   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 16  13 111 143   2   2   1   3   3   1   1   0   0   0   0  0.0          P21
   1  101    1    0   0   1                                              P21B
 17 111  151001   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    2    1    0   0   1                                              P21B
 18  65  161001   2   1   1   1   1   1   1   0   0   0   0  0.0          P21
   1    3    1    0   0   1                                              P21B
 19  16  181001   2   1   1   2   2   1   1   0   0   0   0  0.0          P21
   1    3    1    0   0   1                                              P21B
 20  18  691001   2   1   1   5   5   1   1   0   0   0   0  0.0          P21
   2    1    2    0   0   2                                              P21B
```

21	69	191001	2	1	1	5	5	1	1	0	0	0	0	0.0		P21
2	2	2	0	0	2											P21B
22	69	701001	2	1	1	6	6	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
23	19	201001	2	1	1	2	2	1	1	0	0	0	0	0.0		P21
2	1	2	0	0	2											P21B
24	20	211002	2	1	1	2	2	1	1	0	0	0	0	0.0		P21
2	2	2	0	0	2											P21B
25	21	221002	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	1	2	0	0	2											P21B
26	22	1011002	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	2	2	0	0	2											P21B
27	101	112 102	2	1	1	8	8	2	1	0	0	0	0	0.0		P21
2	100	2	2	2	2											P21B
28	102	112 101	2	1	1	8	8	2	1	0	0	0	0	0.0		P21
2	100	2	1	2	2											P21B
29	100	112 101	2	1	1	8	8	2	1	0	0	0	0	0.0		P21
2	100	2	1	2	2											P21B
30	100	261001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	1	2	0	0	2											P21B
31	26	1131001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
32	113	1141001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
33	114	28 144	2	2	1	9	9	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
34	28	115 144	2	2	1	9	9	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
35	115	301001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
36	30	1041001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
37	104	321001	2	1	1	7	7	1	1	0	0	0	0	0.0		P21
2	0	2	0	0	2											P21B
38	102	1161001	1	1	1	2	2	1	1	0	0	0	0	0.0		P21
2	0	3	0	0	3											P21B
39	116	44 145	1	2	1	3	3	1	1	0	0	0	0	0.0		P21
2	0	3	0	0	3											P21B
40	44	117 145	1	2	1	3	3	1	1	0	0	0	0	0.0		P21
2	0	3	0	0	3											P21B
41	117	461001	1	1	1	2	2	1	1	0	0	0	0	0.0		P21
2	3	3	0	0	3											P21B
42	46	471001	1	1	1	10	10	1	1	0	0	0	0	0.0		P21
3	1	4	0	0	4											P21B
43	47	481001	1	1	1	10	10	1	1	0	0	0	0	0.0		P21
3	2	4	0	0	4											P21B
44	48	661001	1	1	1	11	11	1	1	0	0	0	0	0.0		P21
3	3	4	0	0	4											P21B
45	66	118 68	1	1	1	12	12	2	1	0	0	0	0	0.0		P21
3	100	4	1	1	4											P21B
46	67	118 68	1	1	1	12	12	2	1	0	0	0	0	0.0		P21
3	100	4	1	1	4											P21B
47	68	118 66	1	1	1	12	12	2	1	0	0	0	0	0.0		P21
3	100	4	2	1	4											P21B
48	67	501001	1	1	1	12	12	1	1	0	0	0	0	0.0		P21
3	3	4	0	0	4											P21B
49	68	1191001	1	1	1	12	12	1	1	0	0	0	0	0.0		P21
3	3	4	0	0	4											P21B
50	119	52 146	1	2	1	13	13	1	1	0	0	0	0	0.0		P21
3	101	4	0	0	4											P21B

```
51  52 120 146    1    2    1  13  13    1    1    0    0    0    0  0.0          P21
  3  101    4     0    0    4                                                     P21B
52 120 1211001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    1    4     0    0    4                                                     P21B
53 121  541001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    1    4     0    0    4                                                     P21B
54  54 1221001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
55 122 1231001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
56 123  56 147    1    2    1  13  13    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
57  56 124 147    1    2    1  13  13    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
58 124 1251001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
59 125  581001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
60  58 1261001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
61 126  591001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
62  59 1271001    1    1    1  14  14    1    1    0    0    0    0  0.0          P21
  3    3    4     0    0    4                                                     P21B
63 127  611001    1    1    1  14  14    1    1    0    0    0    0  0.0          P21
  3    3    4     0    0    4                                                     P21B
64  61  621001    1    1    1  12  12    1    1    0    0    0    0  0.0          P21
  3    0    4     0    0    4                                                     P21B
  0                                                                               P22
1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0            P32
7                                                                                 P33
1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0              P34
   7
1  1                                                                              P37
   7  1     0  0     0  0     0  0     0  0     0  0     0  0     0  0           P38
15  1                                                                              P37
   7  2     0  0     0  0     0  0     0  0     0  0     0  0     0  0           P38
22  1                                                                              P37
   7  3     0  0     0  0     0  0     0  0     0  0     0  0     0  0           P38
50  1                                                                              P37
   7  4     0  0     0  0     0  0     0  0     0  0     0  0     0  0           P38
  16     6                                                                        P39
   1     00.0        0.1200E 020.0        0.0        0.0        0.0              P40
   2     00.0        0.1200E 020.0        0.0        0.0        0.0              P40
   3     00.1200E 020.0        0.0        0.0        0.0        0.0              P40
   4     00.1200E 020.0        0.0        0.0        0.0        0.0              P40
   5     00.0        0.0        0.1200E 020.0        0.0        0.0              P40
   6     00.0        0.0        0.1200E 020.0        0.0        0.0              P40
  20     6                                                                        P39
   1     00.0        0.6200E 020.0        0.0        0.0        0.0              P40
   2     00.0        0.6200E 020.0        0.0        0.0        0.0              P40
   3     00.6200E 020.0        0.0        0.0        0.0        0.0              P40
   4     00.6200E 020.0        0.0        0.0        0.0        0.0              P40
   5     00.0        0.0        0.6200E 020.0        0.0        0.0              P40
   6     00.0        0.0        0.6200E 020.0        0.0        0.0              P40
  47     6                                                                        P39
   1     00.0        0.5100E 020.0        0.0        0.0        0.0              P40
   2     00.0        0.5100E 020.0        0.0        0.0        0.0              P40
   3     00.5100E 020.0        0.0        0.0        0.0        0.0              P40
   4     00.5100E 020.0        0.0        0.0        0.0        0.0              P40
```

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     5      00.0        0.0        0.5100E 020.0        0.0        0.0        P40
     6      00.0        0.0        0.5100E 020.0        0.0        0.0        P40
    70      6                                                                  P39
     1      00.0        0.5000E 010.0        0.0        0.0        0.0        P40
     2      00.0        0.5000E 010.0        0.0        0.0        0.0        P40
     3      00.5000E 010.0        0.0        0.0        0.0        0.0        P40
     4      00.5000E 010.0        0.0        0.0        0.0        0.0        P40
     5      00.0        0.0        0.5000E 010.0        0.0        0.0        P40
     6      00.0        0.0        0.5000E 010.0        0.0        0.0        P40
999999                                                                        P41
DESIGN                                                                        P41
VERTICAL +Y                                                                   P41
HORIZONTAL +X                                                                 P41
HORIZONTAL -X                                                                 P41
HORIZONTAL +Z                                                                 P41
HORIZONTAL -Z                                                                 P41
THERMAL                                                                       P41
    11     1     0     0     1                                               P 1
GROUP-5                                                                       P 2
    64    66    16     0     2     1    -4                                   P60
     3                                                                        P61
OBE + SRV XY                                                                  P62
  1   1.0000  2   2.1600  3   2.2000
     2                                                                        P61
OBE + SRV X-Y                                                                 P62
  1   3.1600  3   2.2000
     3                                                                        P61
OBE + SRV ZY                                                                  P62
  1   1.0000  2   2.1600  5   2.2000
     2                                                                        P61
OBE + SRV Z-Y                                                                 P62
  1   3.1600  5   2.2000
     3                                                                        P61
OBE + SRV -XY                                                                 P62
  1   1.0000  2   2.1600  4   2.2000
     2                                                                        P61
OBE + SRV -X-Y                                                                P62
  1   3.1600  4   2.2000
     3                                                                        P61
OBE + SRV -ZY                                                                 P62
  1   1.0000  2   2.1600  6   2.2000
     2                                                                        P61
OBE + SRV -Z-Y                                                                P62
  1   3.1600  6   2.2000
     3                                                                        P61
SSE + SRV + LOCA XY                                                           P62
  1   1.0000  2   2.2600  3   2.3000
     2                                                                        P61
SSE + SRV + LOCA X-Y                                                          P62
  1   3.2600  3   2.3000
     3                                                                        P61
SSE + SRV + LOCA ZY                                                           P62
  1   1.0000  2   2.2600  5   2.3000
     2                                                                        P61
SSE + SRV + LOCA Z-Y                                                          P62
  1   3.2600  5   2.3000
     3                                                                        P61
SSE + SRV + LOCA -XY                                                          P62
  1   1.0000  2   2.2600  4   2.3000
     2                                                                        P61
```

```
SSE + SRV + LOCA -X-Y                                                    P62
  1   3.2600  4   2.3000
      3                                                                  P61
SSE + SRV + LOCA -ZY                                                     P62
  1   1.0000  2   2.2600  6   2.3000
      2                                                                  P61
SSE + SRV + LOCA -Z-Y                                                    P62
  1   3.2600  6   2.3000
      0                                                                  P68
      0                                                                  PD1
      0                                                                   PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.32 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.32 *
* ELAPSED SECONDS                             1.1                                 0.0                        1.1 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	64
TOTAL NUMBER OF STRUCTURAL JOINTS	66
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	8
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	11
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	4
TOTAL NUMBER OF CROSS-SECTION TYPES	14
TOTAL NUMBER OF MATERIALS	2
TOTAL NUMBER OF PIPE PRESSURES	3
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	66
TOTAL FICTIOUS JOINTS READ IN	8
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	2
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
4	-0.456910	0.0	-28.223038
7	-10.242640	0.0	-30.437347
8	-12.000000	0.0	-34.679977
9	-10.242640	0.0	-38.922607
11	3.599990	0.0	-40.679977
13	11.903080	0.456910	-40.679977
15	12.359989	7.200000	-40.679977
16	0.0	6.191999	-8.639999
18	0.0	10.188000	-8.639999
19	0.0	16.187988	-8.639999
20	0.0	22.691986	-8.639999
21	6.000000	22.691986	-8.639999
22	8.400000	22.691986	-8.639999
23	11.160000	22.691986	-8.639999
26	11.160000	16.691986	-8.639999
28	11.160000	-13.950649	-6.882640
30	11.160000	-15.708010	0.360000
32	11.160000	-15.708010	28.319977
44	11.612370	38.334610	-10.338140
46	18.959976	40.091980	-37.919968
47	20.159988	40.091980	-42.239975
48	20.159988	34.811966	-42.239975
50	20.159988	16.811996	-42.239975
52	20.159988	23.555038	-52.223038
54	20.159988	-3.707990	-52.679977
56	20.159988	-28.950607	-50.922607
58	20.159988	-30.707977	-20.279968
59	20.159988	-30.707977	16.559998
61	20.159988	-30.707977	22.559998
62	20.159988	-30.707977	28.320007
63	0.0	0.0	-7.080000
64	0.0	0.0	-10.080000
65	0.0	1.559999	-8.639999
66	20.159988	25.451965	-42.239975
67	20.159988	22.451996	-42.239975
68	20.159988	24.011978	-43.799988
69	0.0	15.948000	-8.639999
70	0.0	15.948000	-13.679999
100	11.160000	20.411957	-8.639999
101	8.879999	22.691986	-8.639999
102	11.160000	24.971970	-8.639999
104	11.160000	-15.708010	16.319977
105	0.0	0.0	-8.579989
106	0.0	0.0	-27.119980
107	-1.559999	0.0	-28.679977
108	-6.000000	0.0	-28.679977
109	-6.000000	0.0	-40.679977
110	10.799990	0.0	-40.679977
111	12.359989	1.559999	-40.679977
112	11.160000	22.691956	-8.639999
113	11.160000	3.491989	-8.639999
114	11.160000	-9.708010	-8.639999
115	11.160000	-15.708010	-2.639999
116	11.160000	34.091980	-8.639999
117	12.704490	40.091980	-14.437799

118	20.159988	23.951965	-42.239975
119	20.159988	24.011978	-51.119949
120	20.159988	22.451965	-52.679977
121	20.159988	9.371989	-52.679977
122	20.159988	-14.207990	-52.679977
123	20.159988	-24.707977	-52.679977
124	20.159988	-30.707977	-46.679977
125	20.159988	-30.707977	-33.479965
126	20.159988	-30.707977	-1.859989
127	20.159988	-30.707977	19.559998
140	-1.559999	0.0	-27.119980
141	-6.000000	0.0	-34.679977
142	-6.000000	0.0	-34.679977
143	10.799990	1.559999	-40.679977
144	11.160000	-9.708010	-2.639999
145	12.704490	34.091980	-14.437799
146	20.159988	22.451965	-51.119949
147	20.159988	-24.707977	-46.679977

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	2.375	0.154	.1075E 01	.6657E 00	.1331E 01	.6657E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
2	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
3	C	2.375	0.218	.1477E 01	.8679E 00	.8679E 00	.1736E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
4	C	2.375	0.154	.1075E 01	.6657E 00	.6657E 00	.1331E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
5	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
6	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
7	S	3.500	0.216	.2228E 01	.3017E 01	.6034E 01	.3017E 01	2.0	2.0	1.75	0.0	0.0	1.75	-1.75	0.0	0.0	-1.75
8	S	3.500	0.300	.3016E 01	.3894E 01	.7789E 01	.3894E 01	2.0	2.0	1.75	0.0	0.0	1.75	-1.75	0.0	0.0	-1.75
9	C	3.500	0.216	.2228E 01	.3017E 01	.3017E 01	.6034E 01	2.0	2.0	1.75	0.0	0.0	1.75	-1.75	0.0	0.0	-1.75
10	S	2.375	0.500	.2945E 01	.1386E 01	.2773E 01	.1386E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
11	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
12	S	2.375	0.218	.1477E 01	.8679E 00	.1736E 01	.8679E 00	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
13	C	2.375	0.218	.1477E 01	.8679E 00	.8679E 00	.1736E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19
14	S	2.375	0.500	.2945E 01	.1386E 01	.2773E 01	.1386E 01	2.0	2.0	1.19	0.0	0.0	1.19	-1.19	0.0	0.0	-1.19

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2375000E 01	.2180000E 00	.2375000E 01	.2180000E 00	.0
2	.3500000E 01	.3000000E 00	.3500000E 01	.3000000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	27900000.00	0.300000	0.000006070	0.0
1-A	96.00	27900000.00	0.300000	0.000006130	0.0
1-B	150.00	27700000.00	0.300000	0.000006250	0.0
1-C	212.00	27700000.00	0.300000	0.000006380	0.0
2	70.00	28300000.00	0.300000	0.000009110	0.0
2-A	150.00	28300000.00	0.300000	0.000009250	0.0
2-B	180.00	28300000.00	0.300000	0.000009300	0.0
2-C	212.00	28300000.00	0.300000	0.000009340	0.0

PRESSURE DATA

TYPE	PRESSURE
1	23.90
2	23.00
3	220.00

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1						
	1	180.000	0.0	0.0	0.0	70.000
	2	212.000	0.0	0.0	0.0	70.000
	3	212.000	0.0	0.0	0.0	70.000
	4	150.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	-1.000000	0.0
2	0.0	1.000000	0.0
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	0.0	1.000000
6	0.0	0.0	-1.000000

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	11	0	0.0	0.10000000E 01	0.0	0.0	0.0	0.0
3	15	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	22	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	26	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
6	30	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
7	32	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
8	50	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
9	54	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
10	58	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
11	62	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0

JOINT DISPLACEMENT DATA

TYPE	X1	X2	X3	THETA 1	THETA 2	THETA 3
1	0.0	0.230000E-01	0.0	0.0	0.0	0.0
2	-.300000E-02	0.0	0.0	0.0	0.0	0.0
3	0.0	0.500000E-01	0.0	0.0	0.0	0.0
4	0.700000E-02	0.0	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.47 ** LAST STEP "BEGP" TIME IS    0.32 ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                             2.0                                 1.1                        0.9 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   65


 BAND-WIDTH =    24  BY D.O.F.          BAND-WIDTH =     4  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.73 ** LAST STEP "DA3D" TIME IS    0.47 ** DELTA TIME IS    0.26 *
* ELAPSED SECONDS                             8.8                                 2.0                        6.8 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

THE FOLLOWING JOINTS HAVE NON-ZERO DISPLACEMENT SPECIFIED

JOINT	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE
5	7	1								
34	7	2								
20	7	3								
49	7	4								

APPLIED CONCENTRATED JOINT LOADS

JOINT	LOAD NO	F1 (LB)	F2 (LB)	F3 (LB)	M1 (IN-LB)	M2 (IN-LB)	M3 (IN-LB)
16	1	0.0	0.12000E 02	0.0	0.0	0.0	0.0
	2	0.0	0.12000E 02	0.0	0.0	0.0	0.0
	3	0.12000E 02	0.0	0.0	0.0	0.0	0.0
	4	0.12000E 02	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.12000E 02	0.0	0.0	0.0
	6	0.0	0.0	0.12000E 02	0.0	0.0	0.0
70	1	0.0	0.50000E 01	0.0	0.0	0.0	0.0
	2	0.0	0.50000E 01	0.0	0.0	0.0	0.0
	3	0.50000E 01	0.0	0.0	0.0	0.0	0.0
	4	0.50000E 01	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.50000E 01	0.0	0.0	0.0
	6	0.0	0.0	0.50000E 01	0.0	0.0	0.0
20	1	0.0	0.62000E 02	0.0	0.0	0.0	0.0
	2	0.0	0.62000E 02	0.0	0.0	0.0	0.0
	3	0.62000E 02	0.0	0.0	0.0	0.0	0.0
	4	0.62000E 02	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.62000E 02	0.0	0.0	0.0
	6	0.0	0.0	0.62000E 02	0.0	0.0	0.0
47	1	0.0	0.51000E 02	0.0	0.0	0.0	0.0
	2	0.0	0.51000E 02	0.0	0.0	0.0	0.0
	3	0.51000E 02	0.0	0.0	0.0	0.0	0.0
	4	0.51000E 02	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.51000E 02	0.0	0.0	0.0
	6	0.0	0.0	0.51000E 02	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.76 ** LAST STEP "JCSO" TIME IS    0.73 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                             9.3                                 8.8                        0.6 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.23646E 09) OCCURS AT THE 131TH DOF
MINIMUM VALUE (0.77143E 05) OCCURS AT THE 80TH DOF
RATIO OF MAX/MIN= 0.30653E 04

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    3.57 ** LAST STEP "INPT" TIME IS    0.76 ** DELTA TIME IS    2.81 *
* ELAPSED SECONDS                            17.6                                 9.3                        8.3 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    5.18 ** LAST STEP "EQ3D" TIME IS    3.57 ** DELTA TIME IS    1.61 *
* ELAPSED SECONDS                            29.3                                17.6                       11.7 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	63	1001	2	1	1	1	2	1	1	1	7.08000	0.30409			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	63	105	65	2	1	2	1	100	1	1	2	1.49999	0.41800			0.0	1.000000	0.0
																0.0	0.0	1.000000
																1.000000	0.0	0.0
3	64	105	65	2	1	2	1	100	1	1	2	1.50001	0.41800			0.0	1.000000	0.0
																0.0	0.0	-1.000000
																-1.000000	0.0	0.0
4	65	105	63	2	1	2	1	100	1	1	2	1.56115	0.41800			0.0	0.038440	0.999261
																0.0	0.999261	-0.038440
																-1.000000	0.0	0.0
5	64	106	1001	2	1	1	1	2	1	1	1	17.03998	0.30400			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
6	106	4	140	2	2	1	1	101	1	1	3	0.78540	0.41800	RAD=	1.5600	-1.000000	0.0	0.0
														FLX=	5.6434	0.0	-1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
7	4	107	140	2	2	1	1	101	1	1	3	0.78540	0.41800	RAD=	1.5600	-0.707117	0.0	0.707097
														FLX=	5.6435	0.0	-1.000000	0.0
														ECC=	0.0	0.707097	0.0	0.707117
8	107	108	1002	2	1	1	1	0	1	1	1	4.44000	0.30400			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
9	108	7	141	2	2	1	1	101	1	1	4	0.78540	0.30400	RAD=	6.0000	0.0	0.0	-1.000000
														FLX=	2.2022	0.0	1.000000	0.0
														ECC=	0.0	1.000000	0.0	0.0
10	7	8	141	2	2	1	1	101	1	1	4	0.78540	0.30400	RAD=	6.0000	0.707108	0.0	-0.707106
														FLX=	2.2022	0.0	1.000000	0.0
														ECC=	0.0	0.707106	0.0	0.707108
11	8	9	142	2	2	1	1	101	1	1	4	0.78540	0.30400	RAD=	6.0000	1.000000	0.0	0.0
														FLX=	2.2022	0.0	1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
12	9	109	142	2	2	1	1	101	1	1	4	0.78540	0.30400	RAD=	6.0000	0.707108	0.0	0.707106
														FLX=	2.2022	0.0	1.000000	0.0
														ECC=	0.0	-0.707106	0.0	0.707108
13	109	11	1002	2	1	1	1	0	1	1	1	9.59999	0.30400			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
14	11	110	1002	2	1	1	1	2	1	1	1	7.20000	0.30400			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
15	110	13	143	2	2	1	1	101	1	1	3	0.78540	0.41800	RAD=	1.5600	0.0	1.000000	0.0
														FLX=	5.6434	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	0.0	0.0
16	13	111	143	2	2	1	1	101	1	1	3	0.78540	0.41800	RAD=	1.5600	-0.707107	0.707107	0.0
														FLX=	5.6434	0.0	0.0	-1.000000
														ECC=	0.0	-0.707107	-0.707107	0.0
17	111	15	1001	2	1	1	1	2	1	1	1	5.64000	0.30400			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
18	65	16	1001	2	1	1	1	3	1	1	1	4.63200	0.30400			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
19	16	18	1001	2	1	1	1	3	1	1	2	3.99600	0.41800			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
20	18	69	1001	2	1	1	2	1	2	2	5	5.76000	0.22700			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
21	69	19	1001	2	1	1	2	2	2	2	5	0.23999	0.22700			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
22	69	70	1001	2	1	1	2	0	2	2	6	5.04000	0.01900			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
23	19	20	1001	2	1	1	2	1	2	2	2	6.50400	0.41800			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
24	20	21	1002	2	1	1	2	2	2	2	2	6.00000	0.41800			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
25	21	22	1002	2	1	1	2	1	2	2	7	2.40000	0.63200			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
26	22	101	1002	2	1	1	2	2	2	2	7	0.48000	0.63200			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
27	101	112	102	2	1	2	2	100	2	2	8	2.28000	0.85800			0.000013 1.000000 0.0 -1.000000 0.000013 0.0 0.0 0.0 1.000000
28	102	112	101	2	1	2	2	100	2	2	8	2.28001	0.85800			-1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 -1.000000
29	100	112	101	2	1	2	2	100	2	2	8	2.28000	0.85800			-1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 1.000000
30	100	26	1001	2	1	1	2	1	2	2	7	3.71997	0.63200			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
31	26	113	1001	2	1	1	2	0	2	2	7	13.20000	0.63200			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
32	113	114	1001	2	1	1	2	0	2	2	7	13.20000	0.63200			1.000000 0.0 0.0 0.0 1.000000 0.0 0.0 0.0 1.000000
33	114	28	144	2	2	1	2	0	2	2	9	0.78540	0.63200	RAD= FLX= ECC=	6.0000 3.4326 0.0	0.0 0.0 1.000000 1.000000 0.0 0.0 0.0 1.000000 0.0
34	28	115	144	2	2	1	2	0	2	2	9	0.78540	0.63200	RAD= FLX= ECC=	6.0000 3.4326 0.0	0.0 0.707107 0.707107 1.000000 0.0 0.0 0.0 0.707107 -0.707107
35	115	30	1001	2	1	1	2	0	2	2	7	3.00000	0.63200			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
36	30	104	1001	2	1	1	2	0	2	2	7	15.95998	0.63200			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
37	104	32	1001	2	1	1	2	0	2	2	7	12.00000	0.63200			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
38	102	116	1001	1	1	1	2	0	3	3	2	9.12001	0.41800			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
39	116	44	145	1	2	1	2	0	3	3	3	0.78540	0.41800	RAD= FLX= ECC=	6.0000 1.4673 0.0	0.257415 0.0 -0.966301 0.966301 0.000000 0.257415 0.000000 -1.000000 0.000000

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
40	44	117	145	1	2	1	2	0	3	3	3	0.78540	0.41800	RAD=	6.0000	0.182020	-0.707106	-0.683278
														FLX=	1.4673	0.966301	0.0	0.257416
														ECC=	0.0	-0.182020	-0.707107	0.683278
41	117	46	1001	1	1	1	2	3	3	3	2	24.30109	0.41800			0.966301	0.0	0.257416
																-0.257416	0.0	0.966301
																0.0	-1.000000	0.0
42	46	47	1001	1	1	1	3	1	4	4	10	4.48358	0.52500			0.963517	0.0	0.267646
																-0.267646	0.0	0.963517
																0.0	-1.000000	0.0
43	47	48	1001	1	1	1	3	2	4	4	10	5.28001	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
44	48	66	1001	1	1	1	3	3	4	4	11	9.36000	0.20700			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
45	66	118	68	1	1	2	3	100	4	4	12	1.50000	0.52500			0.0	0.0	-1.000000
																0.0	1.000000	0.0
																1.000000	0.0	0.0
46	67	118	68	1	1	2	3	100	4	4	12	1.49997	0.52500			0.0	0.0	-1.000000
																0.0	-1.000000	0.0
																-1.000000	0.0	0.0
47	68	118	66	1	1	2	3	100	4	4	12	1.56117	0.52500			0.0	0.999261	0.038441
																0.0	0.038441	-0.999261
																-1.000000	0.0	0.0
48	67	50	1001	1	1	1	3	3	4	4	12	5.64000	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
49	68	119	1001	1	1	1	3	3	4	4	12	7.31996	0.52500			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
50	119	52	146	1	2	1	3	101	4	4	13	0.78542	0.52500	RAD=	1.5600	0.0	-1.000000	0.0
														FLX=	5.6434	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.0	1.000000
51	52	120	146	1	2	1	3	101	4	4	13	0.78537	0.52500	RAD=	1.5600	0.0	-0.707102	0.707112
														FLX=	5.6435	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.707112	0.707102
52	120	121	1001	1	1	1	3	1	4	4	12	13.07998	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
53	121	54	1001	1	1	1	3	1	4	4	12	13.07998	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
54	54	122	1001	1	1	1	3	0	4	4	12	10.50000	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
55	122	123	1001	1	1	1	3	0	4	4	12	10.49999	0.52500			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
56	123	56	147	1	2	1	3	0	4	4	13	0.78540	0.52500	RAD=	6.0000	0.0	0.0	1.000000
														FLX=	1.4673	1.000000	0.0	0.0
														ECC=	0.0	0.0	1.000000	0.0
57	56	124	147	1	2	1	3	0	4	4	13	0.78540	0.52500	RAD=	6.0000	0.0	0.707107	0.707107
														FLX=	1.4673	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.707107	-0.707107
58	124	125	1001	1	1	1	3	0	4	4	12	13.20001	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
59	125	58	1001	1	1	1	3	0	4	4	12	13.20000	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
60	58	126	1001	1	1	1	3	0	4	4	12	18.41997	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
61	126	59	1001	1	1	1	3	0	4	4	12	18.41998	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
62	59	127	1001	1	1	1	3	3	4	4	14	3.00000	7.83300			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
63	127	61	1001	1	1	1	3	3	4	4	14	3.00000	7.83300			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
64	61	62	1001	1	1	1	3	0	4	4	12	5.76001	0.52500			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

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MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  41 AND EQUALS 0.24301E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  21 AND EQUALS 0.23999E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  26 AND EQUALS 0.17934E 09
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  41 AND EQUALS 0.18928E 05

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    5.55 ** LAST STEP "SELT" TIME IS    5.18 ** DELTA TIME IS    0.37 *
* ELAPSED SECONDS                            39.8                                29.3                          10.4 *
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RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	0.0	-0.51213938E 00	0.0	0.37317316E-03	0.0	0.37290272E-03
7	0.0	-0.14325657E 01	0.0	-0.51004700E-02	0.0	-0.51008984E-02
8	0.0	-0.14325647E 01	0.0	-0.22662600E-04	0.0	-0.72158054E-02
9	0.0	-0.14325600E 01	0.0	0.50901920E-02	0.0	-0.51041022E-02
11	0.0	0.0	0.0	0.0	0.0	0.10214529E 01
13	-0.98938107E-01	-0.51214278E 00	0.0	0.0	0.0	0.15420642E-01
16	0.0	0.10460772E 02	0.0	0.0	0.0	0.0
18	0.0	-0.14889231E 01	0.0	0.0	0.0	0.0
19	0.0	-0.13865728E 01	0.0	0.0	0.0	0.0
20	0.0	0.59386658E 02	0.0	0.0	0.0	-0.12540007E 01
21	0.0	-0.20123997E 01	0.0	0.0	0.0	0.95064902E 00
22	0.0	0.0	0.0	0.0	0.0	0.29122758E 00
26	0.0	-0.53467093E 01	0.0	0.0	0.0	0.0
28	0.0	-0.29781713E 01	0.62790871E 00	0.29904246E 00	0.0	0.0
30	0.0	0.0	0.0	0.12941310E 02	0.0	0.0
32	0.0	0.0	0.0	-0.75840435E 01	0.0	0.0
44	-0.10672563E 00	-0.19697313E 01	0.40063208E 00	-0.19155973E 00	-0.10974105E-06	-0.51030543E-01
46	0.0	-0.62558718E 01	0.0	0.19029938E 02	0.0	0.50597963E 01
47	0.0	0.48437042E 02	0.0	0.84740448E 00	0.0	0.23539209E 00
48	0.0	-0.23547649E 01	0.0	0.0	0.0	0.0
52	0.0	-0.64324886E 00	-0.12426883E 00	0.19373208E-01	0.0	0.0
54	0.0	-0.61897430E 01	0.0	0.0	0.0	0.0
56	0.0	-0.24739780E 01	0.52072340E 00	0.24896848E 00	0.0	0.0
58	0.0	0.0	0.0	0.72209072E 01	0.0	0.0
59	0.0	-0.16584732E 02	0.0	-0.89696321E 01	0.0	0.0
61	0.0	-0.13261515E 02	0.0	-0.44232693E 01	0.0	0.0
62	0.0	0.0	0.0	-0.14515238E 01	0.0	0.0
63	0.0	-0.13896589E 01	0.0	0.11914978E 01	0.0	0.0
64	0.0	-0.29035692E 01	0.0	-0.72773819E 01	0.0	0.0
65	0.0	-0.10303431E 01	-0.82942577E-08	0.32633531E-02	0.0	0.0
66	0.0	-0.13625088E 01	0.0	0.0	0.0	0.0
67	0.0	-0.18742399E 01	0.0	0.0	0.0	0.0
68	0.0	-0.23312893E 01	-0.19219415E-08	-0.22376318E 01	0.0	0.0
69	0.0	-0.72887921E 00	0.0	-0.40218744E-01	0.0	0.0
70	0.0	0.49521198E 01	0.0	0.40219091E-01	0.0	0.0
100	0.0	-0.21536274E 01	0.0	0.0	0.0	0.0
101	-0.77317926E-12	-0.11297989E 01	0.0	0.0	0.0	-0.35955155E 00
102	0.0	-0.28842049E 01	0.0	0.0	0.0	0.0
104	0.0	-0.88353500E 01	0.0	-0.58314075E 01	0.0	0.0
105	0.0	-0.95328122E 00	0.70177748E-08	-0.32655005E-02	0.0	0.0
106	0.0	-0.28461552E 01	0.0	0.73024340E 01	0.0	0.26406744E-03
107	0.0	-0.93094766E 00	0.0	0.26415638E-03	0.0	0.44593674E 00
108	0.0	-0.13911676E 01	0.0	-0.36081863E-02	0.0	0.77736259E-01
109	0.0	-0.21754770E 01	0.0	0.36084659E-02	0.0	-0.17575693E 01
110	0.94125926E-01	-0.13010025E 01	0.0	0.0	0.0	0.12735891E 01
111	0.48121586E-02	-0.11628199E 01	0.0	0.0	0.0	0.10904875E-01
112	-0.77318056E-12	-0.29343672E 01	0.0	0.0	0.0	0.37168747E 00
113	0.0	-0.83423958E 01	0.0	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
114	0.0	-0.59743385E 01	-0.64218603E-02	0.21142411E 00	0.0	0.0
115	0.0	-0.21231451E 01	-0.62148643E 00	-0.39925903E 00	0.0	0.0
116	0.11536239E-02	-0.30983248E 01	-0.43301880E-02	-0.13543165E 00	-0.59205700E-07	-0.36077596E-01
117	0.10557204E 00	-0.58564901E 01	-0.39630234E 00	-0.19318924E 02	0.0	-0.51464262E 01
118	0.0	-0.11972980E 01	-0.19219444E-08	-0.10655051E 00	0.0	0.0
119	0.0	-0.21809902E 01	0.11822563E 00	0.22943621E 01	0.0	0.0
120	0.0	-0.38172216E 01	0.60432628E-02	0.13696764E-01	0.0	0.0
121	0.0	-0.68669872E 01	0.0	0.0	0.0	0.0
122	0.0	-0.55124969E 01	0.0	0.0	0.0	0.0
123	0.0	-0.42536449E 01	-0.56425631E-02	0.17603993E 00	0.0	0.0
124	0.0	-0.44416161E 01	-0.51508117E 00	0.68972425E 01	0.0	0.0
125	0.0	-0.69299994E 01	0.0	-0.13217925E-03	0.0	0.0
126	0.0	-0.96704836E 01	0.0	-0.88119501E-04	0.0	0.0
127	0.0	-0.23498993E 02	0.0	-0.44820772E-04	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	0.0	0.51213938E 00	0.0	-0.37317816E-03	0.0	-0.37290272E-03
7	0.0	0.14325657E 01	0.0	0.51004700E-02	0.0	0.51008984E-02
8	0.0	0.14325647E 01	0.0	0.22662600E-04	0.0	0.72158054E-02
9	0.0	0.14325600E 01	0.0	-0.50901920E-02	0.0	0.51041022E-02
11	0.0	0.0	0.0	0.0	0.0	-0.10214529E 01
13	0.98938107E-01	0.51214278E 00	0.0	0.0	0.0	-0.15420642E-01
16	0.0	0.13539227E 02	0.0	0.0	0.0	0.0
18	0.0	0.14889231E 01	0.0	0.0	0.0	0.0
19	0.0	0.13865728E 01	0.0	0.0	0.0	0.0
20	0.0	0.64613327E 02	0.0	0.0	0.0	0.12540007E 01
21	0.0	0.20123997E 01	0.0	0.0	0.0	-0.95064902E 00
22	0.0	0.0	0.0	0.0	0.0	-0.29122758E 00
26	0.0	0.53467093E 01	0.0	0.0	0.0	0.0
28	0.0	0.29781713E 01	-0.62790871E 00	-0.29904246E 00	0.0	0.0
30	0.0	0.0	0.0	-0.12941310E 02	0.0	0.0
32	0.0	0.0	0.0	0.75840435E 01	0.0	0.0
44	0.10672563E 00	0.19697313E 01	-0.40063208E 00	0.19155973E 00	0.10974105E-06	0.51030543E-01
46	0.0	0.62558718E 01	0.0	-0.19029938E 02	0.0	-0.50597963E 01
47	0.0	0.53562943E 02	0.0	-0.84740448E 00	0.0	-0.23539209E 00
48	0.0	0.23547649E 01	0.0	0.0	0.0	0.0
52	0.0	0.64324886E 00	0.12426883E 00	-0.19373208E-01	0.0	0.0
54	0.0	0.61897430E 01	0.0	0.0	0.0	0.0
56	0.0	0.24739780E 01	-0.52072340E 00	-0.24896848E 00	0.0	0.0
58	0.0	0.0	0.0	-0.72209072E 01	0.0	0.0
59	0.0	0.16584732E 02	0.0	0.89696321E 01	0.0	0.0
61	0.0	0.13261515E 02	0.0	0.44232693E 01	0.0	0.0
62	0.0	0.0	0.0	0.14515238E 01	0.0	0.0
63	0.0	0.13896589E 01	0.0	-0.11914978E 01	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
64	0.0	0.29035692E 01	0.0	0.72773819E 01	0.0	0.0
65	0.0	0.10303431E 01	0.82942577E-08	-0.32633531E-02	0.0	0.0
66	0.0	0.13625088E 01	0.0	0.0	0.0	0.0
67	0.0	0.18742399E 01	0.0	0.0	0.0	0.0
68	0.0	0.23312893E 01	0.19219415E-08	0.22376318E 01	0.0	0.0
69	0.0	0.72887921E 00	0.0	0.40218744E-01	0.0	0.0
70	0.0	0.50478792E 01	0.0	-0.40219091E-01	0.0	0.0
100	0.0	0.21536274E 01	0.0	0.0	0.0	0.0
101	0.77317926E-12	0.11297989E 01	0.0	0.0	0.0	0.35955155E 00
102	0.0	0.28842049E 01	0.0	0.0	0.0	0.0
104	0.0	0.88353500E 01	0.0	0.58314075E 01	0.0	0.0
105	0.0	0.95328122E 00	-0.70177748E-08	0.32655005E-02	0.0	0.0
106	0.0	0.28461552E 01	0.0	-0.73024340E 01	0.0	-0.26406744E-03
107	0.0	0.93094766E 00	0.0	-0.26415638E-03	0.0	-0.44593674E 00
108	0.0	0.13911676E 01	0.0	0.36081863E-02	0.0	-0.77736259E-01
109	0.0	0.21754770E 01	0.0	-0.36084659E-02	0.0	0.17575693E 01
110	-0.94125926E-01	0.13010025E 01	0.0	0.0	0.0	-0.12735891E 01
111	-0.48121586E-02	0.11628199E 01	0.0	0.0	0.0	-0.10904875E-01
112	0.77318056E-12	0.29343672E 01	0.0	0.0	0.0	-0.37168747E 00
113	0.0	0.83423958E 01	0.0	0.0	0.0	0.0
114	0.0	0.59743385E 01	0.64218603E-02	-0.21142411E 00	0.0	0.0
115	0.0	0.21231451E 01	0.62148643E 00	0.39925903E 00	0.0	0.0
116	-0.11536239E-02	0.30983248E 01	0.43301880E-02	0.13543165E 00	0.59205700E-07	0.36077596E-01
117	-0.10557204E 00	0.58564901E 01	0.39630234E 00	0.19318924E 02	0.0	0.51464262E 01
118	0.0	0.11972980E 01	0.19219444E-08	0.10655051E 00	0.0	0.0
119	0.0	0.21809902E 01	-0.11822563E 00	-0.22943621E 01	0.0	0.0
120	0.0	0.38172216E 01	-0.60432628E-02	-0.13696764E-01	0.0	0.0
121	0.0	0.68669872E 01	0.0	0.0	0.0	0.0
122	0.0	0.55124969E 01	0.0	0.0	0.0	0.0
123	0.0	0.42536449E 01	0.56425631E-02	-0.17603993E 00	0.0	0.0
124	0.0	0.44416161E 01	0.51508117E 00	-0.68972425E 01	0.0	0.0
125	0.0	0.69299994E 01	0.0	0.13217925E-03	0.0	0.0
126	0.0	0.96704836E 01	0.0	0.88119501E-04	0.0	0.0
127	0.0	0.23498993E 02	0.0	0.44820772E-04	0.0	0.0

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	0.51213849E 00	0.0	0.98936379E-01	0.0	0.15420750E-01	0.0
7	0.14325457E 01	0.0	0.31594491E 00	0.0	-0.13586438E 00	0.0
8	0.11166143E 01	0.0	-0.10152061E-04	0.0	-0.17916478E-04	0.0
9	0.14325781E 01	0.0	-0.31594390E 00	0.0	0.13584977E 00	0.0
11	0.25535975E 01	0.0	0.0	0.0	0.0	0.0
13	0.51213902E 00	0.98936975E-01	0.0	0.0	0.0	-0.15423585E-01
16	0.13539227E 02	0.0	0.0	0.0	0.0	-0.12676775E-01
18	0.14889231E 01	0.0	0.0	0.0	0.0	-0.71386278E-01

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
19	0.13865709E 01	0.0	0.0	0.0	0.0	-0.14724216E 01
20	0.64613327E 02	0.0	0.0	0.0	0.0	0.14735260E 01
21	0.20123997E 01	0.0	0.0	0.0	0.0	0.0
22	0.91008019E 00	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.84478121E 01
28	0.29782276E 01	0.0	0.0	0.0	0.92935003E-02	-0.92909448E-02
30	0.0	0.0	0.0	0.0	0.12941290E 02	0.0
32	0.0	0.0	0.0	0.0	-0.75840425E 01	0.0
44	0.19697742E 01	0.10672665E 00	-0.96720987E-05	0.47268502E-01	-0.79316832E-02	0.20771626E-01
46	0.62558708E 01	0.0	0.16732220E-05	0.0	0.19030060E 02	0.0
47	0.53562943E 02	0.0	0.93340986E-07	0.0	0.84740591E 00	0.12196884E 01
48	0.23547611E 01	0.0	0.0	0.0	0.0	0.29155463E 00
52	0.64323783E 00	0.0	0.0	0.0	0.47579547E-03	0.46086893E-03
54	0.0	0.0	0.0	0.0	0.0	-0.26617374E 01
56	0.24740019E 01	0.0	0.0	0.0	0.10293949E-01	-0.10288250E-01
58	0.0	0.0	0.0	0.0	0.72209339E 01	0.0
59	0.16584732E 02	0.0	0.0	0.0	-0.89696550E 01	0.0
61	0.13261515E 02	0.0	0.0	0.0	-0.44232769E 01	0.0
62	0.0	0.0	0.0	0.0	-0.14515333E 01	0.0
63	0.13896589E 01	0.0	0.0	0.0	0.11914997E 01	0.0
64	0.29035692E 01	0.0	0.0	0.0	-0.72773962E 01	0.0
65	0.10303431E 01	0.0	0.0	0.0	0.32633494E-02	-0.45870501E 00
66	0.13625126E 01	0.0	0.0	0.0	0.0	-0.14128456E 01
67	0.18742390E 01	0.0	0.0	0.0	0.0	0.12932425E 01
68	0.23312893E 01	0.0	0.0	0.0	-0.22376432E 01	0.40989295E-02
69	0.72887945E 00	0.0	0.0	0.0	-0.40218890E-01	0.62652075E 00
70	0.50478792E 01	0.0	0.0	0.0	0.40219236E-01	0.0
100	0.21536283E 01	0.0	0.0	0.0	0.0	0.35712361E 00
101	0.11297989E 01	-0.77317926E-12	0.0	0.0	0.0	0.49749788E-05
102	0.28842020E 01	0.0	0.0	0.0	0.0	-0.25255508E 01
104	0.88353500E 01	0.0	0.0	0.0	-0.58313894E 01	0.0
105	0.95328104E 00	0.0	0.0	0.0	-0.32654472E-02	-0.84833086E-01
106	0.27966862E 01	0.0	-0.94125926E-01	0.0	0.73162289E 01	0.0
107	0.98041785E 00	0.0	-0.48103668E-02	0.0	0.10905214E-01	0.0
108	0.15491610E 01	0.0	0.12866729E-02	0.0	-0.96062243E-01	0.0
109	0.23334341E 01	0.0	-0.12724670E-02	0.0	0.96071482E-01	0.0
110	0.13999424E 01	-0.48102550E-02	0.0	0.0	0.0	-0.10904487E-01
111	0.10638819E 01	-0.94126761E-01	0.0	0.0	0.0	-0.76615131E 00
112	0.29343672E 01	-0.77318056E-12	0.0	0.0	0.0	-0.11572160E-04
113	0.83423958E 01	0.0	0.0	0.0	0.0	-0.63888539E-04
114	0.56603212E 01	0.0	0.0	0.0	0.65735281E-02	-0.79790668E 01
115	0.24371109E 01	0.0	0.0	0.0	-0.72361672E 00	-0.65700561E-02
116	0.28772459E 01	-0.10556340E 00	0.51564436E-01	0.54177135E-01	-0.56029893E-02	0.21161013E 01
117	0.60775309E 01	-0.11632051E-02	-0.51554337E-01	0.33428207E-01	-0.19108582E 02	0.14697313E-01
118	0.11972980E 01	0.0	0.0	0.0	-0.10655028E 00	-0.41030273E-02
119	0.22431259E 01	0.0	0.0	0.0	0.22770615E 01	0.33170078E-03
120	0.37550850E 01	0.0	0.0	0.0	0.33309101E-03	0.74177952E 01
121	0.68669872E 01	0.0	0.0	0.0	0.0	-0.14219283E-03
122	0.55124960E 01	0.0	0.0	0.0	0.0	-0.39052960E-04
123	0.39932604E 01	0.0	0.0	0.0	0.72794519E-02	-0.38242044E 01

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
124	0.47019S06E 01	0.0	0.0	0.0	0.66237774E 01	-0.72776042E-02
125	0.69299994E 01	0.0	0.0	0.0	-0.13818739E-03	0.0
126	0.96704836E 01	0.0	0.0	0.0	-0.14419554E-03	0.0
127	0.23498993E 02	0.0	0.0	0.0	-0.44820772E-04	0.0

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	-0.51213849E 00	0.0	-0.98936379E-01	0.0	-0.15420750E-01	0.0
7	-0.14325457E 01	0.0	-0.31594491E 00	0.0	0.13586438E 00	0.0
8	-0.11166143E 01	0.0	0.10152061E-04	0.0	0.17916478E-04	0.0
9	-0.14325781E 01	0.0	0.31594890E 00	0.0	-0.13584977E 00	0.0
11	-0.25535975E 01	0.0	0.0	0.0	0.0	0.0
13	-0.51213902E 00	-0.98936975E-01	0.0	0.0	0.0	0.15423585E-01
16	0.10460772E 02	0.0	0.0	0.0	0.0	0.12676775E-01
18	-0.14889231E 01	0.0	0.0	0.0	0.0	0.71386278E-01
19	-0.13865709E 01	0.0	0.0	0.0	0.0	0.14724216E 01
20	0.59386658E 02	0.0	0.0	0.0	0.0	-0.14735260E 01
21	-0.20123997E 01	0.0	0.0	0.0	0.0	0.0
22	-0.91008019E 00	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	-0.84478121E 01
28	-0.29782276E 01	0.0	0.0	0.0	-0.92935003E-02	0.92909448E-02
30	0.0	0.0	0.0	0.0	-0.12941290E 02	0.0
32	0.0	0.0	0.0	0.0	0.75840425E 01	0.0
44	-0.19697742E 01	-0.10672665E 00	0.96720987E-05	-0.47268502E-01	0.79316832E-02	-0.20771626E-01
46	-0.62558708E 01	0.0	-0.16732220E-05	0.0	-0.19030060E 02	0.0
47	0.48437042E 02	0.0	-0.93340986E-07	0.0	-0.84740591E 00	-0.12196884E 01
48	-0.23547611E 01	0.0	0.0	0.0	0.0	-0.29155463E 00
52	-0.64323783E 00	0.0	0.0	0.0	-0.47579547E-03	-0.46086893E-03
54	0.0	0.0	0.0	0.0	0.0	0.26617374E 01
56	-0.24740019E 01	0.0	0.0	0.0	-0.10293949E-01	0.10288250E-01
58	0.0	0.0	0.0	0.0	-0.72209339E 01	0.0
59	-0.16584732E 02	0.0	0.0	0.0	0.89696550E 01	0.0
61	-0.13261515E 02	0.0	0.0	0.0	0.44232769E 01	0.0
62	0.0	0.0	0.0	0.0	0.14515333E 01	0.0
63	-0.13896589E 01	0.0	0.0	0.0	-0.11914997E 01	0.0
64	-0.29035692E 01	0.0	0.0	0.0	0.72773962E 01	0.0
65	-0.10303431E 01	0.0	0.0	0.0	-0.32633494E-02	0.45870501E 00
66	-0.13625126E 01	0.0	0.0	0.0	0.0	0.14128456E 01
67	-0.18742390E 01	0.0	0.0	0.0	0.0	-0.12932425E 01
68	-0.23312893E 01	0.0	0.0	0.0	0.22376432E 01	-0.40989295E-02
69	-0.72887945E 00	0.0	0.0	0.0	0.40218890E-01	-0.62652075E 00
70	0.49521198E 01	0.0	0.0	0.0	-0.40219236E-01	0.0
100	-0.21536283E 01	0.0	0.0	0.0	0.0	-0.35712361E 00
101	-0.11297989E 01	0.77317926E-12	0.0	0.0	0.0	-0.49749788E-05
102	-0.28842020E 01	0.0	0.0	0.0	0.0	0.25255508E 01

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
104	-0.88353500E 01	0.0	0.0	0.0	0.58313894E 01	0.0
105	-0.95328104E 00	0.0	0.0	0.0	0.32654472E-02	0.84833086E-01
106	-0.27966862E 01	0.0	0.94125926E-01	0.0	-0.73162289E 01	0.0
107	-0.98041785E 00	0.0	0.48103668E-02	0.0	-0.10905214E-01	0.0
108	-0.15491610E 01	0.0	-0.12866729E-02	0.0	0.96062243E-01	0.0
109	-0.23334341E 01	0.0	0.12724670E-02	0.0	-0.96071482E-01	0.0
110	-0.13999424E 01	0.48102550E-02	0.0	0.0	0.0	0.10904487E-01
111	-0.10638819E 01	0.94126761E-01	0.0	0.0	0.0	0.76615131E 00
112	-0.29343672E 01	0.77318056E-12	0.0	0.0	0.0	0.11572160E-04
113	-0.83423958E 01	0.0	0.0	0.0	0.0	0.63888539E-04
114	-0.56603212E 01	0.0	0.0	0.0	-0.65735281E-02	0.79790668E 01
115	-0.24371109E 01	0.0	0.0	0.0	0.72361672E 00	0.65700561E-02
116	-0.28772459E 01	0.10556340E 00	-0.51564436E-01	-0.54177135E-01	0.56029893E-02	-0.21161013E 01
117	-0.60775309E 01	0.11632051E-02	0.51554537E-01	-0.33428207E-01	0.19108582E 02	-0.14697313E-01
118	-0.11972980E 01	0.0	0.0	0.0	0.10655028E 00	0.41030273E-02
119	-0.22431259E 01	0.0	0.0	0.0	-0.22770615E 01	-0.33170078E-03
120	-0.37550850E 01	0.0	0.0	0.0	-0.33309101E-03	-0.74177952E 01
121	-0.68669872E 01	0.0	0.0	0.0	0.0	0.14219283E-03
122	-0.55124960E 01	0.0	0.0	0.0	0.0	0.39052960E-04
123	-0.39932604E 01	0.0	0.0	0.0	-0.72794519E-02	0.38242044E 01
124	-0.47019806E 01	0.0	0.0	0.0	-0.66237774E 01	0.72776042E-02
125	-0.69299994E 01	0.0	0.0	0.0	0.13818739E-03	0.0
126	-0.96704836E 01	0.0	0.0	0.0	0.14419554E-03	0.0
127	-0.23498993E 02	0.0	0.0	0.0	0.44820772E-04	0.0

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	0.98934352E-01	0.0	0.51213670E 00	0.0	0.15422270E-01	0.0
7	0.31594092E 00	0.0	0.14325905E 01	0.0	-0.13585484E 00	0.0
8	-0.40134022E-04	0.0	0.17485418E 01	0.0	-0.19213045E 00	0.0
9	-0.31589174E 00	0.0	0.14324827E 01	0.0	-0.13589680E 00	0.0
11	0.0	0.0	0.25535975E 01	0.0	0.10214500E 01	0.0
13	0.0	0.0	0.51214272E 00	0.37447177E-03	0.37274417E-03	0.0
16	0.0	0.0	0.13539227E 02	0.12678042E-01	0.0	0.0
18	0.0	0.0	0.14889231E 01	0.71386278E-01	0.0	0.0
19	0.0	0.0	0.13865709E 01	0.14724188E 01	0.0	0.0
20	0.0	0.0	0.64613327E 02	-0.14735231E 01	-0.12539940E 01	0.0
21	0.0	0.0	0.20123997E 01	0.0	0.95064247E 00	0.0
22	0.0	0.0	0.0	0.0	0.29122740E 00	0.0
26	0.0	0.0	0.0	-0.84477987E 01	0.0	0.0
28	0.0	-0.62792593E 00	0.29782581E 01	0.29901123E 00	0.0	0.0
30	0.0	0.0	0.59913502E 01	0.0	0.0	0.0
44	-0.98091859E-05	-0.40063679E 00	0.19698095E 01	-0.18561918E 00	-0.21134354E-02	-0.47268670E-01
46	0.30991907E-06	0.0	0.62558680E 01	0.0	0.50598259E 01	0.0
47	-0.93340986E-07	0.0	0.53562943E 02	-0.12196827E 01	0.23539245E 00	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
48	0.0	0.0	0.23547611E 01	-0.29155666E 00	0.0	0.0
52	0.0	0.12425768E 00	0.64322835E 00	-0.19365162E-01	0.0	0.0
54	0.0	0.0	0.0	0.26617184E 01	0.0	0.0
56	0.0	-0.52072173E 00	0.24740334E 01	0.24896270E 00	0.0	0.0
58	0.0	0.0	0.83002386E 01	0.0	0.0	0.0
59	0.0	0.0	0.16584732E 02	0.0	0.0	0.0
61	0.0	0.0	0.13261507E 02	0.0	0.0	0.0
63	0.0	0.0	0.13896570E 01	0.0	0.0	0.0
64	0.0	0.0	0.29035759E 01	0.0	0.0	0.0
65	0.0	0.70177748E-08	0.10303431E 01	0.45870405E 00	0.0	0.0
66	0.0	0.0	0.13625126E 01	0.14128418E 01	0.0	0.0
67	0.0	0.0	0.18742390E 01	-0.12932348E 01	0.0	0.0
68	0.0	-0.19219415E-08	0.23312922E 01	-0.40989406E-02	0.0	0.0
69	0.0	0.0	0.72887945E 00	-0.62652117E 00	0.0	0.0
70	0.0	0.0	0.50478792E 01	0.0	0.0	0.0
100	0.0	0.0	0.21536283E 01	-0.35712451E 00	0.0	0.0
101	0.0	0.0	0.11297989E 01	-0.49749733E-05	-0.35955113E 00	0.0
102	0.0	0.0	0.28842020E 01	0.25255327E 01	0.0	0.0
104	0.0	0.0	0.88353510E 01	0.0	0.0	0.0
105	0.0	-0.82942577E-08	0.95328134E 00	0.84833145E-01	0.0	0.0
106	-0.48102550E-02	0.0	0.28956203E 01	0.0	0.10904487E-01	0.0
107	-0.94124138E-01	0.0	0.88147825E 00	0.0	0.45971984E 00	0.0
108	-0.31720507E 00	0.0	0.12332010E 01	0.0	-0.83977580E-01	0.0
109	0.31719536E 00	0.0	0.20175152E 01	0.0	-0.19192743E 01	0.0
110	0.0	0.0	0.13504715E 01	0.26406744E-03	0.12598076E 01	0.0
111	0.0	0.0	0.11133509E 01	0.75236601E 00	0.26385789E-03	0.0
112	0.0	0.0	0.29343672E 01	0.11367591E-04	0.37168705E 00	0.0
113	0.0	0.0	0.83423958E 01	0.69915768E-04	0.0	0.0
114	0.0	0.62146610E 00	0.53463640E 01	0.83033981E 01	0.0	0.0
115	0.0	0.64599440E-02	0.27510347E 01	0.21144563E 00	0.0	0.0
116	0.51564090E-01	0.39627033E 00	0.26974163E 01	-0.23050232E 01	-0.14923301E-02	-0.54177064E-01
117	-0.51555637E-01	0.43665208E-02	0.62573271E 01	-0.13127691E 00	-0.50903931E 01	-0.33428207E-01
118	0.0	-0.19219444E-08	0.11972980E 01	0.41030049E-02	0.0	0.0
119	0.0	-0.60410649E-02	0.23052635E 01	-0.13697017E-01	0.0	0.0
120	0.0	-0.11821657E 00	0.36929541E 01	-0.74350376E 01	0.0	0.0
121	0.0	0.0	0.68669872E 01	0.13017653E-03	0.0	0.0
122	0.0	0.0	0.55124960E 01	0.36048878E-04	0.0	0.0
123	0.0	0.51505250E 00	0.37329006E 01	0.40977211E 01	0.0	0.0
124	0.0	0.56695975E-02	0.49623137E 01	0.17605919E 00	0.0	0.0
125	0.0	0.0	0.69300022E 01	0.0	0.0	0.0
126	0.0	0.0	0.96704855E 01	0.0	0.0	0.0
127	0.0	0.0	0.23498993E 02	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
4	-0.98934352E-01	0.0	-0.51213670E 00	0.0	-0.15422270E-01	0.0
7	-0.31594092E 00	0.0	-0.14325905E 01	0.0	0.13585484E 00	0.0
8	0.40134022E-04	0.0	-0.17485418E 01	0.0	0.19213045E 00	0.0
9	0.31589174E 00	0.0	-0.14324827E 01	0.0	0.13589680E 00	0.0
11	0.0	0.0	-0.25535975E 01	0.0	-0.10214500E 01	0.0
13	0.0	0.0	-0.51214272E 00	-0.37447177E-03	-0.37274417E-03	0.0
16	0.0	0.0	0.10460772E 02	-0.12678042E-01	0.0	0.0
18	0.0	0.0	-0.14889231E 01	-0.71386278E-01	0.0	0.0
19	0.0	0.0	-0.13865709E 01	-0.14724188E 01	0.0	0.0
20	0.0	0.0	0.59386658E 02	0.14735231E 01	0.12539940E 01	0.0
21	0.0	0.0	-0.20123997E 01	0.0	-0.95064247E 00	0.0
22	0.0	0.0	0.0	0.0	-0.29122740E 00	0.0
26	0.0	0.0	0.0	0.84477987E 01	0.0	0.0
28	0.0	0.62792593E 00	-0.29782581E 01	-0.29901123E 00	0.0	0.0
30	0.0	0.0	-0.59913502E 01	0.0	0.0	0.0
44	0.98091859E-05	0.40063679E 00	-0.19698095E 01	0.18561918E 00	0.21134354E-02	0.47268670E-01
46	-0.30991907E-06	0.0	-0.62558680E 01	0.0	-0.50598259E 01	0.0
47	0.93340986E-07	0.0	0.48437042E 02	0.12196827E 01	-0.23539245E 00	0.0
48	0.0	0.0	-0.23547611E 01	0.29155666E 00	0.0	0.0
52	0.0	-0.12425768E 00	-0.64322835E 00	0.19365162E-01	0.0	0.0
54	0.0	0.0	0.0	-0.26617184E 01	0.0	0.0
56	0.0	0.52072173E 00	-0.24740334E 01	-0.24896270E 00	0.0	0.0
58	0.0	0.0	-0.83002386E 01	0.0	0.0	0.0
59	0.0	0.0	-0.16584732E 02	0.0	0.0	0.0
61	0.0	0.0	-0.13261507E 02	0.0	0.0	0.0
63	0.0	0.0	-0.13896570E 01	0.0	0.0	0.0
64	0.0	0.0	-0.29035759E 01	0.0	0.0	0.0
65	0.0	-0.70177748E-08	-0.10303431E 01	-0.45870405E 00	0.0	0.0
66	0.0	0.0	-0.13625126E 01	-0.14128418E 01	0.0	0.0
67	0.0	0.0	-0.18742390E 01	0.12932348E 01	0.0	0.0
68	0.0	0.19219415E-08	-0.23312922E 01	0.40989406E-02	0.0	0.0
69	0.0	0.0	-0.72887945E 00	0.62652117E 00	0.0	0.0
70	0.0	0.0	0.49521198E 01	0.0	0.0	0.0
100	0.0	0.0	-0.21536283E 01	0.35712451E 00	0.0	0.0
101	0.0	0.0	-0.11297989E 01	0.49749733E-05	0.35955113E 00	0.0
102	0.0	0.0	-0.28842020E 01	-0.25255327E 01	0.0	0.0
104	0.0	0.0	-0.88353510E 01	0.0	0.0	0.0
105	0.0	0.82942577E-08	-0.95328134E 00	-0.84833145E-01	0.0	0.0
106	0.48102550E-02	0.0	-0.28956203E 01	0.0	-0.10904487E-01	0.0
107	0.94124138E-01	0.0	-0.88147825E 00	0.0	-0.45971984E 00	0.0
108	0.31720507E 00	0.0	-0.12332010E 01	0.0	0.83977580E-01	0.0
109	-0.31719536E 00	0.0	-0.20175152E 01	0.0	0.19192743E 01	0.0
110	0.0	0.0	-0.13504715E 01	-0.26406744E-03	-0.12598076E 01	0.0
111	0.0	0.0	-0.11133509E 01	-0.75236601E 00	-0.26385789E-03	0.0
112	0.0	0.0	-0.29343672E 01	-0.11367591E-04	-0.37168705E 00	0.0
113	0.0	0.0	-0.83423958E 01	-0.69915768E-04	0.0	0.0
114	0.0	-0.62146610E 00	-0.53463640E 01	-0.83033981E 01	0.0	0.0
115	0.0	-0.64599440E-02	-0.27510347E 01	-0.21144563E 00	0.0	0.0
116	-0.51564090E-01	-0.39627033E 00	-0.26974163E 01	0.23050232E 01	0.14923301E-02	0.54177064E-01
117	0.51555637E-01	-0.43665208E-02	-0.62573271E 01	0.13127691E 00	0.50903931E 01	0.33428207E-01

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
118	0.0	0.19219444E-08	-0.11972980E 01	-0.41030049E-02	0.0	0.0
119	0.0	0.60410649E-02	-0.23052635E 01	0.13697017E-01	0.0	0.0
120	0.0	0.11821657E 00	-0.36929541E 01	0.74350376E 01	0.0	0.0
121	0.0	0.0	-0.68669872E 01	-0.13017653E-03	0.0	0.0
122	0.0	0.0	-0.55124960E 01	-0.36048378E-04	0.0	0.0
123	0.0	-0.51505250E 00	-0.37329006E 01	-0.40977211E 01	0.0	0.0
124	0.0	-0.56695975E-02	-0.49623137E 01	-0.17605919E 00	0.0	0.0
125	0.0	0.0	-0.69300022E 01	0.0	0.0	0.0
126	0.0	0.0	-0.96704855E 01	0.0	0.0	0.0
127	0.0	0.0	-0.23498993E 02	0.0	0.0	0.0

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.0	0.22999998E-01	0.0	0.0	0.0	0.0
4	0.18466324E 05	0.0	-0.18466770E 05	0.0	0.59326172E-01	0.0
7	-0.12863203E 05	0.0	0.12863781E 05	0.0	-0.21826172E 00	0.0
8	-0.18192250E 05	0.0	0.94401568E 00	0.0	-0.26855469E-01	0.0
9	-0.12862309E 05	0.0	-0.12864938E 05	0.0	-0.90625000E 00	0.0
11	0.78125000E-02	0.0	0.0	0.0	0.0	0.0
13	0.18467203E 05	-0.18466527E 05	0.0	0.0	0.0	0.27099609E-01
15	-0.29999998E-02	0.0	0.0	0.0	0.0	0.0
16	0.0	-0.11659297E 05	0.0	0.0	0.0	0.0
18	0.0	0.12761398E 05	0.0	0.0	0.0	0.0
19	0.0	-0.25440422E 05	0.0	0.0	0.0	0.0
20	-0.55446938E 05	0.55446938E 05	0.0	0.0	0.0	0.0
21	-0.28195703E 05	0.23653994E 06	0.0	0.0	0.0	0.28384788E 06
22	0.0	0.49999997E-01	0.0	0.0	0.0	-0.18527684E 05
26	0.0	0.14062500E 00	0.0	0.0	0.0	0.0
28	0.0	-0.35108645E 05	-0.35107605E 05	-0.86718750E 00	0.0	0.0
30	0.0	0.0	-0.70312500E-01	0.0	0.0	0.0
44	-0.40078818E 04	0.15569535E 05	0.15044941E 05	-0.47050893E 00	-0.38501453E-02	-0.12141728E 00
46	-0.13748071E 04	0.0	0.34807815E 04	0.0	0.0	0.0
47	0.10917691E 05	0.40791578E 05	-0.39303367E 05	0.0	0.0	0.0
48	0.0	-0.31943891E 05	0.0	0.0	0.0	0.0
50	0.69999993E-02	0.0	0.0	0.0	0.0	0.0
52	0.0	0.88346797E 04	-0.88339492E 04	-0.16577148E 00	0.0	0.0
56	0.0	-0.85925078E 04	-0.85928086E 04	-0.14404297E 00	0.0	0.0
59	0.0	0.0	-0.20331586E 05	0.0	0.0	0.0
61	0.0	0.0	0.20331586E 05	0.0	0.0	0.0
63	0.0	0.82721563E 04	0.11659289E 05	-0.29283441E 05	0.0	0.0
64	0.0	0.0	-0.11659305E 05	0.0	0.0	0.0
65	0.0	0.11627668E 05	-0.16439766E 04	0.0	0.0	0.0
66	0.0	0.11612313E 05	0.0	0.0	0.0	0.0
67	0.52294180E 04	0.0	0.0	0.0	0.0	0.14746961E 05
68	0.0	0.78650269E 03	0.15123156E 02	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
69	0.0	0.0	0.12485000E 05	0.0	0.0	0.0
70	0.0	0.0	-0.12485000E 05	0.0	0.0	0.0
100	0.0	-0.29556391E 05	0.0	0.0	0.0	0.0
101	-0.29556242E 05	0.12599000E 07	0.0	0.0	0.0	-0.30237556E 06
102	0.0	0.76126938E 05	0.0	0.0	0.0	0.0
105	0.0	-0.42736285E 05	0.16439922E 04	0.0	0.0	0.0
106	0.13057996E 05	0.0	0.41643750E 03	0.0	-0.26942822E 04	0.0
107	-0.41571240E 03	0.0	-0.13058258E 05	0.0	0.26942908E 04	0.0
108	-0.91493750E 04	0.0	0.90957969E 04	0.0	0.72183164E 04	0.0
109	-0.91500781E 04	0.0	-0.90955625E 04	0.0	-0.72181563E 04	0.0
110	-0.41643750E 03	-0.13057996E 05	0.0	0.0	0.0	-0.26942822E 04
111	0.11351316E 05	0.41590894E 03	0.0	0.0	0.0	0.75066875E 04
112	0.11319888E 06	-0.15151548E 01	0.0	0.0	0.0	0.0
114	0.0	-0.23708879E 05	-0.24825223E 05	0.19700906E 05	0.0	0.0
115	0.0	-0.24825094E 05	-0.23709742E 05	-0.19701188E 05	0.0	0.0
116	-0.28339507E 04	0.10492871E 05	0.10638301E 05	0.84423438E 04	0.38499602E-02	0.22489768E 04
117	-0.27010554E 04	0.11009484E 05	0.10139344E 05	-0.84426641E 04	0.0	-0.22490662E 04
118	0.0	-0.78650269E 03	0.20444875E 05	0.0	0.0	0.0
119	0.0	0.62469766E 04	-0.53788516E 04	0.12890039E 04	0.0	0.0
120	0.0	0.53783477E 04	-0.62471992E 04	-0.12888926E 04	0.0	0.0
123	0.0	-0.57914531E 04	-0.60759063E 04	0.48217734E 04	0.0	0.0
124	0.0	-0.60760352E 04	-0.57912930E 04	-0.48218945E 04	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    8.55 ** LAST STEP "EDIT" TIME IS    5.55 ** DELTA TIME IS    3.00 *
* ELAPSED SECONDS                           109.6                                39.8                        69.9 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    8.59 ** LAST STEP "SLVR" TIME IS    8.55 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           110.0                               109.6                         0.3 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	-0.000036535	-0.000000443	-0.000001215	-0.000020193	-0.000001017	0.000032783
7	-0.000032226	-0.000395316	-0.000018242	-0.000009518	-0.000002224	0.000037774
8	-0.000022374	-0.000483986	-0.000022308	-0.000001899	-0.000002256	0.000037231
9	-0.000013466	-0.000412367	-0.000018801	0.000002786	-0.000001786	0.000038026
11	-0.000010639	0.0	-0.000005370	0.000001626	-0.000000553	0.000011916
13	-0.000008829	0.000002809	-0.000001576	0.000000722	-0.000000197	-0.000003151
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000060883	0.000268405	0.000080204	0.000008389	0.000004953	0.000004072
18	-0.000071639	0.000272795	0.000105171	0.000005116	0.000005972	0.000000632
19	-0.000019040	0.000285324	0.000113765	0.000000324	0.000010255	-0.000020341
20	0.000146583	0.000292259	0.000099492	-0.000003200	0.000011913	-0.000031608
21	0.000146309	0.000078471	0.000026520	-0.000004509	0.000011019	-0.000032353
22	0.000146237	0.0	0.0	-0.000004660	0.000010583	-0.000030785
26	0.0	-0.000085849	0.0	-0.000002579	0.000010103	-0.000019741
28	-0.000063796	-0.000071149	-0.000016006	-0.000008393	0.000008860	0.000007579
30	0.0	0.0	0.000001665	-0.000005290	0.000004551	0.000007244
32	0.0	0.0	0.0	-0.000001200	-0.000002096	0.000007244
44	0.000542799	-0.000121787	-0.000165814	-0.000012652	0.000014286	-0.000025035
46	0.000140496	-0.000076047	-0.000306675	0.000024821	0.000016153	-0.000006186
47	0.000071311	0.000025615	-0.000325897	0.000023982	0.000015825	-0.000005585
48	0.000041619	0.000022925	-0.000444337	0.000020854	0.000015227	-0.000005607
50	0.0	0.0	0.0	0.0	0.0	0.0
52	-0.000005470	-0.000798393	-0.000178789	-0.000062451	0.000000700	-0.000000270
54	0.0	-0.000835984	0.0	0.000011506	0.000000282	0.000000261
56	0.000003578	-0.000806744	-0.000046895	-0.000023717	-0.000000042	0.000000075
58	0.0	0.0	0.000002621	0.000046840	-0.000000102	0.000000071
59	-0.000000545	-0.001829992	0.000000504	-0.000105656	0.000000042	0.000000071
61	-0.000000277	-0.001034228	0.000000331	-0.000154832	0.000000046	0.000000071
62	0.0	0.0	0.0	-0.000184031	0.000000048	0.000000071
63	-0.000015235	0.000214030	-0.000000671	0.000026160	0.000002969	0.000006629
64	-0.000024273	0.000278208	-0.000000777	0.000012310	0.000002674	0.000009225
65	-0.000032308	0.000259817	0.000026431	0.000016331	0.000003414	0.000007254
66	0.000004974	0.000002187	-0.000289753	-0.000054497	0.000001293	-0.000000999
67	0.000002345	0.000000577	-0.000130646	-0.000044803	0.000000807	-0.000000706
68	0.000002053	-0.000102031	-0.000210938	-0.000067515	0.000000977	-0.000000756
69	-0.000023698	0.000284866	0.000113769	0.000000949	0.000010083	-0.000019352
70	-0.000074518	0.000505549	0.000113769	0.000061150	0.000010083	-0.000019352
100	0.000084762	-0.000085642	-0.000015749	-0.000004410	0.000010271	-0.000025508
101	0.000146223	-0.000015583	-0.000004756	-0.000004690	0.000010487	-0.000030356
102	0.000210163	-0.000085843	-0.000038683	-0.000005093	0.000010485	-0.000028020
104	0.000021691	-0.000005135	0.000000715	0.000000882	-0.000000872	0.000007244
105	-0.000020053	0.000256699	-0.000000775	0.000018834	0.000003007	0.000007706
106	-0.000037415	0.000037878	-0.000000811	-0.000021781	-0.000000540	0.000031725
107	-0.000035991	-0.000047653	-0.000002599	-0.000019799	-0.000001433	0.000035594
108	-0.000035962	-0.000212802	-0.000009698	-0.000015136	-0.000001734	0.000037688
109	-0.000010703	-0.000249794	-0.000012812	0.000002606	-0.000001067	0.000033509
110	-0.000010591	0.000007221	-0.000002254	0.000000892	-0.000000360	-0.000002613
111	-0.000005682	0.000001139	-0.000000922	0.000000364	-0.000000076	-0.000001888
112	0.000146171	-0.000085491	-0.000027387	-0.000004801	0.000010350	-0.000028141

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000136557	-0.000085464	-0.000010660	0.000002298	0.000009508	-0.000003061
114	-0.000109268	-0.000083332	-0.000035129	-0.000000487	0.000008912	0.000005084
115	-0.000016607	-0.000025641	0.000001843	-0.000007924	0.000005757	0.000007244
116	0.000456911	-0.000088140	-0.000108899	-0.000010214	0.000012954	-0.000026273
117	0.000524380	-0.000198034	-0.000204381	-0.000009536	0.000015499	-0.000022666
118	0.000003554	0.000000800	-0.000206900	-0.000056003	0.000001021	-0.000000835
119	-0.000004474	-0.000714050	-0.000211532	-0.000082029	0.000000834	-0.000000387
120	-0.000005929	-0.000824364	-0.000123593	-0.000037562	0.000000611	-0.000000033
121	-0.000003928	-0.000831272	0.000098657	-0.000001206	0.000000447	0.000000274
122	0.000002086	-0.000838180	-0.000108834	0.000006829	0.000000149	0.000000148
123	0.000003276	-0.000838960	-0.000111938	-0.000008633	0.000000017	0.000000090
124	0.000003397	-0.000670153	0.000004138	-0.000038652	-0.000000095	0.000000071
125	0.000001719	-0.000086388	0.000003380	-0.000037914	-0.000000141	0.000000071
126	-0.000000934	-0.001733301	0.000001563	0.000086095	-0.000000008	0.000000071
127	-0.000000414	-0.001471927	0.000000417	-0.000132213	0.000000045	0.000000071

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	3.	43.	-223.	-14.	14.	1.00	92.	399.	491.
			63	-2.	-3.	-45.	-86.	14.	-2.	1.57	92.	245.	337.
2	TEE	1	63	-45.	3.	2.	-2.	-14.	86.	1.57	65.	188.	253.
			105	45.	-3.	-2.	-1.	14.	-154.	1.57	65.	213.	278.
3	TEE	1	64	-9.	0.	-0.	-5.	-19.	100.	1.57	65.	219.	285.
			105	10.	-0.	0.	6.	19.	-114.	1.57	65.	161.	226.
4	TEE	1	65	-1.	56.	2.	-8.	5.	39.	1.57	65.	86.	151.
			105	1.	-55.	-2.	5.	-5.	-40.	1.57	65.	56.	121.
5	TAN	1	64	-0.	0.	-9.	100.	-19.	-5.	1.00	92.	182.	274.
			106	0.	-0.	4.	10.	19.	2.	1.57	92.	61.	153.
6	BEND	1	106	0.	-4.	0.	10.	-2.	-19.	1.57	65.	46.	112.
			4	-0.	3.	0.	3.	2.	22.	1.57	65.	48.	113.
7	BEND	1	4	0.	-3.	-0.	-3.	-2.	-22.	1.57	65.	48.	113.
			107	-0.	3.	0.	14.	1.	15.	1.57	65.	45.	110.
8	TAN	1	107	3.	-0.	-0.	1.	-15.	14.	1.00	92.	37.	129.
			108	-1.	0.	0.	-1.	15.	-5.	1.00	92.	28.	121.
9	BEND	1	108	-0.	1.	-0.	5.	1.	-15.	1.57	92.	45.	137.
			7	0.	-0.	0.	11.	-1.	12.	1.57	92.	46.	138.
10	BEND	1	7	-0.	0.	-0.	-11.	1.	-12.	1.57	92.	46.	138.
			8	0.	1.	-0.	13.	0.	2.	1.57	92.	37.	129.
11	BEND	1	8	-0.	-1.	0.	-13.	-0.	-2.	1.57	92.	37.	129.
			9	0.	3.	-0.	2.	1.	-5.	1.57	92.	14.	106.
12	BEND	1	9	-0.	-3.	0.	-2.	-1.	5.	1.57	92.	14.	106.
			109	-0.	4.	-0.	-17.	1.	1.	1.57	92.	49.	141.
13	TAN	1	109	-4.	0.	0.	-1.	-1.	17.	1.00	92.	31.	123.
			11	7.	-0.	-0.	1.	1.	-72.	1.00	92.	129.	221.
14	TAN	1	11	10.	0.	0.	-1.	-1.	72.	1.00	92.	129.	221.
			110	-8.	-0.	-0.	0.	1.	-7.	1.57	92.	19.	111.
15	BEND	1	110	8.	-0.	0.	-0.	-7.	-1.	1.57	65.	14.	80.
			13	-5.	0.	5.	1.	-2.	1.	1.57	65.	6.	71.

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	5.	-0.	-5.	-1.	2.	-1.	1.57	65.	6.	71.
			111	-0.	0.	7.	1.	-6.	-0.	1.57	65.	13.	78.
17	TAN	1	111	-0.	-7.	-0.	1.	0.	6.	1.00	92.	11.	103.
			15	0.	5.	0.	-1.	-0.	-7.	1.57	92.	20.	112.
18	TAN	1	65	2.	56.	-3.	39.	5.	-9.	1.57	92.	113.	205.
			16	-2.	-57.	3.	-26.	-5.	17.	1.57	92.	88.	180.
19	TAN	1	16	2.	45.	-3.	26.	5.	-17.	1.57	65.	68.	133.
			18	-2.	-47.	3.	-14.	-5.	25.	1.57	65.	63.	128.
20	TAN	2	18	2.	47.	-3.	14.	5.	-25.	1.57	75.	141.	217.
			69	-2.	-48.	3.	2.	-5.	36.	1.00	75.	111.	187.
21	TAN	2	69	2.	43.	-3.	23.	5.	-36.	1.00	75.	132.	207.
			19	-2.	-43.	3.	-22.	-5.	36.	1.57	75.	208.	283.
22	TAN	2	69	0.	-0.	5.	-25.	0.	0.	1.00	53.	354.	407.
			70	-0.	0.	-5.	-0.	-0.	0.	1.00	53.	0.	53.
23	TAN	2	19	2.	43.	-3.	22.	5.	-36.	1.57	63.	93.	155.
			20	-2.	-46.	3.	-4.	-5.	49.	1.00	63.	67.	130.
24	TAN	2	20	16.	-2.	3.	-5.	-4.	49.	1.00	63.	67.	130.
			21	-14.	2.	-3.	-12.	4.	40.	1.57	63.	91.	153.
25	TAN	2	21	14.	-2.	3.	12.	-4.	-40.	1.57	93.	38.	132.
			22	-12.	2.	-3.	-19.	4.	71.	1.00	93.	43.	136.
26	TAN	2	22	23.	-2.	-8.	19.	-4.	-71.	1.00	93.	43.	136.
			101	-23.	2.	8.	-15.	4.	82.	1.57	93.	76.	169.
27	TEE	2	101	23.	-2.	-8.	15.	-4.	-82.	1.57	67.	59.	126.
			112	-21.	2.	8.	2.	4.	132.	1.57	67.	59.	126.
28	TEE	2	102	0.	-12.	0.	14.	5.	-6.	1.57	67.	11.	78.
			112	-0.	14.	-0.	-14.	-5.	6.	1.57	67.	8.	75.
29	TEE	2	100	2.	5.	8.	-28.	3.	129.	1.57	67.	94.	161.
			112	-2.	-7.	-8.	10.	-3.	-125.	1.57	67.	57.	124.
30	TAN	2	100	2.	5.	-8.	-28.	3.	-129.	1.57	93.	121.	214.
			26	-2.	-2.	8.	56.	-3.	135.	1.00	93.	85.	178.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	-4.	2.	4.	-56.	3.	-135.	1.00	93.	85.	178.
			113	4.	6.	-4.	7.	-3.	80.	1.00	93.	47.	140.
32	TAN	2	113	-4.	-6.	4.	-7.	3.	-80.	1.00	93.	47.	140.
			114	4.	14.	-4.	-43.	-3.	25.	1.00	93.	29.	122.
33	BEND	2	114	4.	-4.	-14.	-25.	43.	3.	1.10	93.	32.	125.
			23	10.	4.	15.	-2.	-30.	-12.	1.10	93.	21.	114.
34	BEND	2	28	-10.	-4.	-15.	2.	30.	12.	1.10	93.	21.	114.
			115	20.	4.	4.	-28.	44.	-0.	1.10	93.	33.	126.
35	TAN	2	115	-4.	-4.	-20.	-44.	-0.	28.	1.00	93.	30.	123.
			30	4.	4.	22.	107.	0.	-41.	1.00	93.	67.	160.
36	TAN	2	30	1.	-4.	13.	-107.	0.	41.	1.00	93.	67.	160.
			104	-1.	4.	-3.	-14.	-0.	-17.	1.00	93.	13.	106.
37	TAN	2	104	1.	-4.	3.	14.	0.	17.	1.00	93.	13.	106.
			32	-1.	4.	5.	0.	-0.	-0.	1.00	93.	0.	93.
38	TAN	3	102	0.	-12.	-0.	14.	5.	6.	1.00	63.	22.	84.
			116	-0.	8.	0.	-13.	-5.	-4.	1.00	63.	20.	82.
39	BEND	3	116	-0.	0.	-8.	7.	12.	5.	1.00	63.	20.	82.
			44	5.	-0.	5.	-7.	1.	1.	1.00	63.	10.	73.
40	BEND	3	44	-5.	0.	-5.	7.	-1.	-1.	1.00	63.	10.	73.
			117	4.	-0.	-0.	-4.	24.	5.	1.00	63.	34.	97.
41	TAN	3	117	0.	0.	-4.	-24.	-5.	4.	1.57	63.	54.	116.
			46	-0.	-0.	-6.	9.	5.	2.	1.57	63.	23.	86.
42	TAN	4	46	0.	0.	6.	-9.	-5.	-2.	1.57	261.	14.	276.
			47	-0.	-0.	-8.	-22.	5.	3.	1.00	261.	19.	281.
43	TAN	4	47	0.	43.	0.	22.	3.	1.	1.00	261.	19.	281.
			48	-0.	-40.	-0.	-23.	-3.	0.	1.57	261.	31.	293.
44	TAN	4	48	0.	40.	0.	23.	3.	-0.	1.57	404.	228.	632.
			66	-0.	-38.	-0.	-24.	-3.	2.	1.57	404.	239.	644.
45	TEE	4	66	-0.	38.	0.	2.	3.	24.	1.57	599.	53.	652.
			118	0.	-37.	-0.	-3.	-3.	-24.	1.57	599.	34.	633.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	-3.	6.	0.	-2.	3.	-182.	1.57	599.	392.	991.
			118	3.	-6.	-0.	2.	-3.	177.	1.57	599.	242.	842.
47	TEE	4	68	-30.	2.	-0.	-1.	-1.	153.	1.57	599.	331.	930.
			118	31.	-2.	0.	1.	1.	-201.	1.57	599.	275.	875.
48	TAN	4	67	0.	6.	-3.	-182.	3.	-2.	1.57	599.	392.	991.
			50	-0.	-3.	3.	200.	-3.	4.	1.57	599.	431.	1030.
49	TAN	4	68	-0.	3.	-30.	153.	-1.	-1.	1.57	599.	331.	930.
			119	0.	-3.	26.	53.	1.	0.	1.57	599.	115.	714.
50	BEND	4	119	-26.	-0.	3.	-0.	-53.	-1.	1.57	599.	115.	714.
			52	16.	0.	-21.	1.	81.	0.	1.57	599.	174.	773.
51	BEND	4	52	-16.	-0.	21.	-1.	-81.	-0.	1.57	599.	174.	773.
			120	-3.	0.	-25.	1.	89.	-0.	1.57	599.	191.	790.
52	TAN	4	120	-0.	25.	3.	-89.	0.	-1.	1.57	599.	191.	790.
			121	0.	-18.	-3.	45.	-0.	0.	1.00	599.	62.	661.
53	TAN	4	121	-0.	18.	3.	-45.	0.	-0.	1.57	599.	97.	696.
			54	0.	-11.	-3.	2.	-0.	-0.	1.00	599.	2.	602.
54	TAN	4	54	0.	11.	2.	-2.	0.	0.	1.00	599.	2.	602.
			122	-0.	-6.	-2.	-23.	-0.	-0.	1.00	599.	32.	631.
55	TAN	4	122	0.	6.	2.	23.	0.	0.	1.00	599.	32.	631.
			123	-0.	-0.	-2.	-48.	-0.	-0.	1.00	599.	65.	665.
56	BEND	4	123	2.	0.	0.	0.	48.	0.	1.00	599.	65.	665.
			56	-0.	-0.	3.	-0.	-55.	-0.	1.00	599.	76.	675.
57	BEND	4	56	0.	0.	-3.	0.	55.	0.	1.00	599.	76.	675.
			124	5.	-0.	2.	-0.	-45.	-0.	1.00	599.	61.	660.
58	TAN	4	124	0.	-2.	-5.	45.	0.	0.	1.00	599.	61.	660.
			125	-0.	2.	12.	63.	0.	-0.	1.00	599.	86.	685.
59	TAN	4	125	0.	-2.	-12.	-63.	-0.	0.	1.00	599.	86.	685.
			58	-0.	2.	19.	261.	0.	0.	1.00	599.	358.	957.
60	TAN	4	58	-0.	-2.	26.	-261.	-0.	-0.	1.00	599.	358.	957.
			126	0.	2.	-16.	-129.	0.	0.	1.00	599.	177.	776.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	-0.	-2.	16.	129.	-0.	-0.	1.00	599.	177.	776.
			59	0.	2.	-7.	-342.	0.	0.	1.00	599.	467.	1067.
62	TAN	4	59	-0.	-2.	7.	342.	0.	-0.	1.57	261.	461.	722.
			127	0.	2.	17.	-326.	-0.	0.	1.57	261.	440.	702.
63	TAN	4	127	-0.	-2.	-17.	326.	0.	-0.	1.57	261.	440.	702.
			61	0.	2.	40.	-241.	-0.	0.	1.57	261.	325.	586.
64	TAN	4	61	-0.	-2.	-40.	241.	0.	-0.	1.00	599.	330.	929.
			62	0.	2.	43.	-0.	-0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	44	0.000542799	-0.000121787	-0.000165814
2	59	-0.000000545	-0.001829992	0.000000504
3	48	0.000041519	0.000022925	-0.000444337

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	399.	1	491.
2	22	354.	22	407.
3	41	54.	41	116.
4	61	467.	61	1067.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	2.	-43.	3.	-223.	-14.	-14.
11	-0.	17.	0.	0.	-0.	0.
15	0.	-5.	-0.	-1.	0.	7.
22	0.	11.	-10.	0.	0.	-0.
26	-6.	0.	11.	-0.	0.	-0.
30	6.	35.	0.	-0.	0.	-0.
32	-1.	5.	-4.	0.	-0.	0.
50	-0.	-3.	3.	200.	-3.	4.
54	0.	0.	-1.	-0.	0.	0.
58	-0.	45.	0.	-0.	-0.	0.
62	0.	43.	-2.	-0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	-0.000063887	0.001025991	-0.000002908	0.000001411	-0.000002527	0.000001642
7	-0.000053681	0.000985733	-0.000041387	-0.000030604	-0.000005516	-0.000010159
8	-0.000027336	0.000848373	-0.000051904	-0.000042496	-0.000006508	-0.000022064
9	0.000000566	0.000594800	-0.000040457	-0.000047070	-0.000006218	-0.000035895
11	0.000011097	0.0	0.000020448	-0.000026028	-0.000002816	-0.000016639
13	0.000008867	-0.000003981	0.000029108	-0.000012203	-0.000001186	0.000004106
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000103775	0.000417817	0.000181793	0.000016420	0.000007779	0.000008609
18	-0.000134693	0.000420664	0.000222871	0.000006760	0.000008850	0.000005035
19	-0.000084835	0.000428106	0.000191566	-0.000009470	0.000013352	-0.000027517
20	0.000153770	0.000431394	0.000115231	-0.000010071	0.000015095	-0.000048601
21	0.000153035	0.000099585	0.000026230	-0.000003215	0.000010954	-0.000040563
22	0.000152839	0.0	0.0	-0.000002426	0.000009612	-0.000034411
26	0.0	-0.000074985	0.0	-0.000002047	0.000008738	-0.000020574
28	-0.000064119	-0.000058938	-0.000011280	-0.000005738	0.000008570	0.000008165
30	0.0	0.0	0.000001175	-0.000008029	0.000004516	0.000007900
32	0.0	0.0	0.0	0.000007334	-0.000002080	0.000007900
44	0.000517223	-0.000032414	0.000202300	0.000031200	0.000007470	-0.000018958
46	0.000373372	0.000162923	0.000215188	-0.000014990	0.000005470	-0.000028310
47	0.000350040	0.000055391	0.000208890	-0.000017723	0.000005320	-0.000028724
48	0.000198392	0.000051568	0.000305342	-0.000018040	0.000005109	-0.000028516
50	0.0	0.0	0.0	0.0	0.0	0.0
52	0.000015227	0.000762519	0.000150687	0.000058883	-0.000000261	-0.000002184
54	0.0	0.000798729	0.0	-0.000011469	-0.000000266	0.000000001
56	0.000000780	0.000770294	0.000045803	0.000023139	-0.000000092	0.000000060
58	0.0	0.0	-0.000002503	-0.000047798	-0.000000002	0.000000062
59	-0.000000012	0.001835127	-0.000000481	0.000106052	0.000000001	0.000000062
61	-0.000000006	0.001036840	-0.000000316	0.000155268	0.000000001	0.000000062
62	0.0	0.0	0.0	0.000184487	0.000000001	0.000000062
63	-0.000033963	0.000324355	-0.000001677	0.000051049	0.000005977	0.000006503
64	-0.000051612	0.000476585	-0.000001930	0.000045448	0.000004992	0.000007028
65	-0.000057667	0.000411218	0.000062939	0.000038801	0.000006161	0.000008574
66	0.000022194	0.000019079	0.000249461	0.000047299	0.000000202	-0.000004587
67	0.000010240	0.000013307	0.000110744	0.000039219	0.000000084	-0.000003197
68	0.000015828	0.000109925	0.000181058	0.000061453	0.000000050	-0.000003605
69	-0.000090951	0.000427867	0.000194156	-0.000008731	0.000013172	-0.000025811
70	-0.000157339	0.000602956	0.000194156	0.000052244	0.000013172	-0.000025811
100	0.000088940	-0.000076693	-0.000014330	-0.000002496	0.000008784	-0.000026416
101	0.000152800	-0.000014190	-0.000003767	-0.000002268	0.000009320	-0.000032939
102	0.000217969	-0.000077135	-0.000023133	-0.000000117	0.000008759	-0.000028469
104	0.000021525	0.000068616	0.000000504	0.000001669	-0.000000865	0.000007900
105	-0.000043664	0.000407056	-0.000001935	0.000045946	0.000005742	0.000007560
106	-0.000066301	0.001019051	-0.000001855	0.000012219	-0.000001754	-0.000000846
107	-0.000062604	0.001022439	-0.000006098	-0.000002843	-0.000003211	0.000002918
108	-0.000062528	0.001013723	-0.000021624	-0.000016799	-0.000003853	-0.000000141
109	0.000010933	0.000337017	-0.000016788	-0.000041692	-0.000004785	-0.000041895
110	0.000011220	-0.000010026	0.000034230	-0.000014279	-0.000000904	0.000003624
111	0.000005023	-0.000001818	0.000019225	-0.000006902	-0.000002218	0.000002106
112	0.000152663	-0.000077524	-0.000021535	-0.000001688	0.000008806	-0.000028923

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** VERTICAL +Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000141502	-0.000070043	-0.000005737	0.000001578	0.000008574	-0.000003081
114	-0.000111160	-0.000066847	-0.000023628	-0.000000206	0.000008411	0.000005463
115	-0.000016526	-0.000025534	0.000001301	-0.000008228	0.000005701	0.000007900
116	0.000444639	-0.000074533	0.000088298	0.000021975	0.000007902	-0.000021916
117	0.000519817	0.000082057	0.000252228	0.000030981	0.000007012	-0.000018545
118	0.000015706	0.000016777	0.000177397	0.000049624	0.000000106	-0.000003844
119	0.000016121	0.000682754	0.000181633	0.000077318	-0.000000068	-0.000002481
120	0.000013354	0.000787041	0.000098768	0.000035087	-0.000000444	-0.000001515
121	0.000001722	0.000793982	-0.000102853	0.000000371	-0.000000355	-0.000000406
122	0.000000214	0.000800950	0.000107089	-0.000006642	-0.000000195	0.000000036
123	0.000000714	0.000801758	0.000109422	0.000008485	-0.000000124	0.000000055
124	0.000000572	0.000637184	-0.000003952	0.000037643	-0.000000060	0.000000062
125	0.000000094	0.000070073	-0.000003228	0.000036552	-0.000000018	0.000000062
126	-0.000000020	0.001742105	-0.000001492	-0.000086169	-0.000000000	0.000000062
127	-0.000000009	0.001475831	-0.000000399	0.000132632	0.000000001	0.000000062

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	5.	7.	53.	-320.	-13.	32.	1.00	92.	574.	666.
			63	-5.	-7.	-51.	-46.	13.	0.	1.57	92.	134.	226.
2	TEE	1	63	-51.	7.	5.	0.	-13.	46.	1.57	65.	103.	168.
			105	50.	-7.	-5.	-7.	13.	-121.	1.57	65.	169.	234.
3	TEE	1	64	5.	-0.	-1.	-12.	7.	12.	1.57	65.	39.	104.
			105	-5.	0.	1.	13.	-7.	-4.	1.57	65.	23.	88.
4	TEE	1	65	-6.	44.	5.	12.	5.	108.	1.57	65.	234.	300.
			105	6.	-45.	-5.	-20.	-5.	-117.	1.57	65.	162.	228.
5	TAN	1	64	-1.	-0.	5.	12.	7.	-12.	1.00	92.	32.	124.
			106	1.	0.	1.	-47.	-7.	3.	1.57	92.	134.	226.
6	BEND	1	106	1.	-1.	-0.	-47.	-3.	7.	1.57	65.	102.	168.
			4	-0.	1.	0.	28.	3.	-38.	1.57	65.	101.	166.
7	BEND	1	4	0.	-1.	-0.	-28.	-3.	38.	1.57	65.	101.	166.
			107	0.	2.	1.	-9.	2.	-46.	1.57	65.	100.	165.
8	TAN	1	107	2.	-1.	0.	2.	46.	-9.	1.00	92.	83.	175.
			108	-3.	1.	-0.	-3.	-46.	18.	1.00	92.	88.	180.
9	BEND	1	108	0.	3.	-1.	-18.	3.	46.	1.57	92.	138.	230.
			7	0.	-4.	0.	-4.	-3.	-51.	1.57	92.	144.	237.
10	BEND	1	7	-0.	4.	-0.	4.	3.	51.	1.57	92.	144.	237.
			8	1.	-6.	0.	-17.	-1.	-42.	1.57	92.	128.	220.
11	BEND	1	8	-1.	6.	-0.	17.	1.	42.	1.57	92.	128.	220.
			9	0.	-7.	-0.	-14.	2.	-29.	1.57	92.	90.	182.
12	BEND	1	9	-0.	7.	0.	14.	-2.	29.	1.57	92.	90.	182.
			109	0.	-9.	-1.	3.	3.	-24.	1.57	92.	68.	160.
13	TAN	1	109	9.	1.	-0.	-3.	24.	-3.	1.00	92.	43.	135.
			11	-12.	-1.	0.	5.	-24.	100.	1.00	92.	184.	276.
14	TAN	1	11	-14.	1.	-0.	-5.	24.	-100.	1.00	92.	184.	276.
			110	12.	-1.	0.	5.	-24.	8.	1.57	92.	72.	164.
15	BEND	1	110	-12.	0.	1.	-5.	8.	24.	1.57	65.	55.	120.
			13	8.	-0.	-8.	-13.	4.	-21.	1.57	65.	53.	118.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	-8.	0.	8.	13.	-4.	21.	1.57	65.	53.	118.
			111	-1.	-0.	-11.	-23.	9.	-6.	1.57	65.	55.	120.
17	TAN	1	111	-1.	11.	0.	-23.	6.	-9.	1.00	92.	46.	138.
			15	1.	-9.	-0.	23.	-6.	6.	1.57	92.	68.	160.
18	TAN	1	65	5.	44.	-7.	108.	5.	12.	1.57	92.	306.	398.
			16	-5.	-43.	7.	-74.	-5.	12.	1.57	92.	211.	303.
19	TAN	1	16	5.	31.	-7.	74.	5.	-12.	1.57	65.	162.	227.
			18	-5.	-29.	7.	-45.	-5.	32.	1.57	65.	119.	184.
20	TAN	2	18	5.	29.	-7.	45.	5.	-32.	1.57	75.	267.	343.
			69	-5.	-28.	7.	-2.	-5.	62.	1.00	75.	190.	265.
21	TAN	2	69	5.	23.	-7.	28.	5.	-62.	1.00	75.	208.	284.
			19	-5.	-22.	7.	-26.	-5.	63.	1.57	75.	330.	405.
22	TAN	2	69	0.	0.	5.	-25.	0.	0.	1.00	53.	361.	414.
			70	-0.	-0.	-5.	-0.	-0.	0.	1.00	53.	0.	53.
23	TAN	2	19	5.	22.	-7.	26.	5.	-63.	1.57	63.	147.	210.
			20	-5.	-20.	7.	22.	-5.	96.	1.00	63.	135.	198.
24	TAN	2	20	42.	-5.	7.	-5.	22.	96.	1.00	63.	135.	198.
			21	-45.	5.	-7.	-39.	-22.	165.	1.57	63.	367.	430.
25	TAN	2	21	45.	-5.	7.	39.	22.	-165.	1.57	93.	156.	249.
			22	-46.	5.	-7.	-57.	-22.	274.	1.00	93.	163.	256.
26	TAN	2	22	-50.	-5.	-20.	57.	22.	-274.	1.00	93.	163.	256.
			101	50.	5.	20.	-47.	-22.	250.	1.57	93.	233.	326.
27	TEE	2	101	-50.	-5.	-20.	47.	22.	-250.	1.57	67.	181.	248.
			112	48.	5.	20.	-3.	-22.	139.	1.57	67.	64.	131.
28	TEE	2	102	1.	14.	-3.	-72.	-2.	-21.	1.57	67.	53.	120.
			112	-1.	-16.	3.	79.	2.	23.	1.57	67.	37.	104.
29	TEE	2	100	4.	-30.	16.	20.	1.	126.	1.57	67.	90.	157.
			112	-4.	32.	-16.	-58.	-1.	-116.	1.57	67.	58.	125.
30	TAN	2	100	4.	-30.	-16.	20.	1.	-126.	1.57	93.	117.	210.
			26	-4.	28.	16.	41.	-1.	142.	1.00	93.	86.	179.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	-4.	-28.	3.	-41.	1.	-142.	1.00	93.	86.	179.
			113	4.	19.	-3.	6.	-1.	84.	1.00	93.	49.	142.
32	TAN	2	113	-4.	-19.	3.	-6.	1.	-84.	1.00	93.	49.	142.
			114	4.	11.	-3.	-29.	-1.	26.	1.00	93.	23.	116.
33	BEND	2	114	3.	-4.	-11.	-26.	29.	1.	1.10	93.	25.	118.
			28	4.	4.	8.	-1.	-24.	-11.	1.10	93.	17.	110.
34	BEND	2	28	-4.	-4.	-8.	1.	24.	11.	1.10	93.	17.	110.
			115	5.	4.	3.	-27.	-1.	-0.	1.10	93.	17.	110.
35	TAN	2	115	-4.	-3.	-5.	1.	-0.	27.	1.00	93.	16.	109.
			30	4.	3.	3.	11.	0.	-40.	1.00	93.	24.	117.
36	TAN	2	30	1.	-3.	-8.	-11.	0.	40.	1.00	93.	24.	117.
			104	-1.	3.	-2.	65.	-0.	-17.	1.00	93.	39.	132.
37	TAN	2	104	1.	-3.	2.	-65.	0.	17.	1.00	93.	39.	132.
			32	-1.	3.	-9.	0.	-0.	-0.	1.00	93.	0.	93.
38	TAN	3	102	1.	14.	3.	-72.	-2.	21.	1.00	63.	103.	166.
			116	-1.	-10.	-3.	44.	2.	-14.	1.00	63.	63.	126.
39	BEND	3	116	3.	-0.	10.	2.	-46.	-2.	1.00	63.	63.	126.
			44	-8.	0.	-3.	-0.	18.	2.	1.00	63.	24.	87.
40	BEND	3	44	8.	-0.	3.	0.	-18.	-2.	1.00	63.	24.	87.
			117	-6.	0.	3.	2.	-17.	2.	1.00	63.	23.	86.
41	TAN	3	117	-0.	-3.	6.	17.	-2.	-2.	1.57	63.	36.	99.
			46	0.	3.	4.	-35.	2.	1.	1.57	63.	76.	138.
42	TAN	4	46	-0.	-3.	-4.	35.	-2.	-1.	1.57	261.	47.	309.
			47	0.	3.	7.	-10.	2.	1.	1.00	261.	9.	270.
43	TAN	4	47	1.	58.	-3.	10.	1.	1.	1.00	261.	9.	270.
			48	-1.	-60.	3.	6.	-1.	4.	1.57	261.	9.	271.
44	TAN	4	48	1.	60.	-3.	-6.	1.	-4.	1.57	404.	69.	473.
			66	-1.	-62.	3.	35.	-1.	11.	1.57	404.	360.	764.
45	TEE	4	66	3.	62.	1.	11.	1.	-35.	1.57	599.	79.	678.
			118	-3.	-63.	-1.	-13.	-1.	40.	1.57	599.	57.	656.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	0.	95.	1.	-11.	0.	167.	1.57	599.	360.	960.
			118	-0.	-94.	-1.	10.	-0.	-167.	1.57	599.	228.	828.
47	TEE	4	68	30.	-2.	-0.	-1.	-3.	-158.	1.57	599.	341.	940.
			118	-31.	2.	0.	1.	3.	206.	1.57	599.	282.	882.
48	TAN	4	67	1.	95.	0.	167.	0.	-11.	1.57	599.	360.	960.
			50	-1.	-98.	-0.	-167.	-0.	16.	1.57	599.	363.	962.
49	TAN	4	68	-0.	-3.	30.	-158.	-3.	-1.	1.57	599.	341.	940.
			119	0.	3.	-26.	-49.	3.	0.	1.57	599.	106.	706.
50	BEND	4	119	26.	-0.	-3.	-0.	49.	-3.	1.57	599.	106.	706.
			52	-16.	0.	21.	2.	-77.	2.	1.57	599.	165.	765.
51	BEND	4	52	16.	-0.	-21.	-2.	77.	-2.	1.57	599.	165.	765.
			120	3.	0.	25.	3.	-85.	0.	1.57	599.	183.	782.
52	TAN	4	120	-0.	-25.	-3.	85.	-0.	-3.	1.57	599.	183.	782.
			121	0.	18.	3.	-43.	0.	1.	1.00	599.	59.	658.
53	TAN	4	121	-0.	-18.	-3.	43.	-0.	-1.	1.57	599.	92.	691.
			54	0.	11.	3.	-1.	0.	0.	1.00	599.	1.	600.
54	TAN	4	54	-0.	-11.	-2.	1.	-0.	-0.	1.00	599.	1.	600.
			122	0.	6.	2.	23.	0.	0.	1.00	599.	31.	630.
55	TAN	4	122	-0.	-6.	-2.	-23.	-0.	-0.	1.00	599.	31.	630.
			123	0.	0.	2.	46.	0.	0.	1.00	599.	64.	663.
56	BEND	4	123	-2.	-0.	-0.	-0.	-46.	-0.	1.00	599.	64.	663.
			56	0.	0.	-3.	0.	54.	0.	1.00	599.	74.	673.
57	BEND	4	56	-0.	-0.	3.	-0.	-54.	-0.	1.00	599.	74.	673.
			124	-5.	0.	-2.	0.	43.	0.	1.00	599.	59.	658.
58	TAN	4	124	-0.	2.	5.	-43.	-0.	-0.	1.00	599.	59.	658.
			125	0.	-2.	-11.	-63.	0.	0.	1.00	599.	86.	685.
59	TAN	4	125	-0.	2.	11.	63.	-0.	-0.	1.00	599.	86.	685.
			58	0.	-2.	-18.	-260.	0.	0.	1.00	599.	356.	955.
60	TAN	4	58	-0.	2.	-26.	260.	-0.	-0.	1.00	599.	356.	955.
			126	0.	-2.	16.	130.	0.	0.	1.00	599.	178.	777.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	-0.	2.	-16.	-130.	-0.	-0.	1.00	599.	178.	777.
			59	0.	-2.	7.	342.	0.	0.	1.00	599.	468.	1067.
62	TAN	4	59	-0.	2.	-7.	-342.	0.	-0.	1.57	261.	461.	723.
			127	0.	-2.	-17.	327.	-0.	0.	1.57	261.	441.	702.
63	TAN	4	127	-0.	2.	17.	-327.	0.	-0.	1.57	261.	441.	702.
			61	0.	-2.	-40.	241.	-0.	0.	1.57	261.	325.	586.
64	TAN	4	61	-0.	2.	40.	-241.	0.	-0.	1.00	599.	330.	929.
			62	0.	-2.	-43.	0.	-0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	117	0.000519817	0.000082057	0.000252228
2	59	-0.000000012	0.001835127	-0.000000481
3	48	0.000198392	0.000051568	0.000305342

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	574.	1	666.
2	24	367.	24	430.
3	38	103.	38	166.
4	61	468.	61	1067.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	5.	-53.	7.	-320.	-32.	-13.
11	-0.	-25.	-0.	-0.	-0.	-0.
15	1.	9.	0.	23.	6.	-6.
22	0.	-96.	-27.	-0.	0.	-0.
26	-9.	-0.	19.	-0.	0.	-0.
30	6.	-5.	0.	-0.	0.	-0.
32	-1.	-9.	-3.	0.	-0.	0.
50	-1.	-98.	-0.	-167.	-0.	16.
54	0.	-0.	1.	0.	-0.	-0.
58	0.	-44.	-0.	0.	-0.	-0.
62	0.	-43.	2.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS 00-4 1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	0.000669589	0.000389142	0.000002386	-0.000011457	0.000010908	-0.000004055
7	0.000584553	0.000352866	0.000320952	-0.000020377	0.000047973	-0.000001529
8	0.000362206	0.000265076	0.000411463	-0.000021910	0.000052365	-0.000004905
9	0.000151278	0.000159272	0.000328243	-0.000020727	0.000042240	-0.000008330
11	0.000083070	0.0	0.000048920	-0.000010271	0.000008839	-0.000005339
13	0.000076147	-0.000005149	0.000002311	-0.000003389	0.000002206	0.000009018
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.000397820	0.000312835	0.000039504	-0.000006260	-0.000038466	-0.000021773
18	0.000474970	0.000317821	-0.000009079	-0.000015026	-0.000039265	-0.000017394
19	0.000538279	0.000331654	-0.000151916	-0.000022883	-0.000041717	-0.000007327
20	0.000592333	0.000339768	-0.000279750	-0.000011881	-0.000034259	-0.000014762
21	0.000581596	0.000167703	-0.000083974	0.000010074	-0.000035182	-0.000068311
22	0.000578672	0.0	0.0	0.000012600	-0.000036290	-0.000080630
26	0.0	-0.000233938	0.0	0.000014537	-0.000032646	-0.000073553
28	-0.000107884	-0.000184081	-0.000046092	-0.000023636	0.000001985	0.000032239
30	0.0	0.0	0.000000740	-0.000018144	0.000007403	0.000034164
32	0.0	0.0	0.0	0.000008356	-0.000007046	0.000034164
44	0.004315756	-0.000274455	0.000717321	0.000082127	-0.000183280	-0.000373993
46	0.011626672	0.000017948	0.002637343	0.000229608	-0.000238365	-0.000833507
47	0.012645800	-0.000003580	0.002919978	0.000235366	-0.000233382	-0.000879703
48	0.007903315	-0.000003302	0.001673870	0.000234727	-0.000225879	-0.000903927
50	0.0	0.0	0.0	0.0	0.0	0.0
52	0.001405447	0.000270221	0.000127991	0.000017786	-0.000072185	-0.000130124
54	0.0	0.000276915	0.0	-0.000000888	-0.000077216	0.000012296
56	0.001250349	0.000270583	0.000008535	0.000004469	-0.000074596	0.000066675
58	0.0	0.0	-0.000000782	0.000007060	0.000043609	0.000066447
59	0.001812675	-0.000037841	-0.000000150	-0.000002920	-0.000104319	0.000066447
61	0.001025419	-0.000019251	-0.000000099	-0.000003215	-0.000153361	0.000066447
62	0.0	0.0	0.0	-0.000003364	-0.000182491	0.000066447
63	0.000184376	0.000250842	-0.000001557	0.000031375	-0.000036214	-0.000017229
64	0.000298867	0.000334179	-0.000001732	0.000020358	-0.000036309	-0.000019147
65	0.000280926	0.000304890	0.000027433	0.000015983	-0.000037260	-0.000022324
66	0.001191715	-0.000001037	0.000190494	0.000039207	-0.000051276	-0.000230529
67	0.000568755	-0.000000695	0.000088175	0.000027348	-0.000037814	-0.000169157
68	0.000950722	0.000048722	0.000136872	0.000031010	-0.000052754	-0.000189118
69	0.000536992	0.000331100	-0.000145912	-0.000023238	-0.000042488	-0.000007456
70	0.000970223	0.000213983	-0.000145912	-0.000023238	-0.000103463	-0.000007456
100	0.000346816	-0.000235691	0.000061521	0.000015495	-0.000036559	-0.000092521
101	0.000578080	-0.000038040	0.000016558	0.000013105	-0.000036601	-0.000083491
102	0.000809296	-0.000236370	0.000132378	0.000015673	-0.000043359	-0.000106788
104	0.000065630	0.000086477	0.000000317	0.000003475	-0.000001549	0.000034164
105	0.000242969	0.000301806	-0.000001797	0.000023304	-0.000036942	-0.000020029
106	0.000674283	0.000397536	-0.000000725	-0.000007424	-0.000002107	-0.000006086
107	0.000662516	0.000385831	0.000021957	-0.000013372	0.000023255	-0.000000999
108	0.000662173	0.000386026	0.000147464	-0.000016949	0.000032352	-0.000000064
109	0.000086295	0.000083368	0.000190888	-0.000017551	0.000022817	-0.000009844
110	0.000080048	-0.000012007	0.000007429	-0.000004811	0.000004124	0.000002697
111	0.000062064	0.000000161	-0.000000525	-0.000000934	0.000001193	0.000012194
112	0.000575971	-0.000236485	0.000098591	0.000014965	-0.000038417	-0.000094993

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000421030	-0.000227720	-0.000133660	0.000004873	-0.000018761	-0.000003205
114	-0.000230893	-0.000221501	-0.000117287	-0.000008196	-0.000004877	0.000023261
115	-0.000023762	-0.000068747	0.000000819	-0.000022265	0.000007297	0.000034164
116	0.002641671	-0.000235416	0.000381345	0.000045332	-0.000133978	-0.000278940
117	0.005874220	-0.000306363	0.001110849	0.000120472	-0.000224518	-0.000449306
118	0.000858390	-0.000000880	0.000134942	0.000032782	-0.000047871	-0.000199049
119	0.001393195	0.000247300	0.000136970	0.000023721	-0.000063102	-0.000142672
120	0.001312407	0.000277400	0.000111773	0.000012160	-0.000080030	-0.000102537
121	0.000313041	0.000277158	0.000013219	0.000003695	-0.000078623	-0.000052308
122	0.000419829	0.000276721	0.000015763	-0.000001400	-0.000076087	0.000057103
123	0.001097180	0.000276526	0.000020005	0.000001306	-0.000074958	0.000066963
124	0.001051383	0.000244174	-0.000001235	0.000007580	-0.000073571	0.000066447
125	0.000172435	0.000120369	-0.000001009	0.000010069	-0.000050385	0.000066447
126	0.001703610	-0.000064877	-0.000000466	0.000000547	0.000085845	0.000066447
127	0.001458763	-0.000028767	-0.000000125	-0.000003093	-0.000130797	0.000066447

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-21.	7.	50.	-261.	35.	-169.	1.00	92.	559.	651.
			63	19.	-7.	-50.	-94.	-35.	26.	1.57	92.	293.	385.
2	TEE	1	63	-50.	7.	-19.	26.	35.	94.	1.57	65.	224.	290.
			105	50.	-7.	19.	2.	-35.	-170.	1.57	65.	245.	310.
3	TEE	1	64	-2.	-2.	-5.	14.	-11.	47.	1.57	65.	108.	173.
			105	2.	2.	5.	-7.	11.	-50.	1.57	65.	73.	138.
4	TEE	1	65	-6.	52.	-13.	-26.	-3.	110.	1.57	65.	244.	309.
			105	6.	-52.	13.	47.	3.	-120.	1.57	65.	176.	242.
5	TAN	1	64	-5.	-2.	-2.	47.	-11.	14.	1.00	92.	89.	181.
			106	-1.	2.	2.	-15.	11.	-47.	1.57	92.	142.	234.
6	BEND	1	106	-1.	-2.	-2.	-15.	47.	-11.	1.57	65.	109.	174.
			4	2.	2.	0.	16.	-45.	-2.	1.57	65.	103.	169.
7	BEND	1	4	-2.	-2.	-0.	-16.	45.	2.	1.57	65.	103.	169.
			107	2.	2.	-2.	8.	-43.	-12.	1.57	65.	97.	162.
8	TAN	1	107	2.	2.	2.	-43.	12.	8.	1.00	92.	80.	172.
			108	-2.	-3.	-2.	35.	-12.	0.	1.00	92.	65.	157.
9	BEND	1	108	2.	2.	3.	-0.	-35.	12.	1.57	92.	103.	195.
			7	-4.	-2.	-2.	-0.	20.	-12.	1.57	92.	65.	157.
10	BEND	1	7	4.	2.	2.	0.	-20.	12.	1.57	92.	65.	157.
			8	-6.	-2.	2.	-0.	-5.	-12.	1.57	92.	36.	128.
11	BEND	1	8	6.	2.	-2.	0.	5.	12.	1.57	92.	36.	128.
			9	-4.	-2.	6.	-0.	-30.	-11.	1.57	92.	90.	182.
12	BEND	1	9	4.	2.	-6.	0.	30.	11.	1.57	92.	90.	182.
			109	2.	-2.	9.	-0.	-36.	-11.	1.57	92.	106.	198.
13	TAN	1	109	2.	-9.	-2.	36.	11.	0.	1.00	92.	67.	159.
			11	-2.	12.	2.	-19.	-11.	18.	1.00	92.	50.	142.
14	TAN	1	11	1.	-12.	-2.	19.	11.	-18.	1.00	92.	50.	142.
			110	-1.	14.	2.	-6.	-11.	24.	1.57	92.	76.	168.
15	BEND	1	110	1.	2.	-14.	6.	24.	11.	1.57	65.	59.	124.
			13	10.	-2.	11.	-10.	-19.	-4.	1.57	65.	46.	112.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	-10.	2.	-11.	10.	19.	4.	1.57	65.	46.	112.
			111	15.	-2.	1.	-8.	-3.	3.	1.57	65.	20.	85.
17	TAN	1	111	15.	-1.	2.	-8.	-3.	3.	1.00	92.	16.	109.
			15	-17.	1.	-2.	-2.	3.	86.	1.57	92.	242.	334.
18	TAN	1	65	-13.	52.	-8.	110.	-4.	-26.	1.57	92.	318.	410.
			16	11.	-52.	8.	-71.	4.	-29.	1.57	92.	216.	308.
19	TAN	1	16	1.	52.	-8.	71.	-4.	29.	1.57	65.	166.	231.
			18	-2.	-52.	8.	-37.	4.	-23.	1.57	65.	94.	160.
20	TAN	2	18	2.	52.	-8.	37.	-4.	23.	1.57	75.	212.	287.
			69	-4.	-52.	8.	12.	4.	-6.	1.00	75.	42.	118.
21	TAN	2	69	9.	52.	-8.	-12.	22.	6.	1.00	75.	78.	153.
			19	-9.	-52.	8.	14.	-22.	-4.	1.57	75.	126.	201.
22	TAN	2	69	-5.	0.	0.	-0.	0.	-25.	1.00	53.	361.	414.
			70	5.	0.	-0.	-0.	-0.	-0.	1.00	53.	0.	53.
23	TAN	2	19	9.	52.	-8.	-14.	22.	4.	1.57	63.	56.	119.
			20	-12.	-52.	8.	69.	-22.	63.	1.00	63.	131.	194.
24	TAN	2	20	-52.	-74.	8.	-22.	69.	63.	1.00	63.	131.	194.
			21	52.	76.	-8.	-29.	-69.	-376.	1.57	63.	826.	888.
25	TAN	2	21	-52.	-76.	8.	29.	69.	376.	1.57	93.	350.	443.
			22	52.	78.	-8.	-50.	-69.	-501.	1.00	93.	295.	388.
26	TAN	2	22	-34.	-78.	24.	50.	69.	501.	1.00	93.	295.	388.
			101	34.	78.	-24.	-61.	-69.	-517.	1.57	93.	480.	573.
27	TEE	2	101	-34.	-78.	24.	61.	69.	517.	1.57	67.	372.	439.
			112	34.	80.	-24.	-115.	-69.	-595.	1.57	67.	277.	344.
28	TEE	2	102	-21.	4.	8.	-43.	-184.	545.	1.57	67.	408.	475.
			112	23.	-4.	-8.	25.	184.	-596.	1.57	67.	298.	365.
29	TEE	2	100	105.	-30.	-16.	-8.	-69.	239.	1.57	67.	176.	243.
			112	-103.	30.	16.	44.	69.	-1.	1.57	67.	53.	120.
30	TAN	2	100	105.	-30.	16.	-8.	-69.	-239.	1.57	93.	227.	320.
			26	-107.	30.	-16.	-52.	69.	634.	1.00	93.	371.	464.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	-30.	-30.	2.	52.	-69.	-634.	1.00	93.	371.	464.
			113	22.	30.	-2.	-74.	69.	295.	1.00	93.	181.	274.
32	TAN	2	113	-22.	-30.	2.	74.	-69.	-295.	1.00	93.	181.	274.
			114	13.	30.	-2.	-96.	69.	66.	1.00	93.	78.	172.
33	BEND	2	114	2.	-13.	-30.	-66.	96.	-69.	1.10	93.	86.	179.
			28	20.	10.	22.	46.	-50.	24.	1.10	93.	46.	139.
34	BEND	2	28	-20.	-10.	-22.	-46.	50.	-24.	1.10	93.	46.	139.
			115	30.	7.	2.	13.	73.	0.	1.10	93.	47.	140.
35	TAN	2	115	-7.	-2.	-30.	-73.	0.	-13.	1.00	93.	43.	136.
			30	5.	2.	30.	162.	-0.	-6.	1.00	93.	94.	187.
36	TAN	2	30	-9.	-2.	6.	-162.	0.	6.	1.00	93.	94.	187.
			104	-1.	2.	-6.	69.	-0.	-63.	1.00	93.	54.	148.
37	TAN	2	104	1.	-2.	6.	-69.	0.	63.	1.00	93.	54.	148.
			32	-9.	2.	-6.	-0.	-0.	-0.	1.00	93.	0.	93.
38	TAN	3	102	-21.	4.	-8.	-43.	-184.	-545.	1.00	63.	789.	852.
			116	17.	-4.	8.	113.	184.	368.	1.00	63.	584.	647.
39	BEND	3	116	-12.	-15.	4.	-385.	-15.	-184.	1.00	63.	584.	647.
			44	5.	13.	-11.	343.	57.	-117.	1.00	63.	502.	565.
40	BEND	3	44	-5.	-13.	11.	-343.	-57.	117.	1.00	63.	502.	565.
			117	-4.	11.	-11.	109.	59.	-304.	1.00	63.	449.	512.
41	TAN	3	117	-11.	11.	4.	-59.	304.	-109.	1.57	63.	707.	770.
			46	1.	-8.	-4.	-46.	-304.	-42.	1.57	63.	668.	731.
42	TAN	4	46	-1.	8.	4.	49.	303.	42.	1.57	261.	418.	680.
			47	-1.	-8.	-4.	-68.	-303.	-42.	1.00	261.	269.	530.
43	TAN	4	47	50.	-4.	8.	-16.	-42.	311.	1.00	261.	269.	530.
			48	-53.	4.	-8.	-25.	42.	-39.	1.57	261.	85.	346.
44	TAN	4	48	53.	-4.	8.	25.	-42.	39.	1.57	404.	615.	1019.
			66	-55.	4.	-8.	-97.	42.	463.	1.57	404.	4660.	5064.
45	TEE	4	66	-8.	-4.	55.	463.	-42.	97.	1.57	599.	1024.	1623.
			118	8.	4.	-55.	-546.	42.	-109.	1.57	599.	767.	1366.

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	8.	-5.	67.	-529.	-124.	93.	1.57	599.	1188.	1788.
			118	-8.	5.	-66.	429.	124.	-81.	1.57	599.	655.	1254.
47	TEE	4	68	-1.	-1.	-10.	-61.	-120.	27.	1.57	599.	296.	895.
			118	1.	1.	11.	77.	120.	-28.	1.57	599.	282.	881.
48	TAN	4	67	67.	-5.	8.	93.	-124.	-529.	1.57	599.	1188.	1788.
			50	-70.	5.	-8.	-140.	124.	916.	1.57	599.	2014.	2613.
49	TAN	4	68	-10.	-1.	-1.	27.	-117.	-66.	1.57	599.	296.	895.
			119	6.	1.	1.	-21.	117.	7.	1.57	599.	257.	857.
50	BEND	4	119	-1.	-6.	-1.	-7.	21.	-117.	1.57	599.	257.	857.
			52	1.	5.	-0.	81.	-20.	81.	1.57	599.	251.	850.
51	BEND	4	52	-1.	-5.	0.	-81.	20.	-81.	1.57	599.	251.	850.
			120	1.	5.	-1.	109.	-19.	2.	1.57	599.	239.	838.
52	TAN	4	120	-5.	1.	-1.	19.	-2.	-109.	1.57	599.	239.	838.
			121	-2.	-1.	1.	-12.	2.	91.	1.00	599.	125.	724.
53	TAN	4	121	2.	1.	-1.	12.	-2.	-91.	1.57	599.	197.	796.
			54	-9.	-1.	1.	-5.	2.	162.	1.00	599.	222.	821.
54	TAN	4	54	-13.	1.	-1.	5.	-2.	-162.	1.00	599.	222.	821.
			122	8.	-1.	1.	3.	2.	53.	1.00	599.	73.	672.
55	TAN	4	122	-8.	1.	-1.	-3.	-2.	-53.	1.00	599.	73.	672.
			123	2.	-1.	1.	10.	2.	2.	1.00	599.	14.	613.
56	BEND	4	123	-1.	-2.	1.	-2.	-10.	-2.	1.00	599.	14.	613.
			56	-0.	-0.	-1.	-1.	12.	2.	1.00	599.	16.	615.
57	BEND	4	56	0.	0.	1.	1.	-12.	-2.	1.00	599.	16.	615.
			124	-1.	-3.	-1.	8.	10.	0.	1.00	599.	17.	616.
58	TAN	4	124	3.	1.	1.	-10.	-0.	-8.	1.00	599.	17.	616.
			125	-10.	-1.	-1.	-0.	0.	91.	1.00	599.	125.	724.
59	TAN	4	125	10.	1.	1.	0.	-0.	-91.	1.00	599.	125.	724.
			58	-17.	-1.	-1.	-10.	0.	266.	1.00	599.	364.	964.
60	TAN	4	58	-26.	1.	-0.	10.	-0.	-266.	1.00	599.	364.	964.
			126	16.	-1.	0.	-7.	0.	-126.	1.00	599.	173.	772.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	-16.	1.	-0.	7.	-0.	126.	1.00	599.	173.	772.
			59	7.	-1.	0.	-3.	0.	-340.	1.00	599.	466.	1065.
62	TAN	4	59	-7.	1.	-0.	3.	0.	340.	1.57	261.	459.	721.
			127	-17.	-1.	0.	-2.	-0.	-326.	1.57	261.	439.	701.
63	TAN	4	127	17.	1.	-0.	2.	0.	326.	1.57	261.	439.	701.
			61	-40.	-1.	0.	-1.	-0.	-240.	1.57	261.	324.	585.
64	TAN	4	61	40.	1.	-0.	1.	0.	240.	1.00	599.	329.	928.
			62	-43.	-1.	0.	-0.	-0.	-0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	47	0.012645800	-0.000003580	0.002919978
2	106	0.000674283	0.000397536	-0.000000725
3	47	0.012645800	-0.000003580	0.002919978

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	559.	1	651.
2	24	826.	24	888.
3	38	789.	38	852.
4	44	4660.	44	5064.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-21.	-50.	.7.	-261.	169.	35.
11	0.	-1.	-0.	-0.	0.	-0.
15	-17.	-1.	2.	-2.	-3.	-86.
22	0.	18.	15.	-0.	0.	0.
26	-137.	-0.	-14.	0.	-0.	-0.
30	-3.	36.	0.	-0.	0.	0.
32	-9.	-6.	-2.	-0.	-0.	0.
50	-70.	5.	-8.	-140.	124.	916.
54	-22.	0.	-0.	0.	-0.	-0.
58	-43.	-1.	-0.	0.	-0.	0.
62	-43.	0.	1.	-0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	-0.000394305	0.000161032	0.000000003	-0.000006618	0.000001301	-0.000005400
7	-0.000354416	0.000163152	-0.000136418	-0.000011476	-0.000025253	-0.000001935
8	-0.000231307	0.000114534	-0.000185808	-0.000012555	-0.000029811	-0.000002702
9	-0.000108976	0.000055218	-0.000137431	-0.000012018	-0.000024504	-0.000003545
11	-0.000068775	0.0	0.000007513	-0.000007244	-0.000003220	0.000000134
13	-0.000063506	0.000003211	0.000014972	-0.000004433	-0.000000179	-0.000006622
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.000064587	0.000137060	0.000023196	-0.000001294	0.000005136	-0.000018833
18	0.000134186	0.000139213	0.000008445	-0.000004921	0.000001304	-0.000016557
19	0.000211300	0.000145186	-0.000044502	-0.000008986	-0.000013924	-0.000009301
20	0.000267512	0.000148690	-0.000096146	-0.000005142	-0.000011570	-0.000009541
21	0.000258572	0.000068731	-0.000029385	0.000002847	-0.000012297	-0.000028218
22	0.000256278	0.0	0.0	0.000003766	-0.000012767	-0.000033026
26	0.0	-0.000095451	0.0	0.000005137	-0.000010409	-0.000036157
28	-0.000120181	-0.000075300	-0.000018567	-0.000009529	0.000010462	0.000024627
30	0.0	0.0	0.000000428	-0.000007449	0.000005321	0.000025474
32	0.0	0.0	0.0	0.000003431	0.000001186	0.000025474
44	0.001707844	-0.000111224	0.000263731	0.000036828	-0.000093071	-0.000163010
46	0.006544534	0.000023763	0.001540133	0.000132442	-0.000201605	-0.000491816
47	0.007415194	-0.000001781	0.001781481	0.000137576	-0.000199190	-0.000524502
48	0.004577808	-0.000001645	0.001048815	0.000138522	-0.000191182	-0.000541299
50	0.0	0.0	0.0	0.0	0.0	0.0
52	0.000345862	0.000180934	0.000086838	0.000011925	0.000008766	-0.000053937
54	0.0	0.000185426	0.0	-0.000000569	0.000037843	-0.000029114
56	-0.001419461	0.000181200	0.000005698	0.000002985	0.000070041	-0.000066747
58	0.0	0.0	-0.000000528	0.000004730	-0.000037219	-0.000066124
59	-0.001778423	-0.000025352	-0.000000101	-0.000001956	0.000101676	-0.000066124
61	-0.001007994	-0.000012897	-0.000000067	-0.000002154	0.000150450	-0.000066124
62	0.0	0.0	0.0	-0.000002254	0.000179446	-0.000066124
63	-0.000041706	0.000109568	-0.000001044	0.000013968	0.000010839	-0.000013840
64	-0.000080894	0.000146867	-0.000001248	0.000009145	0.000014841	-0.000015490
65	-0.000031617	0.000133629	0.000012486	0.000007658	0.000010927	-0.000017971
66	0.000594768	-0.000000533	0.000128649	0.000026061	-0.000004842	-0.000121665
67	0.000274217	-0.000000360	0.000060030	0.000018391	-0.000000955	-0.000085298
68	0.000425354	0.000032717	0.000092790	0.000020740	0.000001219	-0.000095055
69	0.000209271	0.000144947	-0.000042153	-0.000009081	-0.000014167	-0.000009589
70	0.000496575	0.000099180	-0.000042153	-0.000009081	-0.000074369	-0.000009589
100	0.000157620	-0.000096182	0.000021813	0.000005115	-0.000012694	-0.000039862
101	0.000255826	-0.000015549	0.000005627	0.000003950	-0.000012901	-0.000034159
102	0.000344731	-0.000096457	0.000043740	0.000004613	-0.000016416	-0.000041608
104	-0.000004990	0.000035503	0.000000184	0.000001427	-0.000000887	0.000025474
105	-0.000059114	0.000132256	-0.000001205	0.000010573	0.000012422	-0.000016089
106	-0.000387695	0.000164510	-0.000001927	-0.000004450	0.000010029	-0.000006628
107	-0.000393525	0.000162398	-0.000003750	-0.000007724	-0.000007331	-0.000003375
108	-0.000393457	0.000174188	-0.000051994	-0.000009545	-0.000013775	-0.000002402
109	-0.000071404	0.000019509	-0.000059615	-0.000010476	-0.000012167	-0.000003155
110	-0.000066199	0.000007413	0.000017048	-0.000004820	-0.000000398	-0.000001318
111	-0.000052436	-0.000000751	0.000010727	-0.000003049	-0.000000441	-0.000009957
112	0.000254269	-0.000096513	0.000034055	0.000004627	-0.000013779	-0.000038743

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000292537	-0.000092856	-0.000050432	0.000002017	-0.000002301	-0.000007710
114	-0.000225755	-0.000090262	-0.000046666	-0.000003075	0.000005806	0.000014072
115	-0.000025212	-0.000028262	0.000000474	-0.000009131	0.000008109	0.000025474
116	0.001003073	-0.000095988	0.000119541	0.000016780	-0.000064779	-0.000106765
117	0.002477938	-0.000120773	0.000461196	0.000059095	-0.000125417	-0.000216502
118	0.000420315	-0.000000456	0.000091499	0.000021923	-0.000001209	-0.000102211
119	0.000382986	0.000165580	0.000092854	0.000015880	0.000009235	-0.000061403
120	0.000293403	0.000185751	0.000075950	0.000008176	0.000005248	-0.000034716
121	0.000096043	0.000185588	0.000009378	0.000002522	0.000021546	-0.000002445
122	-0.000537574	0.000185295	0.000010439	-0.000000937	0.000050926	-0.000063798
123	-0.001252042	0.000185165	0.000013342	0.000000866	0.000064009	-0.000068422
124	-0.001225337	0.000163538	-0.000000833	0.000005073	0.000074940	-0.000066124
125	-0.000275981	0.000080638	-0.000000680	0.000006744	0.000058126	-0.000066124
126	-0.001644886	-0.000043466	-0.000000315	0.000000366	-0.000085350	-0.000066124
127	-0.001432724	-0.000019273	-0.000000084	-0.000002072	0.000127997	-0.000066124

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	4.	22.	-114.	28.	34.	1.00	92.	218.	310.
			63	-0.	-4.	-22.	-39.	-28.	-26.	1.57	92.	154.	247.
2	TEE	1	63	-22.	4.	0.	-26.	28.	39.	1.57	65.	118.	184.
			105	22.	-4.	1.	26.	-28.	-72.	1.57	65.	121.	186.
3	TEE	1	64	-1.	1.	6.	35.	-8.	23.	1.57	65.	91.	156.
			105	1.	-1.	-7.	-45.	8.	-24.	1.57	65.	71.	136.
4	TEE	1	65	-2.	23.	-8.	-24.	-17.	44.	1.57	65.	114.	180.
			105	2.	-23.	8.	37.	17.	-48.	1.57	65.	90.	155.
5	TAN	1	64	6.	1.	-1.	23.	-8.	35.	1.00	92.	75.	167.
			106	-1.	-1.	1.	-7.	8.	31.	1.57	92.	91.	183.
6	BEND	1	106	-1.	-1.	1.	-7.	-31.	-8.	1.57	65.	70.	135.
			4	-0.	1.	-1.	10.	31.	1.	1.57	65.	70.	135.
7	BEND	1	4	0.	-1.	1.	-10.	-31.	-1.	1.57	65.	70.	135.
			107	-1.	1.	-0.	6.	30.	-6.	1.57	65.	67.	132.
8	TAN	1	107	1.	0.	-1.	30.	6.	6.	1.00	92.	56.	148.
			108	-1.	1.	1.	-25.	-6.	-2.	1.00	92.	45.	138.
9	BEND	1	108	-1.	1.	-1.	2.	25.	6.	1.57	92.	71.	164.
			7	3.	-1.	1.	-2.	-16.	-4.	1.57	92.	46.	139.
10	BEND	1	7	-3.	1.	-1.	2.	16.	4.	1.57	92.	46.	139.
			8	4.	-1.	-1.	-1.	0.	-3.	1.57	92.	9.	102.
11	BEND	1	8	-4.	1.	1.	1.	-0.	3.	1.57	92.	9.	102.
			9	3.	-1.	-5.	1.	18.	-4.	1.57	92.	52.	144.
12	BEND	1	9	-3.	1.	5.	-1.	-18.	4.	1.57	92.	52.	144.
			109	-1.	-1.	-7.	2.	23.	-5.	1.57	92.	67.	159.
13	TAN	1	109	1.	7.	1.	-23.	5.	-2.	1.00	92.	43.	135.
			11	-1.	-10.	-1.	12.	-5.	11.	1.00	92.	30.	122.
14	TAN	1	11	-4.	10.	1.	-12.	5.	-11.	1.00	92.	30.	122.
			110	4.	-12.	-1.	3.	-5.	-18.	1.57	92.	54.	146.
15	BEND	1	110	-4.	-1.	12.	-3.	-18.	5.	1.57	65.	42.	107.
			13	-6.	1.	-12.	-3.	17.	-5.	1.57	65.	39.	104.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	6.	-1.	12.	3.	-17.	5.	1.57	65.	39.	104.
			111	-13.	1.	-4.	-7.	5.	-1.	1.57	65.	18.	83.
17	TAN	1	111	-13.	4.	-1.	-7.	1.	-5.	1.00	92.	15.	107.
			15	15.	-4.	1.	14.	-1.	-73.	1.57	92.	209.	301.
18	TAN	1	65	-8.	23.	-3.	44.	-18.	-24.	1.57	92.	149.	241.
			16	10.	-23.	3.	-29.	18.	-18.	1.57	92.	108.	200.
19	TAN	1	16	2.	23.	-3.	29.	-18.	18.	1.57	65.	83.	148.
			18	-1.	-23.	3.	-16.	18.	-11.	1.57	65.	57.	122.
20	TAN	2	18	1.	23.	-3.	16.	-18.	11.	1.57	75.	128.	204.
			69	1.	-23.	3.	3.	18.	-11.	1.00	75.	66.	141.
21	TAN	2	69	4.	23.	-3.	-3.	7.	11.	1.00	75.	41.	116.
			19	-4.	-23.	3.	4.	-7.	-10.	1.57	75.	61.	137.
22	TAN	2	69	-5.	0.	-0.	0.	0.	-25.	1.00	53.	354.	407.
			70	5.	-0.	0.	-0.	-0.	0.	1.00	53.	0.	53.
23	TAN	2	19	4.	23.	-3.	-4.	7.	10.	1.57	63.	27.	90.
			20	-2.	-23.	3.	25.	-7.	9.	1.00	63.	38.	100.
24	TAN	2	20	-23.	-64.	3.	-7.	25.	9.	1.00	63.	38.	100.
			21	23.	61.	-3.	-13.	-25.	-144.	1.57	63.	316.	379.
25	TAN	2	21	-23.	-61.	3.	13.	25.	144.	1.57	93.	134.	227.
			22	23.	60.	-3.	-21.	-25.	-198.	1.00	93.	116.	210.
26	TAN	2	22	-14.	-60.	13.	21.	25.	198.	1.00	93.	116.	210.
			101	14.	59.	-13.	-27.	-25.	-205.	1.57	93.	190.	284.
27	TEE	2	101	-14.	-59.	13.	27.	25.	205.	1.57	67.	147.	215.
			112	14.	57.	-13.	-58.	-25.	-238.	1.57	67.	112.	179.
28	TEE	2	102	7.	2.	6.	-6.	-98.	147.	1.57	67.	125.	192.
			112	-9.	-2.	-6.	-7.	98.	-129.	1.57	67.	91.	158.
29	TEE	2	100	47.	-12.	-8.	-15.	-40.	-0.	1.57	67.	30.	98.
			112	-49.	12.	8.	32.	40.	109.	1.57	67.	58.	126.
30	TAN	2	100	47.	-12.	8.	-15.	-40.	0.	1.57	93.	39.	132.
			26	-44.	12.	-8.	-14.	40.	169.	1.00	93.	101.	194.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	5.	-12.	1.	14.	-40.	-169.	1.00	93.	101.	194.
			113	3.	12.	-1.	-27.	40.	181.	1.00	93.	109.	202.
32	TAN	2	113	-3.	-12.	1.	27.	-40.	-181.	1.00	93.	109.	202.
			114	12.	12.	-1.	-39.	40.	83.	1.00	93.	58.	151.
33	BEND	2	114	1.	-12.	-12.	-83.	39.	-40.	1.10	93.	64.	157.
			28	8.	15.	9.	31.	-22.	-8.	1.10	93.	25.	118.
34	BEND	2	28	-8.	-15.	-9.	-31.	22.	8.	1.10	93.	25.	118.
			115	12.	18.	1.	-52.	29.	-0.	1.10	93.	38.	131.
35	TAN	2	115	-18.	-1.	-12.	-29.	0.	52.	1.00	93.	35.	128.
			30	19.	1.	12.	66.	-0.	-108.	1.00	93.	73.	167.
36	TAN	2	30	13.	-1.	2.	-66.	0.	108.	1.00	93.	73.	167.
			104	-3.	1.	-2.	29.	-0.	14.	1.00	93.	19.	112.
37	TAN	2	104	3.	-1.	2.	-29.	0.	-14.	1.00	93.	19.	112.
			32	5.	1.	-2.	0.	-0.	0.	1.00	93.	0.	93.
38	TAN	3	102	7.	2.	-6.	-6.	-98.	-147.	1.00	63.	242.	304.
			116	-3.	-2.	6.	58.	98.	191.	1.00	63.	304.	367.
39	BEND	3	116	-5.	4.	2.	-199.	-7.	-98.	1.00	63.	304.	367.
			44	2.	-2.	-5.	224.	25.	-78.	1.00	63.	327.	389.
40	BEND	3	44	-2.	2.	5.	-224.	-25.	78.	1.00	63.	327.	389.
			117	-2.	-0.	-6.	109.	26.	-217.	1.00	63.	334.	397.
41	TAN	3	117	0.	6.	2.	-26.	217.	-109.	1.57	63.	526.	589.
			46	9.	-8.	-2.	-26.	-217.	2.	1.57	63.	470.	533.
42	TAN	4	46	-9.	9.	2.	28.	217.	-2.	1.57	261.	295.	556.
			47	12.	-9.	-2.	-37.	-217.	-45.	1.00	261.	192.	453.
43	TAN	4	47	37.	-2.	6.	-22.	-45.	219.	1.00	261.	192.	453.
			48	-35.	2.	-6.	-8.	45.	-28.	1.57	261.	72.	334.
44	TAN	4	48	35.	-2.	6.	8.	-45.	28.	1.57	404.	525.	929.
			66	-33.	2.	-6.	-62.	45.	287.	1.57	404.	2917.	3321.
45	TEE	4	66	-6.	-2.	33.	287.	-45.	62.	1.57	599.	641.	1240.
			118	6.	2.	-32.	-336.	45.	-71.	1.57	599.	480.	1079.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	6.	-3.	27.	-291.	-3.	61.	1.57	599.	641.	1241.
			118	-6.	3.	-27.	251.	3.	-52.	1.57	599.	350.	950.
47	TEE	4	68	-0.	-0.	4.	38.	-84.	18.	1.57	599.	202.	801.
			118	0.	0.	-5.	-45.	84.	-19.	1.57	599.	192.	791.
48	TAN	4	67	27.	-3.	6.	61.	-3.	-291.	1.57	599.	641.	1241.
			50	-24.	3.	-6.	-96.	3.	433.	1.57	599.	956.	1555.
49	TAN	4	68	4.	-0.	-1.	18.	-85.	35.	1.57	599.	202.	801.
			119	0.	0.	1.	-14.	85.	-22.	1.57	599.	192.	791.
50	BEND	4	119	-1.	-0.	-0.	22.	14.	-85.	1.57	599.	192.	791.
			52	1.	1.	-0.	44.	-13.	76.	1.57	599.	191.	790.
51	BEND	4	52	-1.	-1.	0.	-44.	13.	-76.	1.57	599.	191.	790.
			120	0.	1.	-1.	84.	-13.	23.	1.57	599.	189.	788.
52	TAN	4	120	-1.	1.	-0.	13.	-23.	-84.	1.57	599.	189.	788.
			121	8.	-1.	0.	-8.	23.	20.	1.00	599.	43.	642.
53	TAN	4	121	-8.	1.	-0.	8.	-23.	-20.	1.57	599.	68.	667.
			54	15.	-1.	0.	-3.	23.	-133.	1.00	599.	185.	784.
54	TAN	4	54	12.	1.	-0.	3.	-23.	133.	1.00	599.	185.	784.
			122	-7.	-1.	0.	2.	23.	-35.	1.00	599.	58.	657.
55	TAN	4	122	7.	1.	-0.	-2.	-23.	35.	1.00	599.	58.	657.
			123	-1.	-1.	0.	7.	23.	5.	1.00	599.	33.	633.
56	BEND	4	123	-0.	1.	1.	-5.	-7.	-23.	1.00	599.	33.	633.
			56	-0.	1.	-1.	18.	8.	13.	1.00	599.	32.	632.
57	BEND	4	56	0.	-1.	1.	-18.	-8.	-13.	1.00	599.	32.	632.
			124	-1.	4.	-0.	10.	6.	0.	1.00	599.	17.	616.
58	TAN	4	124	-4.	0.	1.	-6.	0.	-10.	1.00	599.	17.	616.
			125	11.	-0.	-1.	-0.	-0.	-87.	1.00	599.	119.	718.
59	TAN	4	125	-11.	0.	1.	0.	0.	87.	1.00	599.	119.	718.
			58	18.	-0.	-1.	-7.	-0.	-276.	1.00	599.	377.	976.
60	TAN	4	58	26.	0.	-0.	7.	0.	276.	1.00	599.	377.	976.
			126	-17.	-0.	0.	-4.	-0.	120.	1.00	599.	165.	764.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	17.	0.	-0.	4.	0.	-120.	1.00	599.	165.	764.
			59	-7.	-0.	0.	-2.	-0.	338.	1.00	599.	463.	1062.
62	TAN	4	59	7.	0.	-0.	2.	-0.	-338.	1.57	261.	456.	718.
			127	17.	-0.	0.	-1.	0.	324.	1.57	261.	437.	698.
63	TAN	4	127	-17.	0.	-0.	1.	-0.	-324.	1.57	261.	437.	698.
			61	40.	-0.	0.	-1.	0.	239.	1.57	261.	323.	584.
64	TAN	4	61	-40.	0.	-0.	1.	-0.	-239.	1.00	599.	327.	926.
			62	43.	-0.	0.	-0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	47	0.007415194	-0.000001781	0.001781481
2	120	0.000293403	0.000185751	0.000075950
3	47	0.007415194	-0.000001781	0.001781481

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	218.	1	310.
2	22	354.	22	407.
3	41	526.	41	589.
4	44	2917.	44	3321.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	2.	-22.	4.	-114.	-34.	28.
11	-0.	-5.	0.	-0.	-0.	-0.
15	15.	4.	-1.	14.	1.	73.
22	0.	8.	10.	-0.	0.	0.
26	-39.	-0.	-7.	0.	-0.	-0.
30	32.	15.	0.	-0.	0.	0.
32	5.	-2.	-1.	0.	0.	0.
50	-24.	3.	-6.	-96.	3.	433.
54	27.	0.	-0.	0.	-0.	0.
58	44.	-1.	-0.	0.	0.	-0.
62	43.	0.	0.	-0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	0.000064147	0.000236980	0.000021375	-0.000001582	0.000013665	0.000007171
7	0.000021352	0.000143917	0.000253038	-0.000008803	0.000016121	0.000006352
8	-0.000016744	0.000089856	0.000274053	-0.000011455	0.000003857	0.000003989
9	-0.000018035	0.000040188	0.000275119	-0.000013145	-0.000000166	0.000001015
11	-0.000017682	0.0	0.000171965	-0.000012356	0.000013476	-0.000000528
13	-0.000016198	0.000000700	0.000046807	-0.000010372	0.000009866	-0.000001621
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000009377	0.000065210	0.000212274	0.000035000	0.000018740	0.000002406
18	-0.000018167	0.000064673	0.000351095	0.000033166	0.000028184	0.000001737
19	-0.000015253	0.000063183	0.000505431	0.000015913	0.000067897	-0.000003530
20	0.000016951	0.000062309	0.000587234	0.000011905	0.000083268	-0.000006757
21	0.000016848	0.000015163	0.000104041	0.000012700	0.000043438	-0.000006188
22	0.000016821	0.0	0.0	0.000012792	0.000030601	-0.000005459
26	0.0	-0.000013710	0.0	-0.000005999	0.000019877	-0.000002579
28	-0.000031890	-0.000014640	0.000012224	0.000001437	0.000008041	-0.000001768
30	0.0	0.0	0.000010978	-0.000002172	0.000002946	-0.000002679
32	0.0	0.0	0.0	0.000001000	-0.000001357	-0.000002679
44	0.000382006	0.000163934	0.001435870	0.000106896	-0.000039281	-0.000061441
46	0.002384159	0.000007385	0.002126800	0.000049524	-0.000074217	-0.000204618
47	0.002701799	0.000010612	0.002217007	0.000070477	-0.000072795	-0.000211242
48	0.001579475	0.000009744	0.001777104	0.000091211	-0.000070140	-0.000211890
50	0.0	0.0	0.0	0.0	0.0	0.0
52	0.000205804	0.000531931	0.000306146	0.000031126	-0.000008361	-0.000020673
54	0.0	0.000543183	0.0	-0.000001303	-0.000005009	-0.000002197
56	-0.000022485	0.000523882	0.000078734	0.000012809	-0.000000549	-0.000000040
58	0.0	0.0	0.000043640	0.000012266	0.000000836	0.000000011
59	0.000004480	-0.000065747	0.000016976	-0.000005074	-0.000000346	0.000000011
61	0.000002279	-0.000033447	0.000012359	-0.000005587	-0.000000381	0.000000011
62	0.0	0.0	0.0	-0.000005845	-0.000000398	0.000000011
63	0.000007698	0.000038693	0.000008167	0.000016079	0.000000036	0.000002246
64	0.000008445	0.000093907	0.000009895	0.000018699	-0.000000916	0.000002836
65	0.000003230	0.000066066	0.000049433	0.000026154	0.000004469	0.000002655
66	0.000194165	0.000002649	0.000425238	0.000073548	-0.000008359	-0.000039446
67	0.000090237	0.000001704	0.000215883	0.000058362	-0.000005652	-0.000027885
68	0.000151353	0.000101247	0.000320422	0.000061706	-0.000007377	-0.000031515
69	-0.000016028	0.000063243	0.000501710	0.000016742	0.000066309	-0.000003263
70	-0.000350224	0.000147620	0.000504413	0.000016742	0.000066309	-0.000003263
100	0.000008775	-0.000014240	-0.000042709	0.000002494	0.000021233	-0.000003537
101	0.000016816	-0.000002751	-0.000007603	0.000012810	0.000027757	-0.000005269
102	0.000026132	-0.000014838	0.000010047	0.000024487	0.000019778	-0.000004783
104	0.000014041	0.000010350	0.000005671	0.000000416	-0.000000564	-0.000002679
105	0.000007643	0.000064761	0.000009375	0.000020409	0.000000780	0.000002611
106	0.000073242	0.000240413	0.000016383	0.000001223	0.000003593	0.000006161
107	0.000056291	0.000227181	0.000042777	-0.000002772	0.000022609	0.000008319
108	0.000056806	0.000189543	0.000157222	-0.000005799	0.000025179	0.000008151
109	-0.000018798	0.000014437	0.000267089	-0.000013259	0.000005678	-0.000001396
110	-0.000016846	0.000001618	0.000065559	-0.000011679	0.000013577	-0.000000227
111	-0.000013387	-0.000000279	0.000032150	-0.000007596	0.000007578	-0.000002545
112	0.000016796	-0.000014480	-0.000040496	0.000012877	0.000021877	-0.000004445

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000026325	-0.000011831	0.000061987	-0.000001150	0.000015066	-0.000001541
114	-0.000042449	-0.000009952	0.000028536	0.000004248	0.000010256	-0.000001034
115	-0.000010274	-0.000009284	0.000011690	-0.000002379	0.000003856	-0.000002679
116	0.000146711	-0.000017828	0.000885280	0.000125202	-0.000018708	-0.000028311
117	0.000714320	0.000409429	0.001656987	0.000056955	-0.000057482	-0.000097063
118	0.000137932	0.000002157	0.000316164	0.000065516	-0.000007155	-0.000033371
119	0.000207122	0.000489967	0.000322089	0.000045159	-0.000007448	-0.000022812
120	0.000189887	0.000543854	0.000280010	0.000018920	-0.000009544	-0.000015616
121	0.000051062	0.000543519	0.000106214	0.000011507	-0.000007277	-0.000006560
122	-0.000015489	0.000542914	0.000088928	-0.000008373	-0.000003188	-0.000000893
123	-0.000020590	0.000542644	0.000117289	0.000004619	-0.000001368	-0.000000218
124	-0.000023013	0.000457512	0.000052037	0.000017054	0.000000209	0.000000011
125	-0.000013574	0.000212956	0.000048956	0.000018465	0.000001020	0.000000011
126	0.000007681	-0.000112721	0.000032484	0.000000950	0.000000065	0.000000011
127	0.000003406	-0.000049982	0.000015099	-0.000005374	-0.000000366	0.000000011

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-3.	-36.	-7.	-20.	-5.	-10.	1.00	92.	40.	132.
			63	3.	34.	7.	66.	5.	-10.	1.57	92.	188.	280.
2	TEE	1	63	7.	-34.	-3.	-10.	-5.	-66.	1.57	65.	144.	209.
			105	-7.	33.	3.	14.	5.	76.	1.57	65.	106.	171.
3	TEE	1	64	-1.	-14.	-4.	-25.	-3.	27.	1.57	65.	80.	145.
			105	1.	15.	4.	30.	3.	-29.	1.57	65.	58.	123.
4	TEE	1	65	18.	-6.	1.	2.	45.	-76.	1.57	65.	191.	256.
			105	-18.	6.	-1.	-3.	-45.	105.	1.57	65.	172.	237.
5	TAN	1	64	-4.	-14.	-1.	27.	-3.	-25.	1.00	92.	66.	159.
			106	4.	9.	1.	-11.	3.	-35.	1.57	92.	104.	196.
6	BEND	1	106	4.	-1.	-9.	-11.	35.	-3.	1.57	65.	80.	145.
			4	3.	1.	8.	9.	-35.	-6.	1.57	65.	79.	144.
7	BEND	1	4	-3.	-1.	-8.	-9.	35.	6.	1.57	65.	79.	144.
			107	8.	1.	4.	1.	-28.	-10.	1.57	65.	63.	128.
8	TAN	1	107	1.	-4.	8.	-28.	10.	1.	1.00	92.	52.	144.
			108	-1.	4.	-7.	-5.	-10.	3.	1.00	92.	20.	112.
9	BEND	1	108	7.	1.	-4.	-3.	5.	10.	1.57	92.	32.	124.
			7	-1.	-1.	6.	-1.	-24.	-11.	1.57	92.	73.	165.
10	BEND	1	7	1.	1.	-6.	1.	24.	11.	1.57	92.	73.	165.
			8	4.	-1.	4.	-4.	-17.	-8.	1.57	92.	55.	147.
11	BEND	1	8	-4.	1.	-4.	4.	17.	8.	1.57	92.	55.	147.
			9	4.	-1.	-1.	-5.	3.	-5.	1.57	92.	21.	113.
12	BEND	1	9	-4.	1.	1.	5.	-3.	5.	1.57	92.	21.	113.
			109	1.	-1.	-4.	-3.	16.	-1.	1.57	92.	45.	137.
13	TAN	1	109	1.	4.	-1.	-16.	1.	3.	1.00	92.	29.	121.
			11	-1.	-4.	-2.	10.	-1.	6.	1.00	92.	21.	114.
14	TAN	1	11	-2.	4.	2.	-10.	1.	-6.	1.00	92.	21.	114.
			110	2.	-4.	-4.	-12.	-1.	-5.	1.57	92.	37.	129.
15	BEND	1	110	-2.	-4.	4.	12.	-5.	1.	1.57	65.	28.	94.
			13	-1.	5.	-4.	-15.	5.	10.	1.57	65.	39.	104.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	1.	-5.	4.	15.	-5.	-10.	1.57	65.	39.	104.
			111	-4.	5.	-2.	-9.	1.	19.	1.57	65.	46.	111.
17	TAN	1	111	-4.	2.	-5.	-9.	-19.	-1.	1.00	92.	38.	130.
			15	4.	-2.	7.	43.	19.	-18.	1.57	92.	143.	235.
18	TAN	1	65	1.	-6.	18.	-76.	45.	1.	1.57	92.	249.	341.
			16	-1.	6.	-17.	-3.	-45.	3.	1.57	92.	126.	218.
19	TAN	1	16	1.	-6.	5.	3.	45.	-3.	1.57	65.	97.	162.
			18	-1.	6.	-3.	-18.	-45.	6.	1.57	65.	104.	170.
20	TAN	2	18	1.	-6.	3.	18.	45.	-6.	1.57	75.	234.	309.
			69	-1.	6.	-2.	-31.	-45.	10.	1.00	75.	169.	244.
21	TAN	2	69	1.	-6.	-4.	31.	45.	-10.	1.00	75.	169.	244.
			19	-1.	6.	4.	-30.	-45.	10.	1.57	75.	264.	339.
22	TAN	2	69	0.	-5.	0.	-0.	0.	0.	1.00	53.	0.	53.
			70	-0.	5.	-0.	-0.	-0.	0.	1.00	53.	0.	53.
23	TAN	2	19	1.	-6.	-4.	30.	45.	-10.	1.57	63.	118.	180.
			20	-1.	6.	6.	3.	-45.	15.	1.00	63.	64.	127.
24	TAN	2	20	6.	-1.	68.	-45.	3.	15.	1.00	63.	64.	127.
			21	-6.	1.	-71.	-373.	-3.	19.	1.57	63.	805.	867.
25	TAN	2	21	6.	-1.	71.	373.	3.	-19.	1.57	93.	341.	434.
			22	-6.	1.	-72.	-545.	-3.	33.	1.00	93.	317.	410.
26	TAN	2	22	4.	-1.	-161.	545.	3.	-33.	1.00	93.	317.	410.
			101	-4.	1.	161.	-467.	-3.	35.	1.57	93.	428.	521.
27	TEE	2	101	4.	-1.	-161.	467.	3.	-35.	1.57	67.	332.	399.
			112	-4.	1.	159.	-102.	-3.	45.	1.57	67.	50.	117.
28	TEE	2	102	8.	-13.	-53.	-500.	-78.	26.	1.57	67.	359.	426.
			112	-8.	13.	55.	623.	78.	-7.	1.57	67.	285.	352.
29	TEE	2	100	-7.	-9.	103.	384.	24.	36.	1.57	67.	274.	341.
			112	7.	9.	-105.	-620.	-24.	-52.	1.57	67.	280.	347.
30	TAN	2	100	-7.	-9.	-103.	384.	24.	-36.	1.57	93.	353.	446.
			26	7.	9.	100.	-7.	-24.	8.	1.00	93.	15.	108.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	-0.	-9.	-9.	7.	24.	-8.	1.00	93.	15.	108.
			113	0.	9.	0.	51.	-24.	5.	1.00	93.	33.	126.
32	TAN	2	113	-0.	-9.	-0.	-51.	24.	-5.	1.00	93.	33.	126.
			114	0.	9.	-8.	-0.	-24.	2.	1.00	93.	14.	107.
33	BEND	2	114	8.	-0.	-9.	-2.	0.	24.	1.10	93.	15.	108.
			28	-1.	0.	14.	-17.	-24.	-18.	1.10	93.	22.	115.
34	BEND	2	28	1.	-0.	-14.	17.	24.	18.	1.10	93.	22.	115.
			115	9.	0.	14.	-25.	-8.	-0.	1.10	93.	17.	110.
35	TAN	2	115	-0.	-14.	-9.	8.	0.	25.	1.00	93.	15.	109.
			30	0.	16.	9.	19.	-0.	-26.	1.00	93.	19.	112.
36	TAN	2	30	1.	-16.	1.	-19.	-0.	26.	1.00	93.	19.	112.
			104	-1.	26.	-1.	8.	0.	-11.	1.00	93.	8.	101.
37	TAN	2	104	1.	-26.	1.	-8.	-0.	11.	1.00	93.	8.	101.
			32	-1.	34.	-1.	-0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	8.	-13.	53.	-500.	-78.	-26.	1.00	63.	694.	756.
			116	-8.	13.	-49.	36.	78.	99.	1.00	63.	179.	242.
39	BEND	3	116	49.	-5.	-13.	-105.	-10.	-78.	1.00	63.	179.	242.
			44	-24.	4.	43.	110.	-172.	-11.	1.00	63.	280.	342.
40	BEND	3	44	24.	-4.	-43.	-110.	172.	11.	1.00	63.	280.	342.
			117	13.	4.	46.	53.	-197.	-78.	1.00	63.	299.	362.
41	TAN	3	117	-4.	-46.	-13.	197.	78.	-53.	1.57	63.	471.	534.
			46	1.	36.	13.	128.	-78.	-9.	1.57	63.	324.	387.
42	TAN	4	46	-2.	-36.	-13.	-128.	79.	9.	1.57	261.	203.	464.
			47	1.	33.	13.	188.	-79.	-15.	1.00	261.	175.	436.
43	TAN	4	47	8.	13.	19.	-202.	-15.	26.	1.00	261.	175.	436.
			48	-8.	-13.	-21.	97.	15.	16.	1.57	261.	134.	396.
44	TAN	4	48	8.	13.	21.	-97.	-15.	-16.	1.57	404.	976.	1380.
			66	-8.	-13.	-23.	-111.	15.	91.	1.57	404.	1418.	1822.
45	TEE	4	66	-23.	13.	8.	91.	-15.	111.	1.57	599.	312.	911.
			118	24.	-13.	-8.	-103.	15.	-147.	1.57	599.	247.	847.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	37.	12.	9.	-94.	-19.	142.	1.57	599.	370.	969.
			118	-36.	-12.	-9.	81.	19.	-87.	1.57	599.	168.	767.
47	TEE	4	68	-1.	-11.	-1.	-2.	-22.	58.	1.57	599.	134.	733.
			118	1.	12.	1.	3.	22.	-59.	1.57	599.	94.	693.
48	TAN	4	67	9.	12.	37.	142.	-19.	-94.	1.57	599.	370.	969.
			50	-9.	-12.	-40.	-358.	19.	143.	1.57	599.	832.	1432.
49	TAN	4	68	-1.	-11.	-1.	58.	-22.	-3.	1.57	599.	134.	733.
			119	1.	7.	1.	-51.	22.	-2.	1.57	599.	119.	718.
50	BEND	4	119	-1.	-1.	-7.	2.	51.	-22.	1.57	599.	119.	718.
			52	6.	1.	4.	13.	-46.	17.	1.57	599.	110.	709.
51	BEND	4	52	-6.	-1.	-4.	-13.	46.	-17.	1.57	599.	110.	709.
			120	6.	1.	-1.	21.	-39.	3.	1.57	599.	95.	694.
52	TAN	4	120	-1.	1.	-6.	39.	-3.	-21.	1.57	599.	95.	694.
			121	1.	-1.	-1.	-4.	3.	12.	1.00	599.	18.	617.
53	TAN	4	121	-1.	1.	1.	4.	-3.	-12.	1.57	599.	29.	628.
			54	1.	-1.	-8.	-58.	3.	4.	1.00	599.	80.	679.
54	TAN	4	54	-0.	1.	-10.	58.	-3.	-4.	1.00	599.	80.	679.
			122	0.	-1.	4.	16.	3.	2.	1.00	599.	23.	622.
55	TAN	4	122	-0.	1.	-4.	-16.	-3.	-2.	1.00	599.	23.	622.
			123	0.	-1.	-1.	33.	3.	1.	1.00	599.	46.	645.
56	BEND	4	123	1.	-0.	1.	-1.	-33.	-3.	1.00	599.	46.	645.
			56	-3.	0.	2.	2.	22.	2.	1.00	599.	30.	629.
57	BEND	4	56	3.	-0.	-2.	-2.	-22.	-2.	1.00	599.	30.	629.
			124	-1.	0.	6.	2.	10.	0.	1.00	599.	13.	613.
58	TAN	4	124	-0.	-6.	1.	-10.	-0.	-2.	1.00	599.	13.	613.
			125	0.	13.	-1.	-4.	0.	1.	1.00	599.	6.	605.
59	TAN	4	125	-0.	-13.	1.	4.	-0.	-1.	1.00	599.	6.	605.
			58	0.	20.	-1.	-18.	0.	-1.	1.00	599.	25.	624.
60	TAN	4	58	0.	-20.	-0.	18.	0.	1.	1.00	599.	25.	624.
			126	-0.	30.	0.	-11.	-0.	-1.	1.00	599.	16.	615.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	-30.	-0.	11.	-0.	1.	1.00	599.	16.	615.
			59	-0.	39.	0.	-4.	0.	-0.	1.00	599.	6.	605.
62	TAN	4	59	0.	-39.	-0.	4.	0.	0.	1.57	261.	6.	267.
			127	-0.	63.	0.	-3.	-0.	-0.	1.57	261.	4.	266.
63	TAN	4	127	0.	-63.	-0.	3.	0.	0.	1.57	261.	4.	266.
			61	-0.	86.	0.	-2.	-0.	-0.	1.57	261.	3.	264.
64	TAN	4	61	0.	-86.	-0.	2.	0.	0.	1.00	599.	3.	602.
			62	-0.	89.	0.	-0.	0.	-0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	47	0.002701799	0.000010612	0.002217007
2	120	0.000189887	0.000543854	0.000280010
3	47	0.002701799	0.000010612	0.002217007

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	18	249.	18	341.
2	24	805.	24	867.
3	38	694.	38	756.
4	44	1418.	44	1822.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-3.	7.	-36.	-20.	10.	-5.
11	-0.	-2.	0.	-0.	-0.	-0.
15	4.	2.	-7.	43.	-19.	18.
22	0.	-1.	-234.	-0.	0.	-0.
26	7.	-0.	92.	0.	0.	-0.
30	1.	10.	0.	-0.	0.	0.
32	-1.	-1.	-34.	-0.	0.	-0.
50	-9.	-12.	-40.	-358.	19.	143.
54	1.	0.	-18.	0.	-0.	-0.
58	0.	-1.	0.	0.	0.	-0.
62	-0.	0.	-89.	-0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
4	-0.000256390	0.000225499	-0.000015603	-0.000002240	-0.000020780	0.000006652
7	-0.000183687	0.000135176	-0.000364319	-0.000007536	-0.000031698	0.000005555
8	-0.000075527	0.000092790	-0.000414050	-0.000007996	-0.000020152	0.000002065
9	-0.000008759	0.000059009	-0.000389107	-0.000006929	-0.000013263	-0.000001339
11	0.000012462	0.0	-0.000179507	0.000001168	-0.000017829	-0.000002016
13	0.000011223	-0.000001076	-0.000032738	0.000004875	-0.000011454	0.000001602
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000084631	0.000067552	0.000220482	0.000041476	0.000037376	-0.000002796
18	-0.000071510	0.000067017	0.000392810	0.000042901	0.000046759	-0.000003739
19	-0.000037806	0.000065531	0.000628236	0.000027946	0.000086216	-0.000007391
20	0.000014526	0.000064660	0.000771255	0.000013944	0.000101488	-0.000008652
21	0.000014539	0.000013504	0.000170649	-0.000007341	0.000071355	-0.000005637
22	0.000014542	0.0	0.0	-0.000009790	0.000061432	-0.000004629
26	0.0	-0.000011509	0.0	-0.000015255	0.000048979	-0.000002665
28	-0.000069068	-0.000010715	-0.000010321	-0.000000679	0.000018857	-0.000006055
30	0.0	0.0	-0.000007259	-0.000001103	0.000006648	-0.000008325
32	0.0	0.0	0.0	0.000000508	-0.000003062	-0.000008325
44	0.000116973	0.000059671	0.000302628	0.000044030	-0.000001336	-0.000026169
46	0.001329288	0.000002895	0.000701554	0.000028525	-0.000063147	-0.000113566
47	0.001602893	0.000004390	0.000779706	0.000038016	-0.000062826	-0.000118982
48	0.000966170	0.000004027	0.000550305	0.000046161	-0.000060516	-0.000120754
50	0.0	0.0	0.0	0.0	0.0	0.0
52	0.000145314	0.000102543	0.000018547	0.000010840	-0.000006247	-0.000013812
54	0.0	0.000107168	0.0	-0.000000225	-0.000003611	-0.000001751
56	-0.000019017	0.000111910	-0.000059068	-0.000002471	-0.000000307	-0.000000117
58	0.0	0.0	-0.000045562	0.000004370	0.000000669	-0.000000079
59	0.000003585	-0.000023424	-0.000017346	-0.000001808	-0.000000277	-0.000000079
61	0.000001824	-0.000011916	-0.000012601	-0.000001990	-0.000000305	-0.000000079
62	0.0	0.0	0.0	-0.000002083	-0.000000319	-0.000000079
63	-0.000066573	0.000039921	-0.000000560	0.000016732	0.000017245	-0.000000713
64	-0.000123788	0.000097157	-0.000001125	0.000019228	0.000018914	-0.000000425
65	-0.000094168	0.000068406	0.000040683	0.000027805	0.000023196	-0.000001273
66	0.000128677	0.000001056	0.000044853	0.000013986	-0.000006760	-0.000025743
67	0.000060247	0.000000671	0.000012358	0.000007393	-0.000004512	-0.000018410
68	0.000102115	0.000016968	0.000025172	0.000010351	-0.000005823	-0.000020732
69	-0.000039568	0.000065591	0.000621255	0.000029078	0.000084638	-0.000007252
70	-0.000466144	0.000212144	0.000623906	0.000029078	0.000084638	-0.000007252
100	0.000008249	-0.000011631	-0.000092448	-0.000016910	0.000052424	-0.000002904
101	0.000014543	-0.000002304	-0.000024886	-0.000010280	0.000059227	-0.000004385
102	0.000021030	-0.000011836	-0.000157808	-0.000006948	0.000052169	-0.000003058
104	0.000031683	0.000005259	-0.000004075	0.000000211	-0.000001273	-0.000008325
105	-0.000094545	0.000067048	-0.000000596	0.000021271	0.000019527	-0.000000829
106	-0.000271767	0.000229632	-0.000007756	0.000000231	-0.000007596	0.000005559
107	-0.000244764	0.000215793	-0.000046547	-0.000003321	-0.000032439	0.000008087
108	-0.000245068	0.000178341	-0.000209486	-0.000005607	-0.000037061	0.000008090
109	0.000013118	0.000035322	-0.000334780	-0.000004565	-0.000014149	-0.000003788
110	0.000011970	-0.000002534	-0.000050675	0.000005467	-0.000015657	0.000000667
111	0.000008928	-0.000000150	-0.000022308	0.000004264	-0.000009384	0.000001870
112	0.000014545	-0.000011686	-0.000138693	-0.000012082	0.000054060	-0.000003385

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	-0.000040200	-0.000011076	0.000041448	0.000002497	0.000036755	-0.000003341
114	-0.000087039	-0.000010643	-0.000007028	0.000002582	0.000024531	-0.000003671
115	-0.000023035	-0.000004231	-0.000007572	-0.000001340	0.000008740	-0.000008325
116	0.000056926	-0.000013088	0.000094787	0.000045457	0.000017493	-0.000009646
117	0.000222357	0.000163503	0.000387197	0.000025480	-0.000021009	-0.000045634
118	0.000091753	0.000000850	0.000024951	0.000010604	-0.000005711	-0.000021920
119	0.000145388	0.000090734	0.000023713	0.000010270	-0.000005746	-0.000015159
120	0.000134871	0.000107645	0.000006100	0.000010283	-0.000006971	-0.000010593
121	0.000038521	0.000107406	-0.000063651	-0.000001799	-0.000005291	-0.000004725
122	-0.000012641	0.000106976	-0.000054465	0.000005093	-0.000002262	-0.000000763
123	-0.000017413	0.000106785	-0.000071497	-0.000001741	-0.000000913	-0.000000252
124	-0.000019141	0.000116745	-0.000055072	0.000000677	0.000000252	-0.000000079
125	-0.000010944	0.000070558	-0.000051434	0.000005229	0.000000837	-0.000000079
126	0.000006146	-0.000040160	-0.000033630	0.000000339	0.000000052	-0.000000079
127	0.000002725	-0.000017807	-0.000015406	-0.000001915	-0.000000293	-0.000000079

WPPSS 00-4-1371 GROUP 5
GROUP 5 LINES 105 112 115 117

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	2.	3.	-7.	-20.	1.	53.	1.00	92.	101.	193.
			63	-2.	-1.	7.	69.	-1.	-39.	1.57	92.	223.	315.
2	TEE	1	63	7.	1.	2.	-39.	1.	-69.	1.57	65.	171.	236.
			105	-7.	-1.	-2.	36.	-1.	80.	1.57	65.	119.	185.
3	TEE	1	64	-1.	14.	2.	-12.	-5.	32.	1.57	65.	75.	140.
			105	1.	-15.	-2.	8.	5.	-34.	1.57	65.	50.	115.
4	TEE	1	65	15.	-6.	-0.	-5.	45.	-91.	1.57	65.	219.	285.
			105	-14.	6.	0.	5.	-45.	114.	1.57	65.	183.	248.
5	TAN	1	64	2.	14.	-1.	32.	-5.	-12.	1.00	92.	62.	154.
			106	-2.	-9.	1.	-10.	5.	47.	1.57	92.	136.	228.
6	BEND	1	106	-2.	-1.	9.	-10.	-47.	-5.	1.57	65.	104.	169.
			4	-5.	1.	-8.	9.	45.	-3.	1.57	65.	100.	165.
7	BEND	1	4	5.	-1.	8.	-9.	-45.	3.	1.57	65.	100.	165.
			107	-8.	1.	-2.	3.	37.	-7.	1.57	65.	81.	146.
8	TAN	1	107	1.	2.	-8.	37.	7.	3.	1.00	92.	67.	159.
			108	-1.	-2.	7.	-3.	-7.	3.	1.00	92.	16.	108.
9	BEND	1	108	-7.	1.	2.	-3.	3.	7.	1.57	92.	24.	117.
			7	2.	-1.	-5.	3.	19.	-10.	1.57	92.	61.	153.
10	BEND	1	7	-2.	1.	5.	-3.	-19.	10.	1.57	92.	61.	153.
			8	-2.	-1.	-4.	1.	19.	-11.	1.57	92.	62.	154.
11	BEND	1	8	2.	1.	4.	-1.	-19.	11.	1.57	92.	62.	154.
			9	-3.	-1.	-0.	-2.	5.	-11.	1.57	92.	33.	125.
12	BEND	1	9	3.	1.	0.	2.	-5.	11.	1.57	92.	33.	125.
			109	-1.	-1.	2.	-3.	-6.	-9.	1.57	92.	31.	124.
13	TAN	1	109	1.	-2.	1.	6.	9.	3.	1.00	92.	20.	112.
			11	-1.	2.	2.	-3.	-9.	10.	1.00	92.	24.	116.
14	TAN	1	11	-1.	-2.	-2.	3.	9.	-10.	1.00	92.	24.	116.
			110	1.	2.	4.	17.	-9.	4.	1.57	92.	56.	148.
15	BEND	1	110	-1.	4.	-2.	-17.	4.	9.	1.57	65.	43.	108.
			13	2.	-4.	1.	11.	-2.	-20.	1.57	65.	50.	115.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	-2.	4.	-1.	-11.	2.	20.	1.57	65.	50.	115.
			111	2.	-5.	-1.	-1.	0.	-24.	1.57	65.	52.	117.
17	TAN	1	111	2.	1.	5.	-1.	24.	-0.	1.00	92.	43.	135.
			15	-2.	-1.	-7.	-32.	-24.	12.	1.57	92.	117.	209.
18	TAN	1	65	-0.	-6.	15.	-91.	44.	-6.	1.57	92.	286.	378.
			16	0.	6.	-16.	19.	-44.	6.	1.57	92.	136.	228.
19	TAN	1	16	-0.	-6.	4.	-19.	44.	-6.	1.57	65.	105.	170.
			18	0.	6.	-6.	-2.	-44.	6.	1.57	65.	96.	162.
20	TAN	2	18	-0.	-6.	6.	2.	44.	-6.	1.57	75.	216.	292.
			69	0.	6.	-7.	-41.	-44.	5.	1.00	75.	186.	261.
21	TAN	2	69	-0.	-6.	2.	41.	44.	-5.	1.00	75.	186.	261.
			19	0.	6.	-3.	-42.	-44.	5.	1.57	75.	295.	370.
22	TAN	2	69	0.	-5.	-0.	0.	0.	0.	1.00	53.	0.	53.
			70	-0.	5.	0.	0.	-0.	0.	1.00	53.	0.	53.
23	TAN	2	19	-0.	-6.	3.	42.	44.	-5.	1.57	63.	132.	194.
			20	0.	6.	-5.	-67.	-44.	4.	1.00	63.	110.	173.
24	TAN	2	20	6.	0.	57.	-44.	-67.	4.	1.00	63.	110.	173.
			21	-6.	-0.	-54.	-289.	67.	29.	1.57	63.	641.	704.
25	TAN	2	21	6.	0.	54.	289.	-67.	-29.	1.57	93.	272.	365.
			22	6.	-0.	-53.	-417.	67.	43.	1.00	93.	246.	339.
26	TAN	2	22	4.	0.	-102.	417.	-67.	-43.	1.00	93.	246.	339.
			101	-4.	-0.	103.	-368.	67.	44.	1.57	93.	344.	437.
27	TEE	2	101	4.	0.	-103.	368.	-67.	-44.	1.57	67.	266.	333.
			112	-4.	-0.	105.	-131.	67.	52.	1.57	67.	79.	146.
28	TEE	2	102	6.	-6.	-18.	-228.	-70.	-9.	1.57	67.	169.	236.
			112	-6.	6.	16.	268.	70.	22.	1.57	67.	131.	198.
29	TEE	2	100	-6.	-2.	90.	131.	61.	16.	1.57	67.	103.	170.
			112	6.	2.	-88.	-335.	-61.	-30.	1.57	67.	157.	224.
30	TAN	2	100	-6.	-2.	-90.	131.	61.	-16.	1.57	93.	133.	226.
			26	6.	2.	93.	209.	-61.	-5.	1.00	93.	126.	219.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	0.	-2.	17.	-209.	61.	5.	1.00	93.	126.	219.
			113	-0.	2.	-9.	39.	-61.	-3.	1.00	93.	42.	135.
32	TAN	2	113	0.	-2.	9.	-39.	61.	3.	1.00	93.	42.	135.
			114	-0.	2.	-0.	-20.	-61.	-1.	1.00	93.	37.	130.
33	BEND	2	114	0.	0.	-2.	1.	20.	61.	1.10	93.	41.	134.
			28	3.	-0.	-0.	-43.	-12.	-43.	1.10	93.	39.	132.
34	BEND	2	28	-3.	0.	0.	43.	12.	43.	1.10	93.	39.	132.
			115	2.	-0.	-6.	-60.	4.	-0.	1.10	93.	38.	131.
35	TAN	2	115	0.	6.	-2.	-4.	0.	60.	1.00	93.	35.	128.
			30	-0.	-8.	2.	10.	-0.	-59.	1.00	93.	35.	128.
36	TAN	2	30	2.	8.	0.	-10.	-0.	59.	1.00	93.	35.	128.
			104	-2.	-18.	-0.	4.	0.	-25.	1.00	93.	15.	108.
37	TAN	2	104	2.	18.	0.	-4.	-0.	25.	1.00	93.	15.	108.
			32	-2.	-25.	-0.	0.	0.	-0.	1.00	93.	0.	93.
38	TAN	3	102	6.	-6.	18.	-228.	-70.	9.	1.00	63.	327.	389.
			116	-6.	6.	-22.	43.	70.	44.	1.00	63.	127.	190.
39	BEND	3	116	23.	-0.	-6.	-53.	-30.	-70.	1.00	63.	127.	190.
			44	-14.	1.	22.	86.	-62.	12.	1.00	63.	146.	208.
40	BEND	3	44	14.	-1.	-22.	-86.	62.	-12.	1.00	63.	146.	208.
			117	6.	1.	27.	66.	-83.	-51.	1.00	63.	160.	223.
41	TAN	3	117	-1.	-27.	-6.	83.	51.	-66.	1.57	63.	252.	315.
			46	4.	37.	6.	54.	-51.	7.	1.57	63.	160.	223.
42	TAN	4	46	-4.	-37.	-6.	-53.	51.	-7.	1.57	261.	100.	361.
			47	5.	39.	6.	79.	-51.	-13.	1.00	261.	81.	342.
43	TAN	4	47	6.	6.	12.	-89.	-13.	28.	1.00	261.	81.	342.
			48	-6.	-6.	-10.	32.	13.	2.	1.57	261.	46.	307.
44	TAN	4	48	6.	6.	10.	-32.	-13.	-2.	1.57	404.	336.	740.
			66	-6.	-6.	-8.	-49.	13.	57.	1.57	404.	745.	1149.
45	TEE	4	66	-8.	6.	6.	57.	-13.	49.	1.57	599.	164.	763.
			118	7.	-6.	-6.	-66.	13.	-60.	1.57	599.	124.	724.

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46	TEE	4	67	-5.	5.	6.	-61.	-15.	48.	1.57	599.	170.	769.
			118	4.	-5.	-6.	52.	15.	-55.	1.57	599.	108.	707.
47	TEE	4	68	-1.	10.	-0.	-1.	-14.	3.	1.57	599.	31.	630.
			118	1.	-11.	0.	1.	14.	-5.	1.57	599.	31.	630.
48	TAN	4	67	6.	5.	-5.	48.	-15.	-61.	1.57	599.	170.	769.
			50	-6.	-5.	8.	-12.	15.	96.	1.57	599.	211.	810.
49	TAN	4	68	-0.	10.	-1.	3.	-14.	-1.	1.57	599.	31.	630.
			119	0.	-6.	1.	2.	14.	-2.	1.57	599.	31.	630.
50	BEND	4	119	-1.	-0.	6.	2.	-2.	-14.	1.57	599.	31.	630.
			52	-3.	0.	-4.	8.	1.	11.	1.57	599.	30.	630.
51	BEND	4	52	3.	-0.	4.	-8.	-1.	-11.	1.57	599.	30.	630.
			120	-5.	0.	-1.	13.	-5.	2.	1.57	599.	31.	630.
52	TAN	4	120	-0.	1.	5.	5.	-2.	-13.	1.57	599.	31.	630.
			121	0.	-1.	2.	-25.	2.	8.	1.00	599.	36.	635.
53	TAN	4	121	-0.	1.	-2.	25.	-2.	-8.	1.57	599.	56.	655.
			54	0.	-1.	9.	45.	2.	3.	1.00	599.	62.	661.
54	TAN	4	54	-0.	1.	8.	-45.	-2.	-3.	1.00	599.	62.	661.
			122	0.	-1.	-3.	-11.	2.	2.	1.00	599.	16.	615.
55	TAN	4	122	-0.	1.	3.	11.	-2.	-2.	1.00	599.	16.	615.
			123	0.	-1.	3.	-10.	2.	1.	1.00	599.	14.	614.
56	BEND	4	123	-3.	-0.	1.	-1.	10.	-2.	1.00	599.	14.	614.
			56	3.	0.	-4.	2.	6.	1.	1.00	599.	8.	607.
57	BEND	4	56	-3.	-0.	4.	-2.	-6.	-1.	1.00	599.	8.	607.
			124	-1.	0.	-8.	2.	13.	0.	1.00	599.	18.	617.
58	TAN	4	124	-0.	8.	1.	-13.	-0.	-2.	1.00	599.	18.	617.
			125	0.	-15.	-1.	3.	0.	0.	1.00	599.	5.	604.
59	TAN	4	125	-0.	15.	1.	-3.	0.	-0.	1.00	599.	5.	604.
			58	0.	-22.	-1.	-6.	-0.	-1.	1.00	599.	9.	608.
60	TAN	4	58	0.	22.	-0.	6.	0.	1.	1.00	599.	9.	608.
			126	-0.	-31.	0.	-4.	-0.	-1.	1.00	599.	6.	605.

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ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	31.	-0.	4.	0.	1.	1.00	599.	6.	605.
			59	-0.	-41.	0.	-2.	-0.	-0.	1.00	599.	2.	601.
62	TAN	4	59	0.	41.	-0.	2.	-0.	0.	1.57	261.	2.	263.
			127	-0.	-65.	0.	-1.	0.	-0.	1.57	261.	2.	263.
63	TAN	4	127	0.	65.	-0.	1.	-0.	0.	1.57	261.	2.	263.
			61	-0.	-88.	0.	-1.	0.	-0.	1.57	261.	1.	262.
64	TAN	4	61	0.	88.	-0.	1.	-0.	0.	1.00	599.	1.	600.
			62	-0.	-91.	0.	0.	0.	-0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	47	0.001602893	0.000004390	0.000779706
2	106	-0.000271767	0.000229632	-0.000007756
3	47	0.001602893	0.000004390	0.000779706

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	18	286.	18	378.
2	24	641.	24	704.
3	38	327.	38	389.
4	44	745.	44	1149.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	2.	7.	3.	-20.	-53.	1.
11	0.	-2.	-0.	-0.	0.	-0.
15	-2.	1.	7.	-32.	24.	-12.
22	-0.	-2.	-155.	0.	0.	-0.
26	6.	-0.	110.	-0.	0.	0.
30	2.	2.	-0.	-0.	0.	0.
32	-2.	-0.	25.	0.	-0.	-0.
50	-6.	-5.	8.	-12.	15.	96.
54	0.	0.	17.	-0.	-0.	-0.
58	0.	-1.	-0.	0.	0.	-0.
62	-0.	0.	91.	0.	-0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.022999998	0.0	0.0	0.0	0.0
4	-0.016557440	0.012066022	-0.028281908	-0.000370085	0.001081681	0.000068256
7	-0.028669912	0.012310453	-0.019999973	-0.000244434	0.000722049	-0.000276449
8	-0.032164913	0.012078695	-0.023397103	-0.000143967	0.000058696	-0.000432462
9	-0.029107682	0.010699078	-0.026944309	-0.000076640	-0.000683801	-0.000564836
11	-0.013352279	0.0	-0.011047039	0.000130727	-0.001365748	-0.000882232
13	-0.004579414	-0.006664343	-0.000938278	0.000170633	-0.000724786	-0.000531625
15	-0.003000000	0.0	0.0	0.0	0.0	0.0
16	-0.005627833	0.026586942	-0.010971840	-0.000286701	0.000007297	0.000687747
18	-0.008542676	0.030653272	-0.011987381	-0.000214654	-0.000160523	0.000738069
19	-0.012973890	0.038551062	-0.012234021	0.000154617	-0.000866245	0.000633105
20	-0.016622365	0.047142062	-0.010693010	0.000329638	-0.001139393	0.000439206
21	-0.008677978	0.049182426	-0.003261212	0.000559556	-0.001347432	0.000352216
22	-0.005498432	0.049999997	0.0	0.000586011	-0.001373659	0.000368856
26	0.0	0.043328151	0.0	0.000971001	-0.001239072	0.000264455
28	0.002255096	0.001665881	-0.046058476	0.000530953	-0.000528079	0.000062543
30	0.0	0.0	-0.036854394	-0.000172018	-0.000200822	0.000118595
32	0.0	0.0	0.0	0.000079221	0.000092487	0.000118595
44	-0.003814480	0.065638959	0.005464409	-0.000595666	-0.000797709	0.000013987
46	0.014808580	0.021068763	-0.017698813	-0.001974476	-0.000236742	-0.000659993
47	0.016397052	0.011722773	-0.019581720	-0.001962913	-0.000225219	-0.000687224
48	0.012728039	0.009078350	-0.009312719	-0.001917531	-0.000215117	-0.000695108
50	0.006999999	0.0	0.0	0.0	0.0	0.0
52	0.007064383	0.004357833	-0.004384849	-0.000214848	0.000071401	-0.000222102
54	0.0	-0.009307668	0.0	0.000939843	0.000122386	-0.000225253
56	-0.004145242	-0.023571678	-0.038430337	0.000694828	0.000161949	-0.000147149
58	0.0	0.0	-0.024005055	-0.000943085	0.000090313	-0.000146217
59	0.000484095	0.005055141	-0.005823296	0.000390092	-0.000037356	-0.000146217
61	0.000246272	0.002571686	-0.002842759	0.000429548	-0.000041135	-0.000146217
62	0.0	0.0	0.0	0.000449440	-0.000043040	-0.000146217
63	-0.001441736	0.020954587	-0.007218327	-0.000391913	0.000309337	0.000386781
64	-0.002484313	0.019720875	-0.010279082	-0.000400466	0.000385484	0.000427739
65	-0.002731697	0.021882795	-0.009415433	-0.000375014	0.000260901	0.000513508
66	0.007863417	0.004362226	0.000561220	0.000016965	0.000019980	-0.000177286
67	0.007388707	0.002851391	0.000374237	0.000074727	0.000019404	-0.000127781
68	0.007570330	0.003804859	-0.000262257	0.000099737	0.000032005	-0.000166118
69	-0.012815453	0.038235165	-0.012268100	0.000138318	-0.000838018	0.000644600
70	-0.008591842	0.038932294	-0.018952545	0.000138318	-0.000838018	0.000644600
100	-0.001073265	0.048199438	0.002681846	0.000680738	-0.001320650	0.000324595
101	-0.004862521	0.050217181	0.000705167	0.000591303	-0.001377509	0.000372371
102	-0.002653318	0.054217190	0.005356297	0.000580697	-0.001339888	0.000351574
104	-0.000957126	0.000819843	-0.015817348	0.000032943	0.000038459	0.000118595
105	-0.001943633	0.020318590	-0.008749042	-0.000393599	0.000326941	0.000449637
106	-0.014942583	0.012540128	-0.027641132	-0.000410541	0.000983316	0.000103434
107	-0.018197984	0.011868212	-0.027498581	-0.000340350	0.001143747	-0.000007901
108	-0.022744790	0.012056679	-0.022347417	-0.000310019	0.001112242	-0.000082637
109	-0.023162927	0.007823437	-0.024367135	-0.000021711	-0.001265071	-0.000735007
110	-0.005994283	-0.006381925	-0.002022707	0.000245056	-0.001041253	-0.000776273
111	-0.003680605	-0.005743247	-0.000485524	0.000094492	-0.000580664	-0.000261358
112	-0.001841065	0.051195078	0.003992461	0.000610775	-0.001359387	0.000357040

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
113	0.002333922	0.026042797	-0.019938681	0.001789906	-0.000949602	0.000108869
114	0.003139478	0.008757439	-0.043750148	0.001557786	-0.000660131	0.000032885
115	0.000704472	-0.000802948	-0.040803730	-0.000170152	-0.000261708	0.000118595
116	-0.005220864	0.062464330	0.007909574	-0.000051929	-0.000982331	0.000186608
117	0.000121221	0.063528538	0.001145158	-0.001114411	-0.000615913	-0.000166360
118	0.007606611	0.003609725	0.000505539	0.000067395	0.000024564	-0.000157045
119	0.007233035	0.004660729	-0.003893676	0.000034341	0.000054678	-0.000208382
120	0.006768346	0.003670356	-0.004213750	-0.000463977	0.000081667	-0.000248466
121	0.003308265	-0.002818656	0.002483608	-0.000330148	0.000102026	-0.000267996
122	-0.002087441	-0.014516748	-0.015844446	0.001808666	0.000138730	-0.000177477
123	-0.003794325	-0.019725818	-0.034441218	0.001464099	0.000155074	-0.000152766
124	-0.003704339	-0.025399577	-0.037034348	-0.000170115	0.000164740	-0.000146217
125	-0.001606557	-0.015250582	-0.030519698	-0.001134460	0.000145752	-0.000146217
126	0.000829963	0.008666839	-0.014914181	-0.000073076	0.000006998	-0.000146217
127	0.000368017	0.003843006	-0.004333027	0.000413198	-0.000039569	-0.000146217

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	125.	-105.	-237.	1881.	-792.	1265.	1.00	92.	4282.	4374.
			63	-125.	105.	237.	-205.	792.	-382.	2.10	92.	3381.	3473.
2	TEE	1	63	237.	-105.	125.	-382.	-792.	205.	2.10	65.	2593.	2658.
			105	-237.	105.	-125.	195.	792.	150.	2.10	65.	2300.	2365.
3	TEE	1	64	-11.	-125.	32.	935.	276.	104.	2.10	65.	2816.	2881.
			105	11.	125.	-32.	-983.	-276.	-121.	2.10	65.	1569.	1635.
4	TEE	1	65	-28.	-225.	93.	892.	-828.	-314.	2.10	65.	3612.	3677.
			105	28.	225.	-93.	-1036.	828.	271.	2.10	65.	2795.	2860.
5	TAN	1	64	32.	-125.	-11.	104.	276.	935.	1.00	92.	1748.	1840.
			106	-32.	125.	11.	82.	-276.	-387.	2.10	92.	1808.	1900.
6	BEND	1	106	-32.	-11.	-125.	82.	387.	276.	2.10	65.	1387.	1452.
			4	111.	11.	65.	-265.	-295.	-132.	2.10	65.	1201.	1266.
7	BEND	1	4	-111.	-11.	-65.	265.	295.	132.	2.10	65.	1201.	1266.
			107	125.	11.	-32.	-293.	-143.	99.	2.10	65.	979.	1044.
8	TAN	1	107	11.	32.	125.	-143.	-99.	-293.	1.00	92.	608.	700.
			108	-11.	-32.	-125.	-410.	99.	341.	1.00	92.	968.	1061.
9	BEND	1	108	125.	11.	32.	-341.	410.	-99.	2.10	92.	2034.	2126.
			7	-111.	-11.	65.	358.	-995.	-191.	2.10	92.	4026.	4118.
10	BEND	1	7	111.	11.	-65.	-358.	995.	191.	2.10	92.	4026.	4118.
			8	-32.	-11.	125.	165.	-1351.	-407.	2.10	92.	5320.	5412.
11	BEND	1	8	32.	11.	-125.	-165.	1351.	407.	2.10	92.	5320.	5412.
			9	65.	-11.	111.	-125.	-1268.	-423.	2.10	92.	5029.	5121.
12	BEND	1	9	-65.	11.	-111.	125.	1268.	423.	2.10	92.	5029.	5121.
			109	125.	-11.	32.	-341.	-796.	-230.	2.10	92.	3356.	3448.
13	TAN	1	109	11.	-32.	-125.	796.	230.	341.	1.00	92.	1598.	1690.
			11	-11.	32.	125.	401.	-230.	-236.	1.00	92.	926.	1018.
14	TAN	1	11	143.	-32.	-125.	-401.	230.	236.	1.00	92.	926.	1018.
			110	-143.	32.	125.	1298.	-230.	791.	2.10	92.	5758.	5850.
15	BEND	1	110	143.	125.	-32.	-1298.	791.	230.	2.10	65.	4417.	4482.
			13	-78.	-125.	124.	892.	-934.	-1137.	2.10	65.	4945.	5010.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	78.	125.	-124.	-892.	934.	1137.	2.10	65.	4945.	5010.
			111	32.	-125.	143.	-36.	-964.	-1492.	2.10	65.	5104.	5170.
17	TAN	1	111	32.	-143.	125.	-36.	1492.	964.	1.00	92.	3169.	3261.
			15	-32.	143.	-125.	-667.	-1492.	-783.	2.10	92.	6788.	6880.
18	TAN	1	65	93.	-226.	-19.	-314.	-793.	923.	2.10	92.	4709.	4801.
			16	-93.	226.	19.	404.	793.	-494.	2.10	92.	3815.	3907.
19	TAN	1	16	93.	-226.	-19.	-404.	-793.	494.	2.10	65.	2926.	2991.
			18	-93.	226.	19.	482.	793.	-124.	2.10	65.	2691.	2756.
20	TAN	2	18	93.	-226.	-19.	-482.	-793.	124.	2.10	75.	6029.	6104.
			69	-93.	226.	19.	593.	793.	409.	1.00	75.	3286.	3361.
21	TAN	2	69	93.	-226.	-19.	-593.	-793.	-409.	1.00	75.	3286.	3361.
			19	-93.	226.	19.	598.	793.	431.	2.10	75.	6972.	7048.
22	TAN	2	69	0.	0.	-0.	0.	-0.	0.	1.00	53.	0.	53.
			70	-0.	-0.	0.	-0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	93.	-226.	-19.	-598.	-793.	-431.	2.10	63.	3112.	3175.
			20	-93.	226.	19.	724.	793.	1033.	1.00	63.	2039.	2102.
24	TAN	2	20	226.	-93.	19.	793.	724.	1033.	1.00	63.	2039.	2102.
			21	-226.	93.	-19.	-910.	-724.	321.	2.10	63.	3466.	3529.
25	TAN	2	21	226.	-93.	19.	910.	724.	-321.	2.10	93.	1469.	1562.
			22	-226.	93.	-19.	-956.	-724.	863.	1.00	93.	857.	950.
26	TAN	2	22	-990.	-93.	-1131.	956.	724.	-863.	1.00	93.	857.	950.
			101	990.	93.	1131.	-413.	-724.	388.	2.10	93.	1120.	1213.
27	TEE	2	101	-990.	-93.	-1131.	413.	724.	-388.	2.10	67.	868.	935.
			112	990.	93.	1131.	2165.	-724.	-1870.	2.10	67.	1482.	1549.
28	TEE	2	102	30.	-68.	-38.	1497.	725.	298.	2.10	67.	1594.	1661.
			112	-30.	68.	38.	-1411.	-725.	-230.	2.10	67.	949.	1016.
29	TEE	2	100	63.	-1058.	1094.	-4628.	-1440.	-1497.	2.10	67.	4788.	4855.
			112	-63.	1058.	-1094.	2135.	1440.	1640.	2.10	67.	1838.	1905.
30	TAN	2	100	63.	-1058.	-1094.	-4628.	-1440.	1497.	2.10	93.	6179.	6273.
			26	-63.	1058.	1094.	8696.	1440.	-1264.	1.00	93.	5165.	5258.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	39.	-1058.	515.	-8696.	-1440.	1264.	1.00	93.	5165.	5258.
			113	-39.	1058.	-515.	1898.	1440.	-749.	1.00	93.	1449.	1542.
32	TAN	2	113	39.	-1058.	515.	-1898.	-1440.	749.	1.00	93.	1449.	1542.
			114	-39.	1058.	-515.	-4901.	1440.	-234.	1.00	93.	2966.	3059.
33	BEND	2	114	515.	39.	-1058.	234.	4901.	-1440.	1.47	93.	4350.	4443.
			28	384.	-39.	1113.	1018.	-5226.	1115.	1.47	93.	4628.	4721.
34	BEND	2	28	-384.	39.	-1113.	-1018.	5226.	-1115.	1.47	93.	4628.	4721.
			115	1058.	-39.	515.	1674.	-1641.	0.	1.47	93.	1994.	2087.
35	TAN	2	115	39.	-515.	-1058.	1641.	0.	-1674.	1.00	93.	1360.	1453.
			30	-39.	515.	1058.	1534.	0.	1791.	1.00	93.	1368.	1461.
36	TAN	2	30	-64.	-515.	55.	-1534.	0.	-1791.	1.00	93.	1368.	1461.
			104	64.	515.	-55.	659.	-0.	769.	1.00	93.	587.	680.
37	TAN	2	104	-64.	-515.	55.	-659.	0.	-769.	1.00	93.	587.	680.
			32	64.	515.	-55.	0.	-0.	-0.	1.00	93.	0.	93.
38	TAN	3	102	30.	-68.	38.	1497.	725.	-298.	1.00	63.	2312.	2374.
			116	-30.	68.	-38.	-1839.	-725.	571.	1.00	63.	2815.	2878.
39	BEND	3	116	44.	19.	-68.	-79.	1924.	725.	1.00	63.	2815.	2878.
			44	17.	-19.	79.	-375.	-1990.	-602.	1.00	63.	2891.	2954.
40	BEND	3	44	-17.	19.	-79.	375.	1990.	602.	1.00	63.	2891.	2954.
			117	68.	-19.	44.	-609.	-1778.	-195.	1.00	63.	2585.	2648.
41	TAN	3	117	19.	-44.	-68.	1778.	195.	609.	2.10	63.	5429.	5491.
			46	-19.	44.	68.	-118.	-195.	-141.	2.10	63.	769.	832.
42	TAN	4	46	19.	-44.	-68.	120.	193.	141.	2.10	261.	481.	743.
			47	-19.	44.	68.	186.	-193.	-57.	1.00	261.	235.	496.
43	TAN	4	47	30.	68.	-38.	-231.	-57.	136.	1.00	261.	235.	496.
			48	-30.	-68.	38.	429.	57.	22.	2.10	261.	779.	1041.
44	TAN	4	48	30.	68.	-38.	-429.	-57.	-22.	2.10	404.	5665.	6069.
			66	-30.	-68.	38.	780.	57.	302.	2.10	404.	10962.	11366.
45	TEE	4	66	38.	68.	30.	302.	-57.	-780.	2.10	599.	2409.	3008.
			118	-38.	-68.	-30.	-347.	57.	836.	2.10	599.	1249.	1849.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	122.	228.	21.	-485.	64.	-26.	2.10	599.	1407.	2006.
			118	-122.	-228.	-21.	453.	-64.	209.	2.10	599.	707.	1306.
47	TEE	4	68	165.	-153.	9.	102.	111.	-369.	2.10	599.	1145.	1744.
			118	-165.	153.	-9.	-116.	-111.	627.	2.10	599.	929.	1528.
48	TAN	4	67	21.	228.	122.	-26.	64.	-485.	2.10	599.	1407.	2006.
			50	-21.	-228.	-122.	-663.	-64.	604.	2.10	599.	2584.	3183.
49	TAN	4	68	9.	-160.	159.	-369.	107.	106.	2.10	599.	1145.	1744.
			119	-9.	160.	-159.	-798.	-107.	-42.	2.10	599.	2318.	2917.
50	BEND	4	119	159.	9.	-160.	42.	798.	107.	2.10	599.	2318.	2917.
			52	0.	-9.	226.	-96.	-901.	-49.	2.10	599.	2608.	3208.
51	BEND	4	52	-0.	9.	-226.	96.	901.	49.	2.10	599.	2608.	3208.
			120	160.	-9.	159.	-93.	-798.	29.	2.10	599.	2310.	2910.
52	TAN	4	120	9.	-159.	-160.	798.	-29.	93.	2.10	599.	2310.	2910.
			121	-9.	159.	160.	1290.	29.	21.	1.00	599.	1766.	2365.
53	TAN	4	121	9.	-159.	-160.	-1290.	-29.	-21.	2.10	599.	3708.	4308.
			54	-9.	159.	160.	3378.	29.	136.	1.00	599.	4626.	5226.
54	TAN	4	54	-5.	-159.	265.	-3378.	-29.	-136.	1.00	599.	4626.	5226.
			122	5.	159.	-265.	600.	29.	83.	1.00	599.	830.	1429.
55	TAN	4	122	-5.	-159.	265.	-600.	-29.	-83.	1.00	599.	830.	1429.
			123	5.	159.	-265.	-2178.	29.	30.	1.00	599.	2981.	3580.
56	BEND	4	123	265.	-5.	-159.	-30.	2178.	-29.	1.00	599.	2981.	3580.
			56	-74.	5.	300.	20.	-3020.	8.	1.00	599.	4133.	4732.
57	BEND	4	56	74.	-5.	-300.	-20.	3020.	-8.	1.00	599.	4133.	4732.
			124	159.	5.	265.	-1.	-2809.	-0.	1.00	599.	3843.	4442.
58	TAN	4	124	-5.	-265.	-159.	2809.	0.	1.	1.00	599.	3843.	4442.
			125	5.	265.	159.	-704.	-0.	-68.	1.00	599.	968.	1567.
59	TAN	4	125	-5.	-265.	-159.	704.	0.	68.	1.00	599.	968.	1567.
			58	5.	265.	159.	1401.	-0.	-134.	1.00	599.	1926.	2525.
60	TAN	4	58	3.	-265.	29.	-1401.	0.	134.	1.00	599.	1926.	2525.
			126	-3.	265.	-29.	870.	-0.	-83.	1.00	599.	1196.	1795.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	3.	-265.	29.	-870.	0.	83.	1.00	599.	1196.	1795.
			59	-3.	265.	-29.	339.	-0.	-32.	1.00	599.	466.	1065.
62	TAN	4	59	3.	-265.	29.	-339.	0.	32.	2.10	261.	613.	874.
			127	-3.	265.	-29.	253.	-0.	-24.	2.10	261.	456.	718.
63	TAN	4	127	3.	-265.	29.	-253.	-0.	24.	2.10	261.	456.	718.
			61	-3.	265.	-29.	166.	0.	-16.	2.10	261.	300.	561.
64	TAN	4	61	3.	-265.	29.	-166.	0.	16.	1.00	599.	228.	827.
			62	-3.	265.	-29.	0.	0.	-0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	8	-0.032164913	0.012078695	-0.023397103
2	44	-0.003814480	0.065638959	0.005464409
3	28	0.002255096	0.001665881	-0.046058476

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	17	6788.	17	6880.
2	21	6972.	21	7048.
3	41	5429.	41	5491.
4	44	10962.	44	11366.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	125.	237.	-105.	1881.	-1265.	-792.
11	0.	132.	-0.	-0.	-0.	0.
15	-32.	-143.	125.	-667.	1492.	783.
22	0.	-1216.	-1150.	-0.	0.	-0.
26	-24.	-0.	1609.	-0.	-0.	0.
30	-103.	1113.	0.	-0.	-0.	-0.
32	64.	-55.	-515.	0.	-0.	0.
50	-21.	-228.	-122.	-663.	-64.	604.
54	-14.	-0.	424.	-0.	-0.	-0.
58	8.	188.	0.	-0.	0.	-0.
62	-3.	-29.	-265.	0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS   12.19 ** LAST STEP "UPDT" TIME IS    8.59 ** DELTA TIME IS    3.60 *
* ELAPSED SECONDS                           144.0                                110.0                     34.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   12.22 ** LAST STEP "ST3D" TIME IS   12.19 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           144.2                                144.0                      0.2 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 64
NUMBER OF JOINTS 66
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	2.1600	3	2.2000				
2	1	3.1600	3	2.2000						
3	1	1.0000	2	2.1600	5	2.2000				
4	1	3.1600	5	2.2000						
5	1	1.0000	2	2.1600	4	2.2000				
6	1	3.1600	4	2.2000						
7	1	1.0000	2	2.1600	6	2.2000				
8	1	3.1600	6	2.2000						
9	1	1.0000	2	2.2600	3	2.3000				
10	1	3.2600	3	2.3000						
11	1	1.0000	2	2.2600	5	2.3000				
12	1	3.2600	5	2.3000						
13	1	1.0000	2	2.2600	4	2.3000				
14	1	3.2600	4	2.3000						
15	1	1.0000	2	2.2600	6	2.3000				
16	1	3.2600	6	2.3000						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS   12.52 ** LAST STEP "BEGP" TIME IS   12.22 ** DELTA TIME IS    0.30 *
* ELAPSED SECONDS                           151.0                                144.2                       6.8 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	58.	33.	267.	1489.	120.	456.	1.00	92.	2786.	2878.
			63	54.	33.	265.	393.	120.	60.	1.57	92.	1166.	1259.
2	TEE	1	63	265.	33.	54.	60.	120.	393.	1.57	65.	895.	960.
			105	264.	33.	52.	21.	120.	789.	1.57	65.	1111.	1176.
3	TEE	1	64	23.	4.	11.	62.	58.	228.	1.57	65.	525.	590.
			105	25.	4.	13.	48.	58.	233.	1.57	65.	348.	413.
4	TEE	1	65	27.	267.	41.	92.	21.	514.	1.57	65.	1127.	1192.
			105	27.	268.	42.	151.	21.	557.	1.57	65.	791.	856.
5	TAN	1	64	11.	4.	23.	228.	58.	62.	1.00	92.	434.	527.
			106	3.	4.	9.	143.	58.	112.	1.57	92.	536.	628.
6	BEND	1	106	3.	9.	4.	143.	112.	58.	1.57	65.	411.	476.
			4	5.	10.	2.	98.	106.	107.	1.57	65.	387.	452.
7	BEND	1	4	5.	10.	2.	98.	106.	107.	1.57	65.	387.	452.
			107	4.	10.	5.	51.	100.	139.	1.57	65.	386.	451.
8	TAN	1	107	10.	5.	4.	100.	139.	51.	1.00	92.	319.	411.
			108	12.	8.	4.	84.	139.	45.	1.00	92.	301.	393.
9	BEND	1	108	4.	12.	8.	45.	84.	139.	1.57	92.	474.	566.
			7	11.	14.	5.	19.	50.	149.	1.57	92.	444.	536.
10	BEND	1	7	11.	14.	5.	19.	50.	149.	1.57	92.	444.	536.
			8	14.	18.	4.	51.	14.	118.	1.57	92.	364.	456.
11	BEND	1	8	14.	18.	4.	51.	14.	118.	1.57	92.	364.	456.
			9	10.	23.	15.	33.	71.	91.	1.57	92.	337.	429.
12	BEND	1	9	10.	23.	15.	33.	71.	91.	1.57	92.	337.	429.
			109	4.	27.	21.	25.	88.	77.	1.57	92.	335.	427.
13	TAN	1	109	27.	21.	4.	88.	77.	25.	1.00	92.	213.	305.
			11	36.	27.	4.	52.	77.	328.	1.00	92.	608.	701.
14	TAN	1	11	42.	27.	4.	52.	77.	328.	1.00	92.	608.	701.
			110	35.	32.	4.	25.	77.	78.	1.57	92.	315.	407.
15	BEND	1	110	35.	4.	32.	25.	78.	77.	1.57	65.	241.	306.
			13	43.	4.	47.	50.	52.	55.	1.57	65.	196.	261.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	43.	4.	47.	50.	52.	55.	1.57	65.	196.	261.
			111	34.	4.	32.	70.	30.	19.	1.57	65.	170.	235.
17	TAN	1	111	34.	32.	4.	70.	19.	30.	1.00	92.	140.	233.
			15	38.	27.	4.	54.	19.	208.	1.57	92.	606.	698.
18	TAN	1	65	41.	266.	37.	514.	24.	92.	1.57	92.	1470.	1562.
			16	38.	264.	37.	342.	24.	107.	1.57	92.	1008.	1100.
19	TAN	1	16	15.	226.	37.	342.	24.	107.	1.57	65.	773.	838.
			18	18.	224.	37.	192.	24.	146.	1.57	65.	523.	588.
20	TAN	2	18	18.	224.	37.	192.	24.	146.	1.57	75.	1171.	1246.
			69	21.	223.	37.	33.	24.	182.	1.00	75.	572.	647.
21	TAN	2	69	32.	207.	37.	110.	63.	182.	1.00	75.	679.	755.
			19	32.	207.	37.	110.	63.	180.	1.57	75.	1064.	1139.
22	TAN	2	69	11.	0.	16.	80.	0.	56.	1.00	53.	1383.	1436.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	32.	207.	37.	110.	63.	180.	1.57	63.	475.	538.
			20	38.	203.	37.	203.	63.	395.	1.00	63.	613.	676.
24	TAN	2	20	222.	175.	37.	63.	203.	395.	1.00	63.	613.	676.
			21	225.	180.	37.	161.	203.	1222.	1.57	63.	2692.	2755.
25	TAN	2	21	225.	180.	37.	161.	203.	1222.	1.57	93.	1141.	1234.
			22	227.	184.	37.	250.	203.	1764.	1.00	93.	1040.	1133.
26	TAN	2	22	206.	184.	102.	250.	203.	1764.	1.00	93.	1040.	1133.
			101	205.	184.	102.	251.	203.	1759.	1.57	93.	1634.	1727.
27	TEE	2	101	205.	184.	102.	251.	203.	1759.	1.57	67.	1266.	1333.
			112	198.	189.	102.	260.	203.	1740.	1.57	67.	804.	871.
28	TEE	2	102	49.	51.	24.	265.	413.	1250.	1.57	67.	951.	1018.
			112	53.	57.	24.	242.	413.	1366.	1.57	67.	689.	756.
29	TEE	2	100	242.	135.	78.	88.	157.	926.	1.57	67.	668.	735.
			112	238.	141.	78.	231.	157.	379.	1.57	67.	228.	295.
30	TAN	2	100	242.	135.	78.	88.	157.	926.	1.57	93.	862.	955.
			26	247.	128.	78.	258.	157.	1837.	1.00	93.	1080.	1173.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	79.	128.	13.	258.	157.	1837.	1.00	93.	1080.	1173.
			113	61.	113.	13.	181.	157.	911.	1.00	93.	546.	639.
32	TAN	2	113	61.	113.	13.	181.	157.	911.	1.00	93.	546.	639.
			114	43.	104.	13.	316.	157.	227.	1.00	93.	243.	336.
33	BEND	2	114	13.	43.	104.	227.	316.	157.	1.10	93.	268.	361.
			28	62.	36.	80.	105.	193.	89.	1.10	93.	151.	245.
34	BEND	2	28	62.	36.	80.	105.	193.	89.	1.10	93.	151.	245.
			115	97.	30.	13.	115.	206.	0.	1.10	93.	150.	244.
35	TAN	2	115	30.	13.	97.	206.	0.	115.	1.00	93.	137.	230.
			30	25.	13.	95.	488.	0.	141.	1.00	93.	295.	388.
36	TAN	2	30	24.	13.	44.	488.	0.	141.	1.00	93.	295.	388.
			104	8.	13.	19.	309.	0.	193.	1.00	93.	211.	304.
37	TAN	2	104	8.	13.	19.	309.	0.	193.	1.00	93.	211.	304.
			32	24.	13.	38.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	49.	51.	24.	265.	413.	1250.	1.00	63.	1838.	1900.
			116	40.	39.	24.	358.	413.	843.	1.00	63.	1375.	1437.
39	BEND	3	116	33.	33.	39.	858.	144.	413.	1.00	63.	1317.	1380.
			44	33.	29.	36.	763.	164.	264.	1.00	63.	1127.	1189.
40	BEND	3	44	33.	29.	36.	763.	164.	264.	1.00	63.	1127.	1189.
			117	26.	25.	31.	247.	189.	678.	1.00	63.	1020.	1083.
41	TAN	3	117	25.	31.	26.	189.	678.	247.	1.57	63.	1607.	1670.
			46	3.	25.	24.	185.	678.	97.	1.57	63.	1529.	1591.
42	TAN	4	46	3.	25.	24.	192.	678.	97.	1.57	261.	959.	1220.
			47	3.	24.	32.	194.	678.	98.	1.00	261.	609.	871.
43	TAN	4	47	112.	177.	24.	80.	98.	685.	1.00	261.	597.	858.
			48	118.	180.	24.	91.	98.	95.	1.57	261.	221.	483.
44	TAN	4	48	118.	180.	24.	91.	98.	95.	1.57	404.	1609.	2013.
			66	122.	182.	24.	313.	98.	1046.	1.57	404.	10752.	11156.
45	TEE	4	66	24.	182.	122.	1046.	98.	313.	1.57	599.	2363.	2962.
			118	24.	183.	124.	1231.	98.	349.	1.57	599.	1763.	2362.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	22.	222.	150.	1190.	276.	748.	1.57	599.	3087.	3686.
			118	22.	221.	148.	967.	276.	715.	1.57	599.	1750.	2349.
47	TEE	4	68	98.	8.	22.	137.	271.	554.	1.57	599.	1361.	1960.
			118	100.	8.	24.	173.	271.	708.	1.57	599.	1155.	1755.
48	TAN	4	67	150.	222.	22.	748.	276.	1190.	1.57	599.	3087.	3686.
			50	156.	226.	22.	870.	276.	2053.	1.57	599.	4842.	5441.
49	TAN	4	68	22.	11.	97.	554.	265.	147.	1.57	599.	1361.	1960.
			119	14.	11.	85.	207.	265.	15.	1.57	599.	725.	1324.
50	BEND	4	119	85.	14.	11.	15.	207.	265.	1.57	599.	725.	1324.
			52	52.	12.	65.	184.	290.	183.	1.57	599.	839.	1438.
51	BEND	4	52	52.	12.	65.	184.	290.	183.	1.57	599.	839.	1438.
			120	11.	11.	81.	247.	314.	5.	1.57	599.	860.	1459.
52	TAN	4	120	11.	81.	11.	314.	5.	247.	1.57	599.	860.	1459.
			121	5.	59.	11.	164.	5.	203.	1.00	599.	357.	956.
53	TAN	4	121	5.	59.	11.	164.	5.	203.	1.57	599.	562.	1161.
			54	20.	38.	11.	14.	5.	357.	1.00	599.	488.	1088.
54	TAN	4	54	29.	38.	9.	14.	5.	357.	1.00	599.	488.	1088.
			122	17.	20.	9.	78.	5.	117.	1.00	599.	192.	791.
55	TAN	4	122	17.	20.	9.	78.	5.	117.	1.00	599.	192.	791.
			123	5.	3.	9.	170.	5.	4.	1.00	599.	232.	832.
56	BEND	4	123	9.	5.	3.	4.	170.	5.	1.00	599.	232.	832.
			56	0.	1.	12.	2.	197.	5.	1.00	599.	269.	869.
57	BEND	4	56	0.	1.	12.	2.	197.	5.	1.00	599.	269.	869.
			124	16.	6.	9.	19.	159.	0.	1.00	599.	219.	819.
58	TAN	4	124	6.	9.	16.	159.	0.	19.	1.00	599.	219.	819.
			125	22.	9.	38.	199.	0.	201.	1.00	599.	387.	986.
59	TAN	4	125	22.	9.	38.	199.	0.	201.	1.00	599.	387.	986.
			58	37.	9.	60.	846.	0.	586.	1.00	599.	1408.	2007.
60	TAN	4	58	58.	9.	83.	846.	0.	586.	1.00	599.	1408.	2007.
			126	36.	9.	52.	425.	0.	278.	1.00	599.	694.	1293.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	36.	9.	52.	425.	0.	278.	1.00	599.	694.	1293.
			59	15.	9.	22.	1086.	0.	749.	1.00	599.	1805.	2404.
62	TAN	4	59	15.	9.	22.	1086.	0.	749.	1.57	261.	1780.	2041.
			127	37.	9.	54.	1036.	0.	716.	1.57	261.	1700.	1961.
63	TAN	4	127	37.	9.	54.	1036.	0.	716.	1.57	261.	1700.	1961.
			61	88.	9.	128.	764.	0.	529.	1.57	261.	1254.	1515.
64	TAN	4	61	88.	9.	128.	764.	0.	529.	1.00	599.	1271.	1870.
			62	95.	9.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2786.	1	2878.
2	24	2692.	24	2755.
3	38	1838.	38	1900.
4	44	10752.	44	11156.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	58.	-267.	33.	1489.	-456.	120.
11	-54.	78.	9.	-153.	104.	657.
15	38.	-27.	-4.	54.	-19.	-208.
22	-367.	432.	139.	-406.	500.	3528.
26	327.	255.	91.	516.	313.	3673.
30	49.	138.	-26.	976.	281.	-0.
32	24.	38.	-13.	0.	0.	-0.
50	156.	226.	22.	870.	276.	2053.
54	49.	75.	20.	28.	10.	713.
58	94.	143.	-17.	1692.	1171.	-0.
62	95.	137.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	52.	24.	245.	1280.	120.	416.	1.00	92.	2410.	2502.
			63	47.	24.	252.	480.	120.	63.	1.57	92.	1403.	1495.
2	TEE	1	63	252.	24.	47.	63.	120.	480.	1.57	65.	1076.	1141.
			105	254.	24.	46.	7.	120.	860.	1.57	65.	1205.	1270.
3	TEE	1	64	33.	4.	11.	47.	85.	419.	1.57	65.	926.	991.
			105	35.	4.	12.	32.	85.	469.	1.57	65.	669.	734.
4	TEE	1	65	16.	292.	34.	84.	22.	365.	1.57	65.	809.	874.
			105	16.	289.	35.	119.	22.	391.	1.57	65.	561.	626.
5	TAN	1	64	11.	4.	33.	419.	85.	47.	1.00	92.	767.	859.
			106	2.	4.	16.	63.	85.	109.	1.57	92.	427.	519.
6	BEND	1	106	2.	16.	4.	63.	109.	85.	1.57	65.	328.	393.
			4	5.	15.	1.	44.	104.	74.	1.57	65.	291.	356.
7	BEND	1	4	5.	15.	1.	44.	104.	74.	1.57	65.	291.	356.
			107	4.	13.	4.	63.	98.	74.	1.57	65.	297.	362.
8	TAN	1	107	13.	4.	4.	98.	74.	63.	1.00	92.	246.	338.
			108	9.	7.	4.	80.	74.	15.	1.00	92.	196.	288.
9	BEND	1	108	4.	9.	7.	15.	80.	74.	1.57	92.	308.	400.
			7	10.	4.	4.	34.	46.	65.	1.57	92.	242.	334.
10	BEND	1	7	10.	4.	4.	34.	46.	65.	1.57	92.	242.	334.
			8	14.	9.	4.	42.	13.	32.	1.57	92.	153.	245.
11	BEND	1	8	14.	9.	4.	42.	13.	32.	1.57	92.	153.	245.
			9	9.	13.	15.	6.	70.	39.	1.57	92.	225.	317.
12	BEND	1	9	9.	13.	15.	6.	70.	39.	1.57	92.	225.	317.
			109	4.	18.	20.	55.	83.	29.	1.57	92.	292.	384.
13	TAN	1	109	18.	20.	4.	83.	29.	55.	1.00	92.	186.	278.
			11	27.	26.	4.	44.	29.	267.	1.00	92.	486.	578.
14	TAN	1	11	34.	26.	4.	44.	29.	267.	1.00	92.	486.	578.
			110	27.	31.	4.	14.	29.	74.	1.57	92.	226.	318.
15	BEND	1	110	27.	4.	31.	14.	74.	29.	1.57	65.	173.	238.
			13	38.	4.	40.	26.	48.	13.	1.57	65.	120.	185.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	38.	4.	40.	26.	48.	13.	1.57	65.	120.	185.
			111	33.	4.	24.	22.	24.	7.	1.57	65.	73.	138.
17	TAN	1	111	33.	24.	4.	22.	7.	24.	1.00	92.	61.	153.
			15	37.	19.	4.	8.	7.	211.	1.57	92.	593.	685.
18	TAN	1	65	34.	291.	28.	365.	24.	84.	1.57	92.	1055.	1147.
			16	31.	295.	28.	237.	24.	120.	1.57	92.	749.	841.
19	TAN	1	16	8.	257.	28.	237.	24.	120.	1.57	65.	575.	640.
			18	11.	263.	28.	127.	24.	130.	1.57	65.	395.	460.
20	TAN	2	18	11.	263.	28.	127.	24.	130.	1.57	75.	885.	960.
			69	14.	267.	28.	32.	24.	126.	1.00	75.	405.	481.
21	TAN	2	69	25.	251.	28.	99.	63.	126.	1.00	75.	529.	604.
			19	25.	251.	28.	102.	63.	123.	1.57	75.	828.	903.
22	TAN	2	69	11.	0.	15.	79.	0.	56.	1.00	53.	1371.	1424.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	25.	251.	28.	102.	63.	123.	1.57	63.	370.	432.
			20	31.	260.	28.	165.	63.	292.	1.00	63.	467.	530.
24	TAN	2	20	166.	168.	28.	63.	165.	292.	1.00	63.	467.	530.
			21	158.	173.	28.	103.	165.	953.	1.57	63.	2097.	2159.
25	TAN	2	21	158.	173.	28.	103.	165.	953.	1.57	93.	889.	982.
			22	153.	177.	28.	169.	165.	1326.	1.00	93.	781.	874.
26	TAN	2	22	148.	177.	76.	169.	165.	1326.	1.00	93.	781.	874.
			101	147.	177.	76.	182.	165.	1396.	1.57	93.	1295.	1388.
27	TEE	2	101	147.	177.	76.	182.	165.	1396.	1.57	67.	1004.	1071.
			112	141.	182.	76.	259.	165.	1724.	1.57	67.	792.	859.
28	TEE	2	102	48.	48.	17.	139.	420.	1217.	1.57	67.	916.	984.
			112	52.	54.	17.	101.	420.	1330.	1.57	67.	669.	736.
29	TEE	2	100	236.	80.	59.	104.	161.	933.	1.57	67.	674.	741.
			112	232.	86.	59.	128.	161.	399.	1.57	67.	220.	287.
30	TAN	2	100	236.	80.	59.	104.	161.	933.	1.57	93.	870.	963.
			26	242.	73.	59.	291.	161.	1822.	1.00	93.	1074.	1168.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	79.	73.	16.	291.	161.	1822.	1.00	93.	1074.	1168.
			113	61.	84.	16.	183.	161.	902.	1.00	93.	542.	635.
32	TAN	2	113	61.	84.	16.	183.	161.	902.	1.00	93.	542.	635.
			114	42.	111.	16.	345.	161.	224.	1.00	93.	257.	350.
33	BEND	2	114	16.	42.	111.	224.	345.	161.	1.10	93.	282.	375.
			28	74.	36.	96.	109.	206.	91.	1.10	93.	159.	253.
34	BEND	2	28	74.	36.	96.	109.	206.	91.	1.10	93.	159.	253.
			115	130.	29.	16.	117.	298.	0.	1.10	93.	204.	297.
35	TAN	2	115	29.	16.	130.	298.	0.	117.	1.00	93.	185.	279.
			30	25.	16.	136.	695.	0.	141.	1.00	93.	411.	505.
36	TAN	2	30	24.	16.	53.	695.	0.	141.	1.00	93.	411.	505.
			104	8.	16.	21.	199.	0.	194.	1.00	93.	161.	254.
37	TAN	2	104	8.	16.	21.	199.	0.	194.	1.00	93.	161.	254.
			32	24.	16.	29.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	48.	48.	17.	139.	420.	1217.	1.00	63.	1772.	1834.
			116	39.	36.	17.	290.	420.	822.	1.00	63.	1324.	1386.
39	BEND	3	116	26.	34.	36.	869.	69.	420.	1.00	63.	1324.	1386.
			44	26.	29.	39.	778.	128.	261.	1.00	63.	1137.	1199.
40	BEND	3	44	26.	29.	39.	778.	128.	261.	1.00	63.	1137.	1199.
			117	24.	25.	24.	251.	205.	686.	1.00	63.	1037.	1100.
41	TAN	3	117	25.	24.	24.	205.	686.	251.	1.57	63.	1634.	1696.
			46	4.	18.	27.	128.	686.	99.	1.57	63.	1518.	1581.
42	TAN	4	46	3.	18.	27.	136.	684.	99.	1.57	261.	950.	1212.
			47	3.	17.	35.	219.	684.	103.	1.00	261.	622.	883.
43	TAN	4	47	111.	145.	17.	106.	103.	686.	1.00	261.	601.	862.
			48	117.	136.	17.	128.	103.	88.	1.57	261.	251.	512.
44	TAN	4	48	117.	136.	17.	128.	103.	88.	1.57	404.	1826.	2230.
			66	121.	130.	17.	290.	103.	1027.	1.57	404.	10514.	10918.
45	TEE	4	66	17.	130.	121.	1027.	103.	290.	1.57	599.	2311.	2910.
			118	17.	128.	123.	1210.	103.	316.	1.57	599.	1725.	2324.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	28.	29.	148.	1171.	281.	780.	1.57	599.	3093.	3692.
			118	28.	31.	147.	950.	281.	738.	1.57	599.	1754.	2353.
47	TEE	4	68	97.	8.	22.	137.	267.	544.	1.57	599.	1337.	1937.
			118	100.	8.	24.	173.	267.	698.	1.57	599.	1139.	1738.
48	TAN	4	67	148.	29.	28.	780.	281.	1171.	1.57	599.	3093.	3692.
			50	155.	20.	28.	940.	281.	2026.	1.57	599.	4852.	5451.
49	TAN	4	68	22.	12.	97.	544.	261.	147.	1.57	599.	1337.	1937.
			119	14.	12.	85.	215.	261.	16.	1.57	599.	730.	1329.
50	BEND	4	119	85.	14.	12.	16.	215.	261.	1.57	599.	730.	1329.
			52	52.	12.	65.	182.	299.	179.	1.57	599.	847.	1446.
51	BEND	4	52	52.	12.	65.	182.	299.	179.	1.57	599.	847.	1446.
			120	12.	11.	81.	243.	322.	5.	1.57	599.	869.	1468.
52	TAN	4	120	11.	81.	12.	322.	5.	243.	1.57	599.	869.	1468.
			121	5.	59.	12.	169.	5.	200.	1.00	599.	358.	958.
53	TAN	4	121	5.	59.	12.	169.	5.	200.	1.57	599.	564.	1164.
			54	20.	37.	12.	16.	5.	357.	1.00	599.	489.	1088.
54	TAN	4	54	29.	37.	9.	16.	5.	357.	1.00	599.	489.	1088.
			122	17.	20.	9.	78.	5.	117.	1.00	599.	193.	792.
55	TAN	4	122	17.	20.	9.	78.	5.	117.	1.00	599.	193.	792.
			123	5.	3.	9.	173.	5.	4.	1.00	599.	236.	836.
56	BEND	4	123	9.	5.	3.	4.	173.	5.	1.00	599.	236.	836.
			56	0.	1.	12.	2.	200.	6.	1.00	599.	274.	873.
57	BEND	4	56	0.	1.	12.	2.	200.	6.	1.00	599.	274.	873.
			124	16.	6.	9.	19.	162.	0.	1.00	599.	223.	823.
58	TAN	4	124	6.	9.	16.	162.	0.	19.	1.00	599.	223.	823.
			125	22.	9.	38.	199.	0.	201.	1.00	599.	387.	986.
59	TAN	4	125	22.	9.	38.	199.	0.	201.	1.00	599.	387.	986.
			58	37.	9.	60.	849.	0.	586.	1.00	599.	1411.	2011.
60	TAN	4	58	58.	9.	83.	849.	0.	586.	1.00	599.	1411.	2011.
			126	36.	9.	52.	423.	0.	278.	1.00	599.	692.	1291.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	36.	9.	52.	423.	0.	278.	1.00	599.	692.	1291.
			59	15.	9.	22.	1085.	0.	749.	1.00	599.	1804.	2403.
62	TAN	4	59	15.	9.	22.	1085.	0.	749.	1.57	261.	1779.	2040.
			127	37.	9.	54.	1036.	0.	716.	1.57	261.	1699.	1960.
63	TAN	4	127	37.	9.	54.	1036.	0.	716.	1.57	261.	1699.	1960.
			61	88.	9.	128.	764.	0.	529.	1.57	261.	1253.	1514.
64	TAN	4	61	88.	9.	128.	764.	0.	529.	1.00	599.	1271.	1870.
			62	95.	9.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2410.	1	2502.
2	24	2097.	24	2159.
3	38	1772.	38	1834.
4	44	10514.	44	10918.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	52.	-245.	24.	1280.	-416.	120.
11	-53.	61.	8.	-58.	87.	535.
15	37.	-19.	-4.	8.	-7.	-211.
22	-353.	300.	103.	-330.	338.	2652.
26	320.	145.	75.	583.	323.	3645.
30	48.	188.	-31.	1390.	283.	-0.
32	24.	29.	-16.	0.	0.	-0.
50	155.	20.	28.	940.	281.	2026.
54	49.	75.	21.	32.	10.	714.
58	94.	143.	-18.	1698.	1172.	-0.
62	95.	137.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	18.	98.	171.	957.	52.	105.	1.00	92.	1720.	1812.
			63	18.	93.	168.	330.	52.	25.	1.57	92.	942.	1034.
2	TEE	1	63	168.	93.	18.	25.	52.	330.	1.57	65.	723.	788.
			105	168.	92.	18.	48.	52.	582.	1.57	65.	807.	873.
3	TEE	1	64	21.	32.	9.	86.	40.	185.	1.57	65.	449.	514.
			105	23.	33.	9.	100.	40.	186.	1.57	65.	302.	367.
4	TEE	1	65	52.	165.	15.	40.	113.	440.	1.57	65.	983.	1048.
			105	53.	166.	15.	57.	113.	522.	1.57	65.	759.	824.
5	TAN	1	64	9.	32.	21.	185.	40.	86.	1.00	92.	372.	464.
			106	9.	20.	7.	136.	40.	86.	1.57	92.	465.	558.
6	BEND	1	106	9.	7.	20.	136.	86.	40.	1.57	65.	357.	422.
			4	8.	8.	20.	82.	84.	116.	1.57	65.	355.	420.
7	BEND	1	4	8.	8.	20.	82.	84.	116.	1.57	65.	355.	420.
			107	18.	8.	9.	36.	67.	135.	1.57	65.	335.	400.
8	TAN	1	107	8.	9.	18.	67.	135.	36.	1.00	92.	277.	369.
			108	10.	9.	15.	18.	135.	51.	1.00	92.	260.	352.
9	BEND	1	108	15.	10.	9.	51.	18.	135.	1.57	92.	409.	501.
			7	3.	11.	15.	21.	59.	146.	1.57	92.	446.	539.
10	BEND	1	7	3.	11.	15.	21.	59.	146.	1.57	92.	446.	539.
			8	9.	16.	9.	60.	39.	111.	1.57	92.	372.	464.
11	BEND	1	8	9.	16.	9.	60.	39.	111.	1.57	92.	372.	464.
			9	10.	20.	3.	43.	11.	76.	1.57	92.	249.	341.
12	BEND	1	9	10.	20.	3.	43.	11.	76.	1.57	92.	249.	341.
			109	2.	25.	9.	31.	43.	56.	1.57	92.	215.	308.
13	TAN	1	109	25.	9.	2.	43.	56.	31.	1.00	92.	137.	229.
			11	34.	9.	5.	33.	56.	303.	1.00	92.	552.	644.
14	TAN	1	11	43.	9.	5.	33.	56.	303.	1.00	92.	552.	644.
			110	37.	9.	10.	39.	56.	35.	1.57	92.	214.	307.
15	BEND	1	110	37.	10.	9.	39.	35.	56.	1.57	65.	165.	230.
			13	25.	11.	31.	61.	21.	67.	1.57	65.	200.	265.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	25.	11.	31.	61.	21.	67.	1.57	65.	200.	265.
			111	9.	12.	33.	72.	27.	55.	1.57	65.	204.	269.
17	TAN	1	111	9.	33.	12.	72.	55.	27.	1.00	92.	169.	261.
			15	9.	28.	16.	145.	55.	60.	1.57	92.	468.	560.
18	TAN	1	65	15.	163.	58.	440.	114.	36.	1.57	92.	1282.	1374.
			16	15.	162.	55.	193.	114.	49.	1.57	92.	645.	737.
19	TAN	1	16	15.	124.	29.	193.	114.	49.	1.57	65.	494.	559.
			18	15.	122.	25.	151.	114.	107.	1.57	65.	468.	533.
20	TAN	2	18	15.	122.	25.	151.	114.	107.	1.57	75.	1048.	1123.
			69	15.	120.	22.	75.	114.	191.	1.00	75.	718.	793.
21	TAN	2	69	15.	104.	27.	151.	114.	191.	1.00	75.	823.	898.
			19	15.	104.	27.	145.	114.	194.	1.57	75.	1291.	1367.
22	TAN	2	69	0.	11.	16.	80.	0.	0.	1.00	53.	1133.	1186.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	15.	104.	27.	145.	114.	194.	1.57	63.	576.	639.
			20	15.	101.	33.	56.	114.	289.	1.00	63.	432.	494.
24	TAN	2	20	120.	15.	169.	114.	56.	289.	1.00	63.	432.	494.
			21	123.	15.	175.	917.	56.	438.	1.57	63.	2192.	2255.
25	TAN	2	21	123.	15.	175.	917.	56.	438.	1.57	93.	929.	1023.
			22	124.	15.	178.	1339.	56.	734.	1.00	93.	887.	980.
26	TAN	2	22	141.	15.	405.	1339.	56.	734.	1.00	93.	887.	980.
			101	140.	15.	404.	1145.	56.	698.	1.57	93.	1226.	1319.
27	TEE	2	101	140.	15.	404.	1145.	56.	698.	1.57	67.	950.	1017.
			112	133.	15.	400.	232.	56.	531.	1.57	67.	263.	330.
28	TEE	2	102	20.	71.	123.	1271.	180.	107.	1.57	67.	912.	979.
			112	20.	77.	127.	1556.	180.	71.	1.57	67.	712.	779.
29	TEE	2	100	27.	90.	269.	917.	57.	480.	1.57	67.	734.	801.
			112	27.	96.	273.	1500.	57.	491.	1.57	67.	710.	777.
30	TAN	2	100	27.	90.	269.	917.	57.	480.	1.57	93.	947.	1040.
			26	27.	82.	264.	160.	57.	461.	1.00	93.	285.	378.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	82.	28.	160.	57.	461.	1.00	93.	285.	378.
			113	14.	68.	10.	133.	57.	273.	1.00	93.	179.	272.
32	TAN	2	113	14.	68.	10.	133.	57.	273.	1.00	93.	179.	272.
			114	14.	58.	27.	106.	57.	85.	1.00	93.	85.	179.
33	BEND	2	114	27.	14.	58.	85.	106.	57.	1.10	93.	94.	187.
			28	21.	14.	63.	41.	136.	76.	1.10	93.	103.	196.
34	BEND	2	28	21.	14.	63.	41.	136.	76.	1.10	93.	103.	196.
			115	51.	14.	40.	143.	63.	0.	1.10	93.	99.	193.
35	TAN	2	115	14.	40.	51.	63.	0.	143.	1.00	93.	90.	184.
			30	14.	45.	49.	175.	0.	185.	1.00	93.	148.	241.
36	TAN	2	30	7.	45.	32.	175.	0.	185.	1.00	93.	148.	241.
			104	7.	67.	8.	174.	0.	80.	1.00	93.	111.	204.
37	TAN	2	104	7.	67.	8.	174.	0.	80.	1.00	93.	111.	204.
			32	7.	83.	26.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	20.	71.	123.	1271.	180.	107.	1.00	63.	1763.	1825.
			116	20.	59.	115.	189.	180.	250.	1.00	63.	494.	557.
39	BEND	3	116	116.	11.	59.	241.	133.	180.	1.00	63.	450.	513.
			44	74.	10.	106.	249.	418.	29.	1.00	63.	666.	729.
40	BEND	3	44	74.	10.	106.	249.	418.	29.	1.00	63.	666.	729.
			117	47.	9.	107.	123.	495.	180.	1.00	63.	740.	802.
41	TAN	3	117	9.	107.	47.	495.	180.	123.	1.57	63.	1165.	1228.
			46	3.	86.	45.	367.	180.	25.	1.57	63.	883.	946.
42	TAN	4	46	4.	86.	45.	365.	184.	25.	1.57	261.	553.	814.
			47	3.	81.	52.	457.	184.	39.	1.00	261.	423.	685.
43	TAN	4	47	20.	197.	48.	490.	39.	59.	1.00	261.	424.	685.
			48	20.	200.	54.	249.	39.	44.	1.57	261.	346.	607.
44	TAN	4	48	20.	200.	54.	249.	39.	44.	1.57	404.	2512.	2916.
			66	20.	203.	58.	344.	39.	228.	1.57	404.	4064.	4468.
45	TEE	4	66	58.	203.	20.	228.	39.	344.	1.57	599.	893.	1492.
			118	60.	203.	20.	257.	39.	432.	1.57	599.	693.	1292.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	85.	238.	21.	234.	44.	855.	1.57	599.	1912.	2512.
			118	83.	237.	21.	202.	44.	729.	1.57	599.	1040.	1639.
47	TEE	4	68	97.	31.	2.	6.	56.	623.	1.57	599.	1348.	1948.
			118	100.	33.	2.	9.	56.	777.	1.57	599.	1070.	1669.
48	TAN	4	67	21.	238.	85.	855.	44.	234.	1.57	599.	1912.	2512.
			50	21.	242.	91.	1350.	44.	354.	1.57	599.	3009.	3608.
49	TAN	4	68	2.	35.	98.	623.	55.	8.	1.57	599.	1348.	1948.
			119	2.	27.	86.	271.	55.	5.	1.57	599.	596.	1196.
50	BEND	4	119	86.	2.	27.	5.	271.	55.	1.57	599.	596.	1196.
			52	62.	2.	74.	34.	348.	43.	1.57	599.	759.	1358.
51	BEND	4	52	62.	2.	74.	34.	348.	43.	1.57	599.	759.	1358.
			120	24.	2.	82.	53.	357.	8.	1.57	599.	777.	1376.
52	TAN	4	120	2.	82.	24.	357.	8.	53.	1.57	599.	777.	1376.
			121	2.	60.	12.	145.	8.	30.	1.00	599.	204.	803.
53	TAN	4	121	2.	60.	12.	145.	8.	30.	1.57	599.	321.	920.
			54	2.	38.	27.	132.	8.	9.	1.00	599.	181.	780.
54	TAN	4	54	0.	38.	29.	132.	8.	9.	1.00	599.	181.	780.
			122	0.	21.	17.	109.	8.	5.	1.00	599.	149.	748.
55	TAN	4	122	0.	21.	17.	109.	8.	5.	1.00	599.	149.	748.
			123	0.	3.	10.	222.	8.	2.	1.00	599.	303.	903.
56	BEND	4	123	10.	0.	3.	2.	222.	8.	1.00	599.	303.	903.
			56	8.	0.	14.	5.	219.	5.	1.00	599.	300.	900.
57	BEND	4	56	8.	0.	14.	5.	219.	5.	1.00	599.	300.	900.
			124	17.	0.	21.	6.	159.	0.	1.00	599.	218.	817.
58	TAN	4	124	0.	21.	17.	159.	0.	6.	1.00	599.	218.	817.
			125	0.	36.	39.	207.	0.	1.	1.00	599.	284.	883.
59	TAN	4	125	0.	36.	39.	207.	0.	1.	1.00	599.	284.	883.
			58	0.	51.	61.	863.	0.	3.	1.00	599.	1181.	1780.
60	TAN	4	58	0.	51.	83.	863.	0.	3.	1.00	599.	1181.	1780.
			126	0.	72.	52.	435.	0.	2.	1.00	599.	595.	1195.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	72.	52.	435.	0.	2.	1.00	599.	595.	1195.
			59	0.	94.	22.	1090.	0.	1.	1.00	599.	1491.	2091.
62	TAN	4	59	0.	94.	22.	1090.	0.	1.	1.57	261.	1471.	1732.
			127	0.	145.	54.	1039.	0.	1.	1.57	261.	1402.	1664.
63	TAN	4	127	0.	145.	54.	1039.	0.	1.	1.57	261.	1402.	1664.
			61	0.	197.	128.	766.	0.	0.	1.57	261.	1034.	1295.
64	TAN	4	61	0.	197.	128.	766.	0.	0.	1.00	599.	1048.	1647.
			62	0.	204.	138.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1720.	1	1812.
2	24	2192.	24	2255.
3	38	1763.	38	1825.
4	44	4064.	44	4468.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	18.	-171.	98.	957.	-105.	52.
11	-18.	78.	10.	-111.	66.	605.
15	9.	-28.	-16.	145.	-55.	-60.
22	-29.	265.	583.	-113.	2679.	1468.
26	41.	164.	292.	321.	115.	922.
30	21.	81.	-89.	350.	371.	-0.
32	7.	26.	-83.	0.	0.	-0.
50	21.	242.	91.	1350.	44.	354.
54	2.	77.	56.	264.	15.	17.
58	0.	144.	-102.	1726.	6.	-0.
62	0.	138.	-204.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	12.	89.	149.	748.	53.	66.	1.00	92.	1342.	1434.
			63	12.	84.	156.	418.	53.	28.	1.57	92.	1186.	1278.
2	TEE	1	63	156.	84.	12.	28.	53.	418.	1.57	65.	909.	975.
			105	158.	83.	12.	34.	53.	653.	1.57	65.	902.	967.
3	TEE	1	64	31.	31.	8.	72.	67.	376.	1.57	65.	837.	902.
			105	33.	33.	8.	85.	67.	423.	1.57	65.	608.	673.
4	TEE	1	65	41.	190.	8.	32.	114.	291.	1.57	65.	677.	742.
			105	43.	188.	8.	25.	114.	356.	1.57	65.	547.	612.
5	TAN	1	64	8.	31.	31.	376.	67.	72.	1.00	92.	693.	785.
			106	8.	20.	14.	56.	67.	83.	1.57	92.	338.	430.
6	BEND	1	106	8.	14.	20.	56.	83.	67.	1.57	65.	259.	324.
			4	8.	13.	19.	28.	82.	82.	1.57	65.	258.	323.
7	BEND	1	4	8.	13.	19.	28.	82.	82.	1.57	65.	258.	323.
			107	18.	11.	8.	48.	65.	70.	1.57	65.	230.	295.
8	TAN	1	107	11.	8.	18.	65.	70.	48.	1.00	92.	190.	283.
			108	7.	8.	15.	14.	70.	21.	1.00	92.	132.	224.
9	BEND	1	108	15.	7.	8.	21.	14.	70.	1.57	92.	208.	301.
			7	3.	2.	14.	36.	54.	62.	1.57	92.	252.	344.
10	BEND	1	7	3.	2.	14.	36.	54.	62.	1.57	92.	252.	344.
			8	8.	6.	8.	51.	39.	25.	1.57	92.	193.	285.
11	BEND	1	8	8.	6.	8.	51.	39.	25.	1.57	92.	193.	285.
			9	9.	11.	2.	16.	10.	24.	1.57	92.	87.	179.
12	BEND	1	9	9.	11.	2.	16.	10.	24.	1.57	92.	87.	179.
			109	2.	16.	8.	61.	39.	8.	1.57	92.	203.	296.
13	TAN	1	109	16.	8.	2.	39.	8.	61.	1.00	92.	129.	221.
			11	25.	8.	5.	25.	8.	242.	1.00	92.	433.	526.
14	TAN	1	11	36.	8.	5.	25.	8.	242.	1.00	92.	433.	526.
			110	29.	8.	9.	28.	8.	31.	1.57	92.	119.	211.
15	BEND	1	110	29.	9.	8.	28.	31.	8.	1.57	65.	91.	156.
			13	20.	11.	24.	36.	17.	24.	1.57	65.	100.	165.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	20.	11.	24.	36.	17.	24.	1.57	65.	100.	165.
			111	8.	12.	25.	24.	21.	43.	1.57	65.	117.	182.
17	TAN	1	111	8.	25.	12.	24.	43.	21.	1.00	92.	96.	189.
			15	8.	20.	16.	99.	43.	62.	1.57	92.	350.	442.
18	TAN	1	65	8.	188.	48.	291.	113.	28.	1.57	92.	881.	973.
			16	8.	193.	45.	89.	113.	61.	1.57	92.	439.	531.
19	TAN	1	16	8.	155.	19.	89.	113.	61.	1.57	65.	337.	402.
			18	8.	160.	15.	85.	113.	91.	1.57	65.	364.	429.
20	TAN	2	18	8.	160.	15.	85.	113.	91.	1.57	75.	815.	890.
			69	8.	164.	12.	73.	113.	135.	1.00	75.	585.	660.
21	TAN	2	69	8.	149.	17.	141.	113.	135.	1.00	75.	691.	767.
			19	8.	149.	17.	137.	113.	137.	1.57	75.	1082.	1157.
22	TAN	2	69	0.	11.	15.	79.	0.	0.	1.00	53.	1118.	1171.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	8.	149.	17.	137.	113.	137.	1.57	63.	483.	546.
			20	8.	158.	23.	19.	113.	186.	1.00	63.	299.	362.
24	TAN	2	20	63.	8.	159.	113.	19.	186.	1.00	63.	299.	362.
			21	55.	8.	165.	859.	19.	169.	1.57	63.	1886.	1949.
25	TAN	2	21	55.	8.	165.	859.	19.	169.	1.57	93.	800.	893.
			22	50.	8.	168.	1258.	19.	296.	1.00	93.	750.	843.
26	TAN	2	22	83.	8.	379.	1258.	19.	296.	1.00	93.	750.	843.
			101	82.	8.	379.	1076.	19.	335.	1.57	93.	1030.	1123.
27	TEE	2	101	82.	8.	379.	1076.	19.	335.	1.57	67.	798.	865.
			112	75.	8.	374.	231.	19.	514.	1.57	67.	254.	321.
28	TEE	2	102	18.	68.	116.	1145.	188.	74.	1.57	67.	823.	890.
			112	18.	74.	121.	1415.	188.	35.	1.57	67.	650.	717.
29	TEE	2	100	21.	35.	250.	933.	62.	487.	1.57	67.	746.	813.
			112	21.	41.	254.	1397.	62.	511.	1.57	67.	670.	737.
30	TAN	2	100	21.	35.	250.	933.	62.	487.	1.57	93.	963.	1056.
			26	21.	27.	245.	194.	62.	447.	1.00	93.	285.	378.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	27.	31.	194.	62.	447.	1.00	93.	285.	378.
			113	14.	39.	12.	135.	62.	265.	1.00	93.	176.	269.
32	TAN	2	113	14.	39.	12.	135.	62.	265.	1.00	93.	176.	269.
			114	14.	65.	30.	135.	62.	83.	1.00	93.	99.	192.
33	BEND	2	114	30.	14.	65.	83.	135.	62.	1.10	93.	109.	202.
			28	34.	14.	78.	44.	149.	78.	1.10	93.	111.	204.
34	BEND	2	28	34.	14.	78.	44.	149.	78.	1.10	93.	111.	204.
			115	84.	14.	43.	145.	154.	0.	1.10	93.	135.	228.
35	TAN	2	115	14.	43.	84.	154.	0.	145.	1.00	93.	123.	216.
			30	14.	47.	90.	382.	0.	186.	1.00	93.	246.	340.
36	TAN	2	30	7.	47.	42.	382.	0.	186.	1.00	93.	246.	340.
			104	7.	69.	10.	64.	0.	80.	1.00	93.	59.	153.
37	TAN	2	104	7.	69.	10.	64.	0.	80.	1.00	93.	59.	153.
			32	7.	86.	17.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	18.	68.	116.	1145.	188.	74.	1.00	63.	1591.	1653.
			116	18.	56.	108.	121.	188.	228.	1.00	63.	437.	500.
39	BEND	3	116	109.	11.	56.	252.	59.	188.	1.00	63.	437.	500.
			44	67.	10.	109.	264.	382.	26.	1.00	63.	637.	699.
40	BEND	3	44	67.	10.	109.	264.	382.	26.	1.00	63.	637.	699.
			117	44.	9.	100.	127.	510.	188.	1.00	63.	764.	827.
41	TAN	3	117	9.	100.	44.	510.	188.	127.	1.57	63.	1203.	1266.
			46	3.	79.	48.	311.	188.	27.	1.57	63.	785.	848.
42	TAN	4	46	4.	79.	48.	309.	191.	27.	1.57	261.	491.	753.
			47	3.	74.	55.	482.	191.	43.	1.00	261.	446.	707.
43	TAN	4	47	18.	165.	41.	516.	43.	59.	1.00	261.	446.	707.
			48	18.	156.	47.	286.	43.	37.	1.57	261.	394.	655.
44	TAN	4	48	18.	156.	47.	286.	43.	37.	1.57	404.	2863.	3267.
			66	18.	150.	51.	321.	43.	209.	1.57	404.	3775.	4179.
45	TEE	4	66	51.	150.	18.	209.	43.	321.	1.57	599.	830.	1429.
			118	53.	148.	18.	236.	43.	399.	1.57	599.	641.	1240.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	91.	45.	20.	215.	49.	887.	1.57	599.	1971.	2570.
			118	39.	48.	20.	185.	49.	752.	1.57	599.	1065.	1664.
47	TEE	4	68	97.	32.	2.	6.	52.	613.	1.57	599.	1325.	1925.
			118	100.	33.	2.	8.	52.	766.	1.57	599.	1054.	1654.
48	TAN	4	67	20.	45.	91.	887.	49.	215.	1.57	599.	1971.	2570.
			50	20.	36.	98.	1420.	49.	327.	1.57	599.	3143.	3742.
49	TAN	4	68	2.	35.	98.	613.	51.	8.	1.57	599.	1325.	1925.
			119	2.	27.	86.	280.	51.	6.	1.57	599.	613.	1212.
50	BEND	4	119	86.	2.	27.	6.	280.	51.	1.57	599.	613.	1212.
			52	62.	2.	74.	32.	356.	40.	1.57	599.	775.	1375.
51	BEND	4	52	62.	2.	74.	32.	356.	40.	1.57	599.	775.	1375.
			120	24.	2.	81.	49.	365.	8.	1.57	599.	793.	1392.
52	TAN	4	120	2.	81.	24.	365.	8.	49.	1.57	599.	793.	1392.
			121	2.	60.	12.	150.	8.	28.	1.00	599.	210.	809.
53	TAN	4	121	2.	60.	12.	150.	8.	28.	1.57	599.	330.	929.
			54	2.	38.	27.	134.	8.	9.	1.00	599.	184.	783.
54	TAN	4	54	0.	38.	29.	134.	8.	9.	1.00	599.	184.	783.
			122	0.	21.	17.	109.	8.	6.	1.00	599.	150.	749.
55	TAN	4	122	0.	21.	17.	109.	8.	6.	1.00	599.	150.	749.
			123	0.	3.	10.	224.	8.	2.	1.00	599.	307.	906.
56	BEND	4	123	10.	0.	3.	2.	224.	8.	1.00	599.	307.	906.
			56	8.	0.	14.	6.	223.	5.	1.00	599.	305.	904.
57	BEND	4	56	8.	0.	14.	6.	223.	5.	1.00	599.	305.	904.
			124	17.	0.	21.	6.	162.	0.	1.00	599.	222.	821.
58	TAN	4	124	0.	21.	17.	162.	0.	6.	1.00	599.	222.	821.
			125	0.	36.	39.	207.	0.	1.	1.00	599.	284.	883.
59	TAN	4	125	0.	36.	39.	207.	0.	1.	1.00	599.	284.	883.
			58	0.	51.	61.	866.	0.	3.	1.00	599.	1185.	1784.
60	TAN	4	58	0.	51.	83.	866.	0.	3.	1.00	599.	1185.	1784.
			126	0.	73.	53.	433.	0.	2.	1.00	599.	593.	1192.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	73.	53.	433.	0.	2.	1.00	599.	593.	1192.
			59	0.	94.	22.	1089.	0.	1.	1.00	599.	1490.	2090.
62	TAN	4	59	0.	94.	22.	1089.	0.	1.	1.57	261.	1470.	1731.
			127	0.	146.	54.	1039.	0.	1.	1.57	261.	1402.	1663.
63	TAN	4	127	0.	146.	54.	1039.	0.	1.	1.57	261.	1402.	1663.
			61	0.	197.	128.	766.	0.	0.	1.57	261.	1033.	1294.
64	TAN	4	61	0.	197.	128.	766.	0.	0.	1.00	599.	1048.	1647.
			62	0.	204.	138.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1342.	1	1434.
2	24	1886.	24	1949.
3	38	1591.	38	1653.
4	44	3775.	44	4179.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	12.	-149.	89.	748.	-66.	53.
11	-17.	60.	9.	-15.	49.	483.
15	8.	-20.	-16.	99.	-43.	-62.
22	-15.	133.	547.	-37.	2516.	591.
26	35.	54.	276.	387.	124.	893.
30	20.	132.	-94.	764.	372.	-0.
32	7.	17.	-86.	0.	0.	-0.
50	20.	36.	98.	1420.	49.	327.
54	2.	76.	56.	268.	16.	18.
58	0.	144.	-103.	1732.	6.	-0.
62	0.	138.	-204.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	17.	28.	204.	1164.	105.	159.	1.00	92.	2104.	2197.
			63	12.	28.	202.	272.	105.	60.	1.57	92.	835.	927.
2	TEE	1	63	202.	28.	12.	60.	105.	272.	1.57	65.	641.	706.
			105	201.	28.	13.	74.	105.	574.	1.57	65.	823.	888.
3	TEE	1	64	21.	3.	15.	107.	50.	175.	1.57	65.	456.	521.
			105	23.	3.	17.	131.	50.	176.	1.57	65.	320.	385.
4	TEE	1	65	18.	201.	31.	88.	53.	369.	1.57	65.	825.	890.
			105	18.	202.	30.	129.	53.	397.	1.57	65.	583.	648.
5	TAN	1	64	15.	3.	21.	175.	50.	107.	1.00	92.	377.	470.
			106	4.	3.	7.	127.	50.	76.	1.57	92.	439.	532.
6	BEND	1	106	4.	7.	3.	127.	76.	50.	1.57	65.	337.	402.
			4	2.	8.	4.	83.	75.	105.	1.57	65.	331.	396.
7	BEND	1	4	2.	8.	4.	83.	75.	105.	1.57	65.	331.	396.
			107	3.	8.	2.	46.	73.	127.	1.57	65.	330.	395.
8	TAN	1	107	8.	2.	3.	73.	127.	46.	1.00	92.	273.	365.
			108	10.	4.	3.	62.	127.	49.	1.00	92.	266.	358.
9	BEND	1	108	3.	10.	4.	49.	62.	127.	1.57	92.	419.	512.
			7	7.	11.	3.	23.	41.	132.	1.57	92.	394.	487.
10	BEND	1	7	7.	11.	3.	23.	41.	132.	1.57	92.	394.	487.
			8	10.	16.	3.	51.	3.	100.	1.57	92.	316.	409.
11	BEND	1	8	10.	16.	3.	51.	3.	100.	1.57	92.	316.	409.
			9	8.	20.	11.	35.	45.	74.	1.57	92.	262.	354.
12	BEND	1	9	8.	20.	11.	35.	45.	74.	1.57	92.	262.	354.
			109	3.	25.	16.	29.	60.	63.	1.57	92.	258.	350.
13	TAN	1	109	25.	16.	3.	60.	63.	29.	1.00	92.	164.	256.
			11	34.	23.	3.	36.	63.	313.	1.00	92.	573.	665.
14	TAN	1	11	49.	23.	3.	36.	63.	313.	1.00	92.	573.	665.
			110	42.	28.	3.	19.	63.	65.	1.57	92.	260.	352.
15	BEND	1	110	42.	3.	28.	19.	65.	63.	1.57	65.	200.	265.
			13	35.	3.	49.	34.	49.	57.	1.57	65.	177.	242.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	35.	3.	49.	34.	49.	57.	1.57	65.	177.	242.
			111	30.	3.	39.	67.	35.	15.	1.57	65.	166.	231.
17	TAN	1	111	30.	39.	3.	67.	15.	35.	1.00	92.	137.	230.
			15	34.	34.	3.	80.	15.	180.	1.57	92.	554.	647.
18	TAN	1	65	51.	200.	26.	369.	56.	86.	1.57	92.	1076.	1168.
			16	34.	199.	26.	249.	56.	82.	1.57	92.	753.	845.
19	TAN	1	16	18.	161.	26.	249.	56.	82.	1.57	65.	577.	643.
			18	15.	159.	26.	146.	56.	120.	1.57	65.	424.	489.
20	TAN	2	18	15.	159.	26.	146.	56.	120.	1.57	75.	949.	1025.
			69	14.	157.	26.	14.	56.	194.	1.00	75.	619.	694.
21	TAN	2	69	22.	141.	26.	90.	31.	194.	1.00	75.	661.	737.
			19	22.	141.	26.	87.	31.	194.	1.57	75.	1040.	1115.
22	TAN	2	69	11.	0.	16.	80.	0.	55.	1.00	53.	1374.	1428.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	22.	141.	26.	87.	31.	194.	1.57	63.	464.	527.
			20	16.	138.	26.	106.	31.	276.	1.00	63.	407.	470.
24	TAN	2	20	157.	153.	26.	31.	106.	276.	1.00	63.	407.	470.
			21	160.	147.	26.	124.	106.	713.	1.57	63.	1575.	1638.
25	TAN	2	21	160.	147.	26.	124.	106.	713.	1.57	93.	668.	761.
			22	161.	144.	26.	187.	106.	1098.	1.00	93.	649.	742.
26	TAN	2	22	163.	144.	79.	187.	106.	1098.	1.00	93.	649.	742.
			101	162.	143.	79.	177.	106.	1073.	1.57	93.	998.	1091.
27	TEE	2	101	162.	143.	79.	177.	106.	1073.	1.57	67.	773.	840.
			112	156.	139.	79.	135.	106.	956.	1.57	67.	440.	507.
28	TEE	2	102	17.	46.	19.	183.	225.	374.	1.57	67.	335.	402.
			112	21.	52.	19.	202.	225.	340.	1.57	67.	238.	305.
29	TEE	2	100	114.	97.	60.	104.	93.	402.	1.57	67.	301.	368.
			112	118.	103.	60.	206.	93.	616.	1.57	67.	299.	366.
30	TAN	2	100	114.	97.	60.	104.	93.	402.	1.57	93.	389.	482.
			26	108.	90.	60.	175.	93.	814.	1.00	93.	486.	579.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	25.	90.	12.	175.	93.	814.	1.00	93.	486.	579.
			113	21.	75.	12.	78.	93.	660.	1.00	93.	389.	482.
32	TAN	2	113	21.	75.	12.	78.	93.	660.	1.00	93.	389.	482.
			114	39.	66.	12.	192.	93.	264.	1.00	93.	197.	290.
33	BEND	2	114	12.	39.	66.	264.	192.	93.	1.10	93.	217.	310.
			28	36.	46.	52.	72.	130.	54.	1.10	93.	101.	194.
34	BEND	2	28	36.	46.	52.	72.	130.	54.	1.10	93.	101.	194.
			115	59.	52.	12.	201.	110.	0.	1.10	93.	146.	240.
35	TAN	2	115	52.	12.	59.	110.	0.	201.	1.00	93.	133.	226.
			30	56.	12.	56.	278.	0.	364.	1.00	93.	266.	359.
36	TAN	2	30	32.	12.	36.	278.	0.	364.	1.00	93.	266.	359.
			104	10.	12.	11.	219.	0.	86.	1.00	93.	136.	229.
37	TAN	2	104	10.	12.	11.	219.	0.	86.	1.00	93.	136.	229.
			32	16.	12.	30.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	17.	46.	19.	183.	225.	374.	1.00	63.	648.	710.
			116	8.	34.	19.	236.	225.	453.	1.00	63.	763.	826.
39	BEND	3	116	18.	10.	34.	449.	127.	225.	1.00	63.	709.	771.
			44	26.	6.	23.	501.	94.	178.	1.00	63.	738.	801.
40	BEND	3	44	26.	6.	23.	501.	94.	178.	1.00	63.	738.	801.
			117	22.	1.	20.	248.	116.	486.	1.00	63.	763.	826.
41	TAN	3	117	1.	20.	22.	116.	486.	248.	1.57	63.	1202.	1265.
			46	21.	26.	20.	141.	486.	9.	1.57	63.	1091.	1154.
42	TAN	4	46	21.	26.	20.	146.	486.	9.	1.57	261.	685.	946.
			47	26.	27.	27.	126.	486.	104.	1.00	261.	440.	701.
43	TAN	4	47	84.	172.	19.	94.	104.	483.	1.00	261.	431.	692.
			48	78.	175.	19.	54.	104.	70.	1.57	261.	185.	446.
44	TAN	4	48	78.	175.	19.	54.	104.	70.	1.57	404.	1343.	1747.
			66	74.	178.	19.	236.	104.	659.	1.57	404.	6942.	7346.
45	TEE	4	66	19.	178.	74.	659.	104.	236.	1.57	599.	1526.	2125.
			118	19.	179.	72.	769.	104.	265.	1.57	599.	1135.	1735.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	17.	217.	61.	667.	10.	677.	1.57	599.	2048.	2647.
			118	17.	216.	63.	574.	10.	652.	1.57	599.	1189.	1788.
47	TEE	4	68	97.	7.	8.	87.	191.	534.	1.57	599.	1237.	1836.
			118	100.	7.	10.	101.	191.	688.	1.57	599.	1037.	1636.
48	TAN	4	67	61.	217.	17.	677.	10.	667.	1.57	599.	2048.	2647.
			50	54.	220.	17.	772.	10.	992.	1.57	599.	2709.	3308.
49	TAN	4	68	8.	11.	97.	534.	194.	80.	1.57	599.	1237.	1836.
			119	1.	11.	85.	191.	194.	49.	1.57	599.	596.	1195.
50	BEND	4	119	85.	1.	11.	49.	191.	194.	1.57	599.	596.	1195.
			52	52.	2.	65.	102.	276.	172.	1.57	599.	734.	1333.
51	BEND	4	52	52.	2.	65.	102.	276.	172.	1.57	599.	734.	1333.
			120	11.	3.	80.	190.	300.	51.	1.57	599.	773.	1373.
52	TAN	4	120	3.	80.	11.	300.	51.	190.	1.57	599.	773.	1373.
			121	18.	59.	11.	155.	51.	48.	1.00	599.	233.	832.
53	TAN	4	121	18.	59.	11.	155.	51.	48.	1.57	599.	367.	966.
			54	34.	37.	11.	11.	51.	293.	1.00	599.	408.	1007.
54	TAN	4	54	27.	37.	8.	11.	51.	293.	1.00	599.	408.	1007.
			122	14.	20.	8.	76.	51.	78.	1.00	599.	165.	764.
55	TAN	4	122	14.	20.	8.	76.	51.	78.	1.00	599.	165.	764.
			123	2.	2.	8.	163.	51.	10.	1.00	599.	234.	833.
56	BEND	4	123	8.	2.	2.	10.	163.	51.	1.00	599.	234.	833.
			56	0.	3.	11.	41.	189.	28.	1.00	599.	267.	866.
57	BEND	4	56	0.	3.	11.	41.	189.	28.	1.00	599.	267.	866.
			124	16.	9.	8.	23.	152.	0.	1.00	599.	211.	810.
58	TAN	4	124	9.	8.	16.	152.	0.	23.	1.00	599.	211.	810.
			125	24.	8.	38.	198.	0.	191.	1.00	599.	377.	976.
59	TAN	4	125	24.	8.	38.	198.	0.	191.	1.00	599.	377.	976.
			58	39.	8.	59.	838.	0.	607.	1.00	599.	1416.	2015.
60	TAN	4	58	58.	8.	83.	838.	0.	607.	1.00	599.	1416.	2015.
			126	37.	8.	52.	420.	0.	265.	1.00	599.	679.	1278.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	37.	8.	52.	420.	0.	265.	1.00	599.	679.	1278.
			59	15.	8.	21.	1084.	0.	744.	1.00	599.	1799.	2398.
62	TAN	4	59	15.	8.	21.	1084.	0.	744.	1.57	261.	1774.	2035.
			127	36.	8.	53.	1035.	0.	713.	1.57	261.	1695.	1957.
63	TAN	4	127	36.	8.	53.	1035.	0.	713.	1.57	261.	1695.	1957.
			61	88.	8.	128.	763.	0.	526.	1.57	261.	1251.	1512.
64	TAN	4	61	88.	8.	128.	763.	0.	526.	1.00	599.	1268.	1868.
			62	95.	8.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2104.	1	2197.
2	24	1575.	24	1638.
3	41	1202.	41	1265.
4	44	6942.	44	7346.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	17.	-204.	28.	1164.	-159.	105.
11	-46.	83.	6.	-127.	73.	625.
15	34.	-34.	-3.	80.	-15.	-180.
22	-288.	324.	105.	-212.	373.	2196.
26	133.	179.	72.	350.	187.	1628.
30	89.	93.	-23.	557.	729.	-0.
32	16.	30.	-12.	0.	0.	-0.
50	54.	220.	17.	772.	10.	992.
54	60.	74.	19.	21.	102.	587.
58	97.	142.	-16.	1677.	1213.	-0.
62	95.	137.	-8.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	19.	182.	955.	105.	120.	1.00	92.	1726.	1819.
			63	6.	19.	189.	359.	105.	63.	1.57	92.	1066.	1158.
2	TEE	1	63	189.	19.	6.	63.	105.	359.	1.57	65.	818.	883.
			105	191.	19.	6.	60.	105.	644.	1.57	65.	914.	979.
3	TEE	1	64	31.	3.	15.	93.	77.	366.	1.57	65.	830.	895.
			105	32.	3.	16.	116.	77.	413.	1.57	65.	610.	675.
4	TEE	1	65	7.	226.	24.	80.	54.	220.	1.57	65.	517.	582.
			105	8.	224.	23.	97.	54.	231.	1.57	65.	363.	428.
5	TAN	1	64	15.	3.	31.	366.	77.	93.	1.00	92.	687.	779.
			106	3.	3.	14.	47.	77.	73.	1.57	92.	326.	418.
6	BEND	1	106	3.	14.	3.	47.	73.	77.	1.57	65.	250.	315.
			4	1.	13.	3.	29.	73.	71.	1.57	65.	229.	294.
7	BEND	1	4	1.	13.	3.	29.	73.	71.	1.57	65.	229.	294.
			107	3.	11.	1.	58.	71.	61.	1.57	65.	237.	302.
8	TAN	1	107	11.	1.	3.	71.	61.	58.	1.00	92.	196.	288.
			108	7.	3.	3.	58.	61.	19.	1.00	92.	154.	246.
9	BEND	1	108	3.	7.	3.	19.	58.	61.	1.57	92.	243.	335.
			7	6.	2.	2.	37.	37.	48.	1.57	92.	200.	292.
10	BEND	1	7	6.	2.	2.	37.	37.	48.	1.57	92.	200.	292.
			8	9.	6.	3.	43.	2.	14.	1.57	92.	126.	218.
11	BEND	1	8	9.	6.	3.	43.	2.	14.	1.57	92.	126.	218.
			9	7.	11.	11.	8.	44.	22.	1.57	92.	139.	231.
12	BEND	1	9	7.	11.	11.	8.	44.	22.	1.57	92.	139.	231.
			109	3.	15.	16.	59.	56.	15.	1.57	92.	232.	324.
13	TAN	1	109	15.	16.	3.	56.	15.	59.	1.00	92.	147.	240.
			11	25.	22.	3.	28.	15.	252.	1.00	92.	453.	545.
14	TAN	1	11	41.	22.	3.	28.	15.	252.	1.00	92.	453.	545.
			110	34.	27.	3.	8.	15.	61.	1.57	92.	178.	270.
15	BEND	1	110	34.	3.	27.	8.	61.	15.	1.57	65.	137.	202.
			13	30.	3.	42.	10.	45.	14.	1.57	65.	103.	168.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	30.	3.	42.	10.	45.	14.	1.57	65.	103.	168.
			111	29.	3.	31.	19.	29.	3.	1.57	65.	76.	141.
17	TAN	1	111	29.	31.	3.	19.	3.	29.	1.00	92.	63.	155.
			15	33.	26.	3.	33.	3.	183.	1.57	92.	522.	614.
18	TAN	1	65	24.	226.	16.	220.	55.	79.	1.57	92.	673.	765.
			16	27.	230.	16.	145.	55.	94.	1.57	92.	509.	601.
19	TAN	1	16	11.	192.	16.	145.	55.	94.	1.57	65.	390.	455.
			18	8.	197.	16.	80.	55.	104.	1.57	65.	307.	372.
20	TAN	2	18	8.	197.	16.	80.	55.	104.	1.57	75.	688.	764.
			69	7.	201.	16.	12.	55.	138.	1.00	75.	456.	532.
21	TAN	2	69	16.	186.	16.	80.	30.	138.	1.00	75.	497.	572.
			19	15.	186.	16.	80.	30.	137.	1.57	75.	779.	854.
22	TAN	2	69	11.	0.	15.	79.	0.	55.	1.00	53.	1362.	1416.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	15.	186.	16.	80.	30.	137.	1.57	63.	347.	410.
			20	9.	195.	16.	68.	30.	174.	1.00	63.	259.	321.
24	TAN	2	20	100.	146.	16.	30.	68.	174.	1.00	63.	259.	321.
			21	92.	140.	16.	66.	68.	444.	1.57	63.	978.	1041.
25	TAN	2	21	92.	140.	16.	66.	68.	444.	1.57	93.	415.	508.
			22	88.	137.	16.	105.	68.	660.	1.00	93.	389.	483.
26	TAN	2	22	105.	137.	54.	105.	68.	660.	1.00	93.	389.	483.
			101	104.	136.	54.	108.	68.	710.	1.57	93.	659.	752.
27	TEE	2	101	104.	136.	54.	108.	68.	710.	1.57	67.	510.	577.
			112	98.	132.	54.	133.	68.	939.	1.57	67.	429.	496.
28	TEE	2	102	15.	43.	13.	57.	232.	341.	1.57	67.	294.	362.
			112	20.	49.	13.	61.	232.	304.	1.57	67.	215.	282.
29	TEE	2	100	108.	42.	41.	120.	98.	409.	1.57	67.	309.	377.
			112	112.	48.	41.	103.	98.	636.	1.57	67.	298.	365.
30	TAN	2	100	108.	42.	41.	120.	98.	409.	1.57	93.	399.	493.
			26	103.	35.	41.	208.	98.	800.	1.00	93.	483.	576.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	24.	35.	14.	208.	98.	800.	1.00	93.	483.	576.
			113	20.	46.	14.	80.	98.	652.	1.00	93.	385.	478.
32	TAN	2	113	20.	46.	14.	80.	98.	652.	1.00	93.	385.	478.
			114	39.	73.	14.	222.	98.	261.	1.00	93.	207.	300.
33	BEND	2	114	14.	39.	73.	261.	222.	98.	1.10	93.	227.	321.
			28	48.	45.	68.	75.	143.	56.	1.10	93.	109.	202.
34	BEND	2	28	48.	45.	68.	75.	143.	56.	1.10	93.	109.	202.
			115	91.	52.	14.	203.	202.	0.	1.10	93.	183.	276.
35	TAN	2	115	52.	14.	91.	202.	0.	203.	1.00	93.	166.	259.
			30	56.	14.	97.	485.	0.	365.	1.00	93.	352.	445.
36	TAN	2	30	32.	14.	45.	485.	0.	365.	1.00	93.	352.	445.
			104	10.	14.	13.	108.	0.	87.	1.00	93.	80.	174.
37	TAN	2	104	10.	14.	13.	108.	0.	87.	1.00	93.	80.	174.
			32	16.	14.	21.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	15.	43.	13.	57.	232.	341.	1.00	63.	569.	632.
			116	7.	31.	13.	169.	232.	431.	1.00	63.	709.	771.
39	BEND	3	116	11.	10.	31.	460.	53.	232.	1.00	63.	709.	771.
			44	19.	6.	26.	517.	58.	174.	1.00	63.	750.	813.
40	BEND	3	44	19.	6.	26.	517.	58.	174.	1.00	63.	750.	813.
			117	19.	2.	13.	252.	132.	494.	1.00	63.	780.	842.
41	TAN	3	117	2.	13.	19.	132.	494.	252.	1.57	63.	1228.	1291.
			46	21.	19.	23.	84.	494.	11.	1.57	63.	1080.	1143.
42	TAN	4	46	21.	19.	23.	90.	493.	11.	1.57	261.	676.	938.
			47	26.	20.	30.	151.	493.	109.	1.00	261.	452.	713.
43	TAN	4	47	83.	140.	13.	119.	109.	483.	1.00	261.	437.	698.
			48	77.	132.	13.	91.	109.	63.	1.57	261.	210.	471.
44	TAN	4	48	77.	132.	13.	91.	109.	63.	1.57	404.	1525.	1929.
			66	73.	125.	13.	212.	109.	640.	1.57	404.	6700.	7104.
45	TEE	4	66	13.	125.	73.	640.	109.	212.	1.57	599.	1472.	2072.
			118	13.	123.	71.	748.	109.	232.	1.57	599.	1097.	1696.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	24.	24.	59.	648.	15.	709.	1.57	599.	2071.	2670.
			118	24.	26.	61.	557.	15.	674.	1.57	599.	1197.	1796.
47	TEE	4	68	97.	8.	8.	87.	187.	524.	1.57	599.	1213.	1813.
			118	99.	8.	10.	101.	187.	677.	1.57	599.	1020.	1619.
48	TAN	4	67	59.	24.	24.	709.	15.	648.	1.57	599.	2071.	2670.
			50	53.	14.	24.	842.	15.	965.	1.57	599.	2760.	3360.
49	TAN	4	68	8.	11.	96.	524.	190.	80.	1.57	599.	1213.	1813.
			119	0.	11.	84.	200.	190.	50.	1.57	599.	604.	1203.
50	BEND	4	119	84.	0.	11.	50.	200.	190.	1.57	599.	604.	1203.
			52	51.	2.	65.	99.	284.	168.	1.57	599.	743.	1342.
51	BEND	4	52	51.	2.	65.	99.	234.	168.	1.57	599.	743.	1342.
			120	11.	3.	80.	187.	308.	51.	1.57	599.	784.	1383.
52	TAN	4	120	3.	80.	11.	308.	51.	187.	1.57	599.	784.	1383.
			121	18.	59.	11.	160.	51.	45.	1.00	599.	238.	838.
53	TAN	4	121	18.	59.	11.	160.	51.	45.	1.57	599.	375.	975.
			54	33.	37.	11.	12.	51.	294.	1.00	599.	409.	1008.
54	TAN	4	54	27.	37.	8.	12.	51.	294.	1.00	599.	409.	1008.
			122	14.	19.	8.	76.	51.	78.	1.00	599.	166.	765.
55	TAN	4	122	14.	19.	8.	76.	51.	78.	1.00	599.	166.	765.
			123	2.	2.	8.	165.	51.	10.	1.00	599.	237.	837.
56	BEND	4	123	8.	2.	2.	10.	165.	51.	1.00	599.	237.	837.
			56	0.	3.	12.	41.	192.	28.	1.00	599.	271.	871.
57	BEND	4	56	0.	3.	12.	41.	192.	28.	1.00	599.	271.	871.
			124	16.	9.	8.	23.	155.	0.	1.00	599.	215.	814.
58	TAN	4	124	9.	8.	16.	155.	0.	23.	1.00	599.	215.	814.
			125	24.	8.	38.	199.	0.	191.	1.00	599.	377.	976.
59	TAN	4	125	24.	8.	38.	199.	0.	191.	1.00	599.	377.	976.
			58	39.	8.	60.	841.	0.	607.	1.00	599.	1419.	2019.
60	TAN	4	58	58.	8.	83.	841.	0.	607.	1.00	599.	1419.	2019.
			126	37.	8.	52.	418.	0.	265.	1.00	599.	677.	1276.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	37.	8.	52.	418.	0.	265.	1.00	599.	677.	1276.
			59	15.	8.	21.	1083.	0.	744.	1.00	599.	1798.	2397.
62	TAN	4	59	15.	8.	21.	1083.	0.	744.	1.57	261.	1773.	2034.
			127	36.	8.	53.	1034.	0.	713.	1.57	261.	1695.	1956.
63	TAN	4	127	36.	8.	53.	1034.	0.	713.	1.57	261.	1695.	1956.
			61	88.	8.	128.	763.	0.	526.	1.57	261.	1250.	1512.
64	TAN	4	61	88.	8.	128.	763.	0.	526.	1.00	599.	1268.	1867.
			62	95.	8.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1726.	1	1819.
2	22	1362.	22	1416.
3	41	1228.	41	1291.
4	44	6700.	44	7104.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	10.	-182.	19.	955.	-120.	105.
11	-44.	66.	6.	-31.	56.	503.
15	33.	-26.	-3.	33.	-3.	-183.
22	-274.	192.	70.	-137.	210.	1319.
26	127.	69.	55.	417.	196.	1599.
30	89.	143.	-28.	971.	730.	-0.
32	16.	21.	-14.	0.	0.	-0.
50	53.	14.	24.	842.	15.	965.
54	60.	74.	20.	25.	103.	588.
58	97.	142.	-17.	1683.	1214.	-0.
62	95.	137.	-8.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	16.	26.	172.	958.	46.	200.	1.00	92.	1748.	1840.
			63	16.	21.	169.	337.	46.	88.	2.10	92.	1317.	1409.
2	TEE	1	63	169.	21.	16.	88.	46.	337.	2.10	65.	1010.	1075.
			105	169.	20.	16.	95.	46.	591.	2.10	65.	829.	894.
3	TEE	1	64	22.	32.	6.	56.	45.	197.	2.10	65.	602.	667.
			105	24.	33.	6.	52.	45.	199.	2.10	65.	310.	375.
4	TEE	1	65	45.	165.	13.	45.	113.	473.	2.10	65.	1404.	1469.
			105	44.	166.	13.	60.	113.	543.	2.10	65.	815.	880.
5	TAN	1	64	6.	32.	22.	197.	45.	56.	1.00	92.	374.	466.
			106	6.	21.	8.	132.	45.	112.	2.10	92.	670.	762.
6	BEND	1	106	6.	8.	21.	132.	112.	45.	2.10	65.	514.	579.
			4	11.	9.	18.	82.	107.	109.	2.10	65.	497.	562.
7	BEND	1	4	11.	9.	18.	82.	107.	109.	2.10	65.	497.	562.
			107	18.	9.	6.	39.	88.	130.	2.10	65.	465.	530.
8	TAN	1	107	9.	6.	18.	88.	130.	39.	1.00	92.	288.	381.
			108	11.	6.	15.	15.	130.	51.	1.00	92.	251.	343.
9	BEND	1	108	15.	11.	6.	51.	15.	130.	2.10	92.	526.	618.
			7	6.	12.	13.	24.	49.	144.	2.10	92.	578.	670.
10	BEND	1	7	6.	12.	13.	24.	49.	144.	2.10	92.	578.	670.
			8	6.	17.	9.	52.	44.	117.	2.10	92.	507.	599.
11	BEND	1	8	6.	17.	9.	52.	44.	117.	2.10	92.	507.	599.
			9	8.	21.	2.	36.	16.	90.	2.10	92.	366.	459.
12	BEND	1	9	8.	21.	2.	36.	16.	90.	2.10	92.	366.	459.
			109	3.	26.	6.	31.	22.	72.	2.10	92.	304.	397.
13	TAN	1	109	26.	6.	3.	22.	72.	31.	1.00	92.	145.	237.
			11	35.	6.	4.	18.	72.	311.	1.00	92.	570.	662.
14	TAN	1	11	42.	6.	4.	18.	72.	311.	1.00	92.	570.	662.
			110	35.	6.	9.	50.	72.	34.	2.10	92.	351.	443.
15	BEND	1	110	35.	9.	6.	50.	34.	72.	2.10	65.	269.	334.
			13	26.	10.	25.	52.	16.	90.	2.10	65.	303.	368.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	26.	10.	25.	52.	16.	90.	2.10	65.	303.	368.
			111	6.	11.	32.	55.	25.	66.	2.10	65.	256.	322.
17	TAN	1	111	6.	32.	11.	55.	66.	25.	1.00	92.	159.	251.
			15	6.	26.	15.	119.	66.	46.	2.10	92.	538.	630.
18	TAN	1	65	13.	163.	52.	473.	113.	49.	2.10	92.	1832.	1924.
			16	13.	161.	55.	227.	113.	56.	2.10	92.	972.	1065.
19	TAN	1	16	13.	124.	28.	227.	113.	56.	2.10	65.	746.	811.
			18	13.	122.	32.	116.	113.	107.	2.10	65.	558.	623.
20	TAN	2	18	13.	122.	32.	116.	113.	107.	2.10	75.	1251.	1326.
			69	13.	120.	35.	97.	113.	180.	1.00	75.	718.	794.
21	TAN	2	69	13.	104.	24.	174.	113.	180.	1.00	75.	843.	918.
			19	13.	104.	24.	171.	113.	183.	2.10	75.	1770.	1846.
22	TAN	2	69	0.	11.	16.	80.	0.	0.	1.00	53.	1133.	1186.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	13.	104.	24.	171.	113.	183.	2.10	63.	790.	853.
			20	13.	101.	30.	198.	113.	267.	1.00	63.	480.	543.
24	TAN	2	20	120.	13.	144.	113.	198.	267.	1.00	63.	480.	543.
			21	123.	13.	138.	731.	198.	460.	2.10	63.	2546.	2609.
25	TAN	2	21	123.	13.	138.	731.	198.	460.	2.10	93.	1079.	1173.
			22	124.	13.	135.	1058.	198.	756.	1.00	93.	763.	856.
26	TAN	2	22	139.	13.	275.	1058.	198.	756.	1.00	93.	763.	856.
			101	138.	13.	276.	926.	198.	719.	2.10	93.	1448.	1542.
27	TEE	2	101	138.	13.	276.	926.	198.	719.	2.10	67.	1122.	1189.
			112	131.	13.	280.	296.	198.	547.	2.10	67.	342.	409.
28	TEE	2	102	15.	54.	47.	672.	163.	71.	2.10	67.	656.	723.
			112	15.	60.	43.	775.	163.	105.	2.10	67.	391.	458.
29	TEE	2	100	24.	74.	242.	360.	139.	438.	2.10	67.	551.	618.
			112	24.	81.	237.	872.	139.	442.	2.10	67.	468.	535.
30	TAN	2	100	24.	74.	242.	360.	139.	438.	2.10	93.	711.	804.
			26	24.	67.	247.	604.	139.	455.	1.00	93.	446.	539.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	67.	47.	604.	139.	455.	1.00	93.	446.	539.
			113	14.	53.	29.	106.	139.	269.	1.00	93.	186.	279.
32	TAN	2	113	14.	53.	29.	106.	139.	269.	1.00	93.	186.	279.
			114	14.	43.	10.	149.	139.	84.	1.00	93.	128.	221.
33	BEND	2	114	10.	14.	43.	84.	149.	139.	1.47	93.	187.	281.
			28	25.	14.	32.	98.	108.	131.	1.47	93.	167.	260.
34	BEND	2	28	25.	14.	32.	98.	108.	131.	1.47	93.	167.	260.
			115	36.	14.	22.	218.	54.	0.	1.47	93.	191.	284.
35	TAN	2	115	14.	22.	36.	54.	0.	218.	1.00	93.	130.	224.
			30	14.	26.	34.	154.	0.	258.	1.00	93.	174.	267.
36	TAN	2	30	9.	26.	32.	154.	0.	258.	1.00	93.	174.	267.
			104	9.	48.	7.	165.	0.	111.	1.00	93.	115.	208.
37	TAN	2	104	9.	48.	7.	165.	0.	111.	1.00	93.	115.	208.
			32	9.	65.	26.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	15.	54.	47.	672.	163.	71.	1.00	63.	951.	1014.
			116	15.	42.	56.	202.	163.	129.	1.00	63.	397.	460.
39	BEND	3	116	58.	0.	42.	128.	177.	163.	1.00	63.	373.	436.
			44	51.	2.	59.	196.	175.	34.	1.00	63.	363.	425.
40	BEND	3	44	51.	2.	59.	196.	175.	34.	1.00	63.	363.	425.
			117	29.	3.	66.	152.	242.	121.	1.00	63.	424.	487.
41	TAN	3	117	3.	66.	29.	242.	121.	152.	2.10	63.	891.	954.
			46	8.	88.	27.	203.	121.	21.	2.10	63.	681.	744.
42	TAN	4	46	9.	87.	27.	202.	122.	21.	2.10	261.	426.	688.
			47	11.	92.	35.	217.	122.	34.	1.00	261.	215.	477.
43	TAN	4	47	15.	180.	34.	242.	34.	64.	1.00	261.	216.	477.
			48	15.	183.	28.	105.	34.	14.	2.10	261.	201.	462.
44	TAN	4	48	15.	183.	28.	105.	34.	14.	2.10	404.	1459.	1863.
			66	15.	185.	24.	207.	34.	152.	2.10	404.	3385.	3789.
45	TEE	4	66	24.	185.	15.	152.	34.	207.	2.10	599.	744.	1343.
			118	22.	186.	15.	174.	34.	241.	2.10	599.	418.	1018.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	14.	222.	16.	160.	36.	648.	2.10	599.	1921.	2520.
			118	12.	221.	16.	136.	36.	658.	2.10	599.	925.	1524.
47	TEE	4	63	98.	29.	1.	4.	38.	502.	2.10	599.	1446.	2045.
			118	101.	30.	1.	5.	38.	657.	2.10	599.	906.	1505.
48	TAN	4	67	16.	222.	14.	648.	36.	160.	2.10	599.	1921.	2520.
			50	16.	225.	21.	589.	36.	250.	2.10	599.	1841.	2440.
49	TAN	4	68	1.	32.	97.	502.	38.	5.	2.10	599.	1446.	2045.
			119	1.	24.	85.	165.	38.	4.	2.10	599.	488.	1087.
50	BEND	4	119	85.	1.	24.	4.	165.	38.	2.10	599.	488.	1087.
			52	58.	1.	75.	23.	248.	30.	2.10	599.	720.	1319.
51	BEND	4	52	58.	1.	75.	23.	248.	30.	2.10	599.	720.	1319.
			120	21.	1.	81.	36.	282.	6.	2.10	599.	818.	1417.
52	TAN	4	120	1.	81.	21.	282.	6.	36.	2.10	599.	818.	1417.
			121	1.	59.	14.	192.	6.	21.	1.00	599.	264.	863.
53	TAN	4	121	1.	59.	14.	192.	6.	21.	2.10	599.	554.	1154.
			54	1.	38.	30.	103.	6.	7.	1.00	599.	142.	741.
54	TAN	4	54	0.	38.	25.	103.	6.	7.	1.00	599.	142.	741.
			122	0.	20.	13.	97.	6.	4.	1.00	599.	134.	733.
55	TAN	4	122	0.	20.	13.	97.	6.	4.	1.00	599.	134.	733.
			123	0.	3.	14.	171.	6.	1.	1.00	599.	234.	833.
56	BEND	4	123	14.	0.	3.	1.	171.	6.	1.00	599.	234.	833.
			56	8.	0.	19.	4.	184.	3.	1.00	599.	251.	851.
57	BEND	4	56	8.	0.	19.	4.	184.	3.	1.00	599.	251.	851.
			124	16.	0.	24.	4.	167.	0.	1.00	599.	229.	828.
58	TAN	4	124	0.	24.	16.	167.	0.	4.	1.00	599.	229.	828.
			125	0.	40.	38.	205.	0.	1.	1.00	599.	281.	880.
59	TAN	4	125	0.	40.	38.	205.	0.	1.	1.00	599.	281.	880.
			58	0.	55.	60.	837.	0.	2.	1.00	599.	1145.	1745.
60	TAN	4	58	0.	55.	83.	837.	0.	2.	1.00	599.	1145.	1745.
			126	0.	76.	52.	419.	0.	1.	1.00	599.	573.	1173.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	76.	52.	419.	0.	1.	1.00	599.	573.	1173.
			59	0.	97.	21.	1084.	0.	1.	1.00	599.	1483.	2082.
62	TAN	4	59	0.	97.	21.	1084.	0.	1.	2.10	261.	1950.	2211.
			127	0.	149.	53.	1035.	0.	0.	2.10	261.	1861.	2123.
63	TAN	4	127	0.	149.	53.	1035.	0.	0.	2.10	261.	1861.	2123.
			61	0.	201.	128.	763.	0.	0.	2.10	261.	1373.	1634.
64	TAN	4	61	0.	201.	128.	763.	0.	0.	1.00	599.	1044.	1643.
			62	0.	207.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	18	1832.	18	1924.
2	24	2546.	24	2609.
3	38	951.	38	1014.
4	44	3385.	44	3789.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	16.	-172.	26.	958.	-200.	46.
11	-12.	77.	9.	-143.	36.	621.
15	6.	-26.	-15.	119.	-66.	-46.
22	-26.	263.	410.	-396.	2117.	1512.
26	38.	134.	294.	1208.	277.	909.
30	23.	65.	-52.	308.	516.	-0.
32	9.	26.	-65.	0.	0.	-0.
50	16.	225.	21.	589.	36.	250.
54	1.	75.	55.	206.	11.	13.
58	0.	142.	-110.	1674.	5.	-0.
62	0.	137.	-207.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	17.	150.	748.	46.	160.	1.00	92.	1368.	1460.
			63	10.	12.	157.	425.	46.	91.	1.57	92.	1227.	1319.
2	TEE	1	63	157.	12.	10.	91.	46.	425.	1.57	65.	941.	1006.
			105	159.	11.	10.	81.	46.	661.	1.57	65.	917.	982.
3	TEE	1	64	31.	32.	5.	42.	72.	387.	1.57	65.	853.	918.
			105	33.	33.	5.	36.	72.	436.	1.57	65.	618.	683.
4	TEE	1	65	35.	190.	6.	37.	114.	324.	1.57	65.	744.	810.
			105	33.	188.	6.	28.	114.	377.	1.57	65.	573.	638.
5	TAN	1	64	5.	32.	31.	387.	72.	42.	1.00	92.	706.	798.
			106	5.	21.	15.	52.	72.	109.	1.57	92.	395.	487.
6	BEND	1	106	5.	15.	21.	52.	109.	72.	1.57	65.	303.	368.
			4	11.	13.	17.	28.	105.	76.	1.57	65.	284.	349.
7	BEND	1	4	11.	13.	17.	28.	105.	76.	1.57	65.	284.	349.
			107	18.	12.	5.	51.	86.	65.	1.57	65.	256.	321.
8	TAN	1	107	12.	5.	18.	86.	65.	51.	1.00	92.	212.	304.
			108	8.	5.	15.	11.	65.	21.	1.00	92.	123.	215.
9	BEND	1	108	15.	8.	5.	21.	11.	65.	1.57	92.	193.	285.
			7	6.	3.	12.	39.	44.	60.	1.57	92.	236.	329.
10	BEND	1	7	6.	3.	12.	39.	44.	60.	1.57	92.	236.	329.
			8	5.	7.	9.	43.	43.	31.	1.57	92.	192.	284.
11	BEND	1	8	5.	7.	9.	43.	43.	31.	1.57	92.	192.	284.
			9	8.	12.	1.	9.	15.	38.	1.57	92.	116.	208.
12	BEND	1	9	8.	12.	1.	9.	15.	38.	1.57	92.	116.	208.
			109	3.	16.	5.	61.	18.	24.	1.57	92.	191.	283.
13	TAN	1	109	16.	5.	3.	18.	24.	61.	1.00	92.	121.	214.
			11	26.	5.	4.	10.	24.	250.	1.00	92.	448.	540.
14	TAN	1	11	34.	5.	4.	10.	24.	250.	1.00	92.	448.	540.
			110	27.	5.	9.	39.	24.	30.	1.57	92.	153.	245.
15	BEND	1	110	27.	9.	5.	39.	30.	24.	1.57	65.	117.	182.
			13	22.	10.	18.	28.	12.	47.	1.57	65.	121.	186.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	22.	10.	18.	28.	12.	47.	1.57	65.	121.	186.
			111	5.	11.	24.	8.	19.	54.	1.57	65.	124.	189.
17	TAN	1	111	5.	24.	11.	8.	54.	19.	1.00	92.	102.	195.
			15	5.	18.	15.	73.	54.	48.	1.57	92.	288.	380.
18	TAN	1	65	6.	188.	42.	324.	113.	41.	1.57	92.	970.	1063.
			16	6.	193.	45.	123.	113.	68.	1.57	92.	505.	598.
19	TAN	1	16	6.	155.	19.	123.	113.	68.	1.57	65.	388.	453.
			18	6.	160.	22.	51.	113.	91.	1.57	65.	331.	396.
20	TAN	2	18	6.	160.	22.	51.	113.	91.	1.57	75.	742.	817.
			69	6.	164.	25.	96.	113.	125.	1.00	75.	594.	669.
21	TAN	2	69	6.	149.	14.	164.	113.	125.	1.00	75.	719.	794.
			19	6.	149.	15.	163.	113.	126.	1.57	75.	1133.	1209.
22	TAN	2	69	0.	11.	15.	79.	0.	0.	1.00	53.	1118.	1171.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	6.	149.	15.	163.	113.	126.	1.57	63.	506.	568.
			20	6.	157.	20.	160.	113.	164.	1.00	63.	350.	412.
24	TAN	2	20	63.	6.	134.	113.	160.	164.	1.00	63.	350.	412.
			21	55.	6.	128.	673.	160.	191.	1.57	63.	1547.	1610.
25	TAN	2	21	55.	6.	128.	673.	160.	191.	1.57	93.	656.	749.
			22	50.	6.	125.	977.	160.	318.	1.00	93.	603.	696.
26	TAN	2	22	81.	6.	249.	977.	160.	318.	1.00	93.	603.	696.
			101	80.	6.	250.	857.	160.	356.	1.57	93.	860.	954.
27	TEE	2	101	80.	6.	250.	857.	160.	356.	1.57	67.	667.	734.
			112	74.	6.	254.	295.	160.	531.	1.57	67.	296.	363.
28	TEE	2	102	13.	51.	41.	546.	171.	38[illegible]	1.57	67.	406.	473.
			112	13.	57.	37.	634.	171.	69.	1.57	67.	311.	378.
29	TEE	2	100	18.	19.	223.	376.	143.	445.	1.57	67.	425.	492.
			112	18.	26.	218.	768.	143.	462.	1.57	67.	415.	483.
30	TAN	2	100	18.	19.	223.	376.	143.	445.	1.57	93.	548.	641.
			26	18.	12.	228.	637.	143.	440.	1.00	93.	457.	550.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	12.	49.	637.	143.	440.	1.00	93.	457.	550.
			113	14.	24.	31.	108.	143.	261.	1.00	93.	184.	277.
32	TAN	2	113	14.	24.	31.	108.	143.	261.	1.00	93.	184.	277.
			114	14.	50.	13.	179.	143.	82.	1.00	93.	141.	234.
33	BEND	2	114	13.	14.	50.	82.	179.	143.	1.10	93.	155.	248.
			28	38.	14.	48.	101.	120.	133.	1.10	93.	132.	225.
34	BEND	2	28	38.	14.	48.	101.	120.	133.	1.10	93.	132.	225.
			115	69.	14.	24.	220.	146.	0.	1.10	93.	168.	262.
35	TAN	2	115	14.	24.	69.	146.	0.	220.	1.00	93.	153.	246.
			30	14.	28.	75.	361.	0.	259.	1.00	93.	258.	351.
36	TAN	2	30	9.	28.	41.	361.	0.	259.	1.00	93.	258.	351.
			104	9.	51.	9.	55.	0.	111.	1.00	93.	72.	165.
37	TAN	2	104	9.	51.	9.	55.	0.	111.	1.00	93.	72.	165.
			32	9.	67.	17.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	13.	51.	41.	546.	171.	38.	1.00	63.	784.	847.
			116	13.	39.	49.	135.	171.	108.	1.00	63.	332.	395.
39	BEND	3	116	51.	1.	39.	139.	102.	171.	1.00	63.	332.	395.
			44	44.	2.	62.	212.	139.	30.	1.00	63.	349.	412.
40	BEND	3	44	44.	2.	62.	212.	139.	30.	1.00	63.	349.	412.
			117	26.	3.	59.	156.	258.	128.	1.00	63.	448.	511.
41	TAN	3	117	3.	59.	26.	258.	128.	156.	1.57	63.	706.	768.
			46	9.	81.	30.	147.	128.	22.	1.57	63.	423.	485.
42	TAN	4	46	10.	81.	30.	146.	129.	22.	1.57	261.	264.	526.
			47	11.	86.	38.	242.	129.	39.	1.00	261.	237.	498.
43	TAN	4	47	13.	148.	27.	267.	39.	64.	1.00	261.	238.	499.
			48	13.	139.	21.	142.	39.	7.	1.57	261.	199.	461.
44	TAN	4	48	13.	139.	21.	142.	39.	7.	1.57	404.	1448.	1853.
			66	13.	133.	17.	183.	39.	133.	1.57	404.	2252.	2656.
45	TEE	4	66	17.	133.	13.	133.	39.	183.	1.57	599.	495.	1094.
			118	15.	131.	13.	153.	39.	207.	1.57	599.	363.	962.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	21.	29.	15.	141.	41.	681.	1.57	599.	1500.	2099.
			118	19.	31.	15.	119.	41.	680.	1.57	599.	949.	1548.
47	TEE	4	68	98.	29.	1.	3.	34.	491.	1.57	599.	1062.	1661.
			118	101.	31.	1.	5.	34.	647.	1.57	599.	888.	1487.
48	TAN	4	67	15.	29.	21.	681.	41.	141.	1.57	599.	1500.	2099.
			50	15.	19.	27.	659.	41.	223.	1.57	599.	1502.	2101.
49	TAN	4	68	1.	33.	97.	491.	34.	5.	1.57	599.	1062.	1661.
			119	1.	24.	85.	174.	34.	5.	1.57	599.	382.	982.
50	BEND	4	119	85.	1.	24.	5.	174.	34.	1.57	599.	382.	982.
			52	58.	1.	75.	21.	256.	26.	1.57	599.	556.	1156.
51	BEND	4	52	58.	1.	75.	21.	256.	26.	1.57	599.	556.	1156.
			120	21.	1.	81.	32.	290.	6.	1.57	599.	630.	1229.
52	TAN	4	120	1.	81.	21.	290.	6.	32.	1.57	599.	630.	1229.
			121	1.	59.	15.	197.	6.	19.	1.00	599.	270.	870.
53	TAN	4	121	1.	59.	15.	197.	6.	19.	1.57	599.	426.	1025.
			54	1.	37.	30.	105.	6.	7.	1.00	599.	144.	743.
54	TAN	4	54	0.	37.	25.	105.	6.	7.	1.00	599.	144.	743.
			122	0.	20.	13.	98.	6.	4.	1.00	599.	134.	734.
55	TAN	4	122	0.	20.	13.	98.	6.	4.	1.00	599.	134.	734.
			123	0.	3.	14.	173.	6.	2.	1.00	599.	237.	837.
56	BEND	4	123	14.	0.	3.	2.	173.	6.	1.00	599.	237.	837.
			56	8.	0.	20.	4.	187.	4.	1.00	599.	256.	855.
57	BEND	4	56	8.	0.	20.	4.	187.	4.	1.00	599.	256.	855.
			124	16.	0.	25.	4.	170.	0.	1.00	599.	233.	832.
58	TAN	4	124	0.	25.	16.	170.	0.	4.	1.00	599.	233.	832.
			125	0.	40.	38.	205.	0.	1.	1.00	599.	281.	880.
59	TAN	4	125	0.	40.	38.	205.	0.	1.	1.00	599.	281.	880.
			58	0.	55.	60.	840.	0.	3.	1.00	599.	1150.	1749.
60	TAN	4	58	0.	55.	83.	840.	0.	3.	1.00	599.	1150.	1749.
			126	0.	76.	52.	417.	0.	2.	1.00	599.	571.	1170.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	76.	52.	417.	0.	2.	1.00	599.	571.	1170.
			59	0.	98.	21.	1083.	0.	1.	1.00	599.	1482.	2081.
62	TAN	4	59	0.	98.	21.	1083.	0.	1.	1.57	261.	1461.	1722.
			127	0.	149.	53.	1034.	0.	0.	1.57	261.	1395.	1657.
63	TAN	4	127	0.	149.	53.	1034.	0.	0.	1.57	261.	1395.	1657.
			61	0.	201.	128.	763.	0.	0.	1.57	261.	1029.	1290.
64	TAN	4	61	0.	201.	128.	763.	0.	0.	1.00	599.	1044.	1643.
			62	0.	208.	137.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1368.	1	1460.
2	24	1547.	24	1610.
3	38	784.	38	847.
4	44	2252.	44	2656.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	10.	-150.	17.	748.	-160.	46.
11	-10.	60.	8.	-47.	19.	500.
15	5.	-18.	-15.	73.	-54.	-48.
22	-12.	131.	374.	-321.	1954.	635.
26	32.	24.	277.	1274.	286.	880.
30	23.	116.	-57.	722.	518.	-0.
32	9.	17.	-67.	0.	0.	-0.
50	15.	19.	27.	659.	41.	223.
54	1.	75.	55.	210.	12.	14.
58	0.	143.	-110.	1680.	5.	-0.
62	0.	137.	-208.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	61.	35.	277.	1547.	125.	476.	1.00	92.	2896.	2988.
			63	56.	35.	275.	407.	125.	63.	1.57	92.	1209.	1301.
2	TEE	1	63	275.	35.	56.	63.	125.	407.	1.57	65.	927.	992.
			105	274.	35.	55.	22.	125.	818.	1.57	65.	1152.	1217.
3	TEE	1	64	24.	4.	12.	64.	60.	234.	1.57	65.	539.	604.
			105	26.	4.	13.	50.	60.	238.	1.57	65.	357.	422.
4	TEE	1	65	28.	276.	43.	96.	22.	536.	1.57	65.	1175.	1240.
			105	28.	277.	44.	158.	22.	580.	1.57	65.	824.	890.
5	TAN	1	64	12.	4.	24.	234.	60.	64.	1.00	92.	446.	538.
			106	3.	4.	9.	150.	60.	117.	1.57	92.	559.	651.
6	BEND	1	106	3.	9.	4.	150.	117.	60.	1.57	65.	429.	494.
			4	6.	10.	2.	102.	111.	111.	1.57	65.	404.	469.
7	BEND	1	4	6.	10.	2.	102.	111.	111.	1.57	65.	404.	469.
			107	4.	11.	5.	52.	105.	145.	1.57	65.	402.	467.
8	TAN	1	107	11.	5.	4.	105.	145.	52.	1.00	92.	333.	425.
			108	12.	8.	4.	88.	145.	47.	1.00	92.	314.	406.
9	BEND	1	108	4.	12.	8.	47.	88.	145.	1.57	92.	494.	586.
			7	11.	14.	5.	19.	53.	155.	1.57	92.	463.	555.
10	BEND	1	7	11.	14.	5.	19.	53.	155.	1.57	92.	463.	555.
			8	15.	19.	4.	53.	14.	124.	1.57	92.	380.	472.
11	BEND	1	8	15.	19.	4.	53.	14.	124.	1.57	92.	380.	472.
			9	10.	23.	16.	35.	74.	95.	1.57	92.	352.	444.
12	BEND	1	9	10.	23.	16.	35.	74.	95.	1.57	92.	352.	444.
			109	4.	28.	22.	26.	91.	80.	1.57	92.	349.	441.
13	TAN	1	109	28.	22.	4.	91.	80.	26.	1.00	92.	222.	314.
			11	38.	28.	4.	54.	80.	340.	1.00	92.	631.	723.
14	TAN	1	11	44.	28.	4.	54.	80.	340.	1.00	92.	631.	723.
			110	36.	33.	4.	26.	80.	81.	1.57	92.	328.	420.
15	BEND	1	110	36.	4.	33.	26.	81.	80.	1.57	65.	252.	317.
			13	44.	4.	49.	53.	54.	58.	1.57	65.	205.	270.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	44.	4.	49.	53.	54.	58.	1.57	65.	205.	270.
			111	36.	4.	33.	73.	32.	20.	1.57	65.	177.	242.
17	TAN	1	111	36.	33.	4.	73.	20.	32.	1.00	92.	147.	239.
			15	40.	27.	4.	57.	20.	217.	1.57	92.	633.	725.
18	TAN	1	65	43.	275.	39.	536.	25.	96.	1.57	92.	1532.	1624.
			16	39.	273.	39.	356.	25.	112.	1.57	92.	1050.	1143.
19	TAN	1	16	15.	234.	39.	356.	25.	112.	1.57	65.	806.	871.
			18	19.	232.	39.	200.	25.	151.	1.57	65.	544.	609.
20	TAN	2	18	19.	232.	39.	200.	25.	151.	1.57	75.	1218.	1294.
			69	22.	231.	39.	35.	25.	189.	1.00	75.	593.	668.
21	TAN	2	69	34.	214.	39.	114.	66.	189.	1.00	75.	705.	780.
			19	34.	214.	39.	114.	66.	187.	1.57	75.	1104.	1179.
22	TAN	2	69	12.	0.	16.	82.	0.	59.	1.00	53.	1433.	1487.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	34.	214.	39.	114.	66.	187.	1.57	63.	493.	555.
			20	40.	211.	39.	212.	66.	411.	1.00	63.	639.	701.
24	TAN	2	20	231.	183.	39.	66.	212.	411.	1.00	63.	639.	701.
			21	235.	188.	39.	167.	212.	1276.	1.57	63.	2811.	2874.
25	TAN	2	21	235.	188.	39.	167.	212.	1276.	1.57	93.	1192.	1285.
			22	237.	192.	39.	261.	212.	1842.	1.00	93.	1086.	1179.
26	TAN	2	22	214.	192.	106.	261.	212.	1842.	1.00	93.	1086.	1179.
			101	213.	193.	106.	262.	212.	1836.	1.57	93.	1705.	1799.
27	TEE	2	101	213.	193.	106.	262.	212.	1836.	1.57	67.	1321.	1388.
			112	207.	197.	106.	272.	212.	1814.	1.57	67.	838.	905.
28	TEE	2	102	51.	53.	25.	277.	432.	1307.	1.57	67.	994.	1061.
			112	56.	59.	25.	252.	432.	1428.	1.57	67.	720.	787.
29	TEE	2	100	253.	141.	81.	91.	164.	963.	1.57	67.	694.	761.
			112	249.	148.	81.	241.	164.	391.	1.57	67.	237.	304.
30	TAN	2	100	253.	141.	81.	91.	164.	963.	1.57	93.	896.	989.
			26	258.	133.	81.	267.	164.	1914.	1.00	93.	1125.	1218.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	83.	133.	14.	267.	164.	1914.	1.00	93.	1125.	1218.
			113	64.	118.	14.	189.	164.	949.	1.00	93.	569.	662.
32	TAN	2	113	64.	118.	14.	189.	164.	949.	1.00	93.	569.	662.
			114	44.	108.	14.	328.	164.	236.	1.00	93.	253.	346.
33	BEND	2	114	14.	44.	108.	236.	328.	164.	1.10	93.	278.	372.
			28	64.	38.	83.	110.	201.	93.	1.10	93.	158.	251.
34	BEND	2	28	64.	38.	83.	110.	201.	93.	1.10	93.	158.	251.
			115	100.	31.	14.	119.	213.	0.	1.10	93.	156.	249.
35	TAN	2	115	31.	14.	100.	213.	0.	119.	1.00	93.	142.	235.
			30	26.	14.	98.	506.	0.	145.	1.00	93.	305.	398.
36	TAN	2	30	25.	14.	45.	506.	0.	145.	1.00	93.	305.	398.
			104	8.	14.	20.	322.	0.	202.	1.00	93.	220.	314.
37	TAN	2	104	8.	14.	20.	322.	0.	202.	1.00	93.	220.	314.
			32	26.	14.	39.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	51.	53.	25.	277.	432.	1307.	1.00	63.	1921.	1983.
			116	42.	40.	25.	373.	432.	881.	1.00	63.	1437.	1499.
39	BEND	3	116	35.	35.	40.	896.	150.	432.	1.00	63.	1377.	1439.
			44	34.	30.	37.	797.	172.	276.	1.00	63.	1178.	1240.
40	BEND	3	44	34.	30.	37.	797.	172.	276.	1.00	63.	1178.	1240.
			117	27.	26.	32.	258.	196.	708.	1.00	63.	1066.	1129.
41	TAN	3	117	26.	32.	27.	196.	708.	258.	1.57	63.	1679.	1742.
			46	3.	26.	25.	193.	708.	101.	1.57	63.	1597.	1660.
42	TAN	4	46	3.	26.	25.	200.	708.	101.	1.57	261.	1002.	1263.
			47	3.	25.	33.	201.	708.	103.	1.00	261.	637.	898.
43	TAN	4	47	117.	183.	25.	82.	103.	716.	1.00	261.	624.	885.
			48	123.	187.	25.	94.	103.	99.	1.57	261.	230.	492.
44	TAN	4	48	123.	187.	25.	94.	103.	99.	1.57	404.	1675.	2079.
			66	128.	189.	25.	327.	103.	1094.	1.57	404.	11237.	11641.
45	TEE	4	66	25.	189.	128.	1094.	103.	327.	1.57	599.	2469.	3069.
			118	25.	190.	130.	1287.	103.	364.	1.57	599.	1843.	2442.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	22.	232.	157.	1244.	288.	774.	1.57	599.	3218.	3817.
			118	22.	231.	155.	1011.	288.	740.	1.57	599.	1823.	2423.
47	TEE	4	68	101.	8.	23.	143.	283.	572.	1.57	599.	1410.	2009.
			118	103.	8.	25.	181.	283.	732.	1.57	599.	1198.	1797.
48	TAN	4	67	157.	232.	22.	774.	288.	1244.	1.57	599.	3218.	3817.
			50	163.	236.	22.	900.	288.	2146.	1.57	599.	5054.	5653.
49	TAN	4	68	23.	12.	100.	572.	277.	154.	1.57	599.	1410.	2009.
			119	14.	12.	88.	214.	277.	16.	1.57	599.	755.	1354.
50	BEND	4	119	88.	14.	12.	16.	214.	277.	1.57	599.	755.	1354.
			52	54.	13.	67.	192.	300.	191.	1.57	599.	871.	1471.
51	BEND	4	52	54.	13.	67.	192.	300.	191.	1.57	599.	871.	1471.
			120	12.	11.	84.	258.	324.	5.	1.57	599.	893.	1492.
52	TAN	4	120	11.	84.	12.	324.	5.	258.	1.57	599.	893.	1492.
			121	5.	61.	12.	169.	5.	212.	1.00	599.	371.	970.
53	TAN	4	121	5.	61.	12.	169.	5.	212.	1.57	599.	584.	1184.
			54	21.	39.	12.	14.	5.	373.	1.00	599.	511.	1110.
54	TAN	4	54	30.	39.	9.	14.	5.	373.	1.00	599.	511.	1110.
			122	18.	21.	9.	80.	5.	122.	1.00	599.	200.	799.
55	TAN	4	122	18.	21.	9.	80.	5.	122.	1.00	599.	200.	799.
			123	5.	3.	9.	175.	5.	4.	1.00	599.	240.	839.
56	BEND	4	123	9.	5.	3.	4.	175.	5.	1.00	599.	240.	839.
			56	0.	1.	13.	2.	203.	6.	1.00	599.	278.	878.
57	BEND	4	56	0.	1.	13.	2.	203.	6.	1.00	599.	278.	878.
			124	17.	7.	9.	19.	165.	0.	1.00	599.	227.	826.
58	TAN	4	124	7.	9.	17.	165.	0.	19.	1.00	599.	227.	826.
			125	22.	9.	39.	205.	0.	210.	1.00	599.	402.	1001.
59	TAN	4	125	22.	9.	39.	205.	0.	210.	1.00	599.	402.	1001.
			58	38.	9.	62.	873.	0.	612.	1.00	599.	1459.	2058.
60	TAN	4	58	60.	9.	85.	873.	0.	612.	1.00	599.	1459.	2058.
			126	38.	9.	54.	438.	0.	290.	1.00	599.	719.	1318.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	38.	9.	54.	438.	0.	290.	1.00	599.	719.	1318.
			59	16.	9.	22.	1120.	0.	783.	1.00	599.	1870.	2469.
62	TAN	4	59	16.	9.	22.	1120.	0.	783.	1.57	261.	1844.	2105.
			127	38.	9.	55.	1069.	0.	749.	1.57	261.	1761.	2023.
63	TAN	4	127	38.	9.	55.	1069.	0.	749.	1.57	261.	1761.	2023.
			61	92.	9.	132.	788.	0.	553.	1.57	261.	1299.	1560.
64	TAN	4	61	92.	9.	132.	788.	0.	553.	1.00	599.	1317.	1916.
			62	99.	9.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2896.	1	2988.
2	24	2811.	24	2874.
3	38	1921.	38	1983.
4	44	11237.	44	11641.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	61.	-277.	35.	1547.	-476.	125.
11	-56.	81.	9.	-160.	108.	680.
15	40.	-27.	-4.	57.	-20.	-217.
22	-384.	451.	145.	-424.	522.	3683.
26	341.	267.	95.	535.	327.	3828.
30	51.	143.	-27.	1011.	290.	-0.
32	26.	39.	-14.	0.	0.	-0.
50	163.	236.	22.	900.	288.	2146.
54	51.	78.	21.	29.	10.	746.
58	99.	147.	-18.	1746.	1225.	-0.
62	99.	142.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	54.	25.	254.	1328.	125.	434.	1.00	92.	2503.	2595.
			63	50.	25.	261.	498.	125.	66.	1.57	92.	1456.	1548.
2	TEE	1	63	261.	25.	50.	66.	125.	498.	1.57	65.	1117.	1182.
			105	264.	25.	48.	7.	125.	892.	1.57	65.	1250.	1315.
3	TEE	1	64	34.	4.	11.	49.	88.	433.	1.57	65.	959.	1024.
			105	36.	4.	13.	34.	88.	486.	1.57	65.	692.	757.
4	TEE	1	65	17.	302.	35.	87.	23.	380.	1.57	65.	842.	907.
			105	17.	300.	37.	125.	23.	407.	1.57	65.	584.	649.
5	TAN	1	64	11.	4.	34.	433.	88.	49.	1.00	92.	794.	886.
			106	2.	4.	17.	66.	88.	114.	1.57	92.	444.	537.
6	BEND	1	106	2.	17.	4.	66.	114.	88.	1.57	65.	341.	406.
			4	5.	15.	1.	46.	109.	76.	1.57	65.	303.	368.
7	BEND	1	4	5.	15.	1.	46.	109.	76.	1.57	65.	303.	368.
			107	4.	14.	5.	65.	103.	76.	1.57	65.	309.	374.
8	TAN	1	107	14.	5.	4.	103.	76.	65.	1.00	92.	256.	348.
			108	9.	8.	4.	83.	76.	16.	1.00	92.	204.	296.
9	BEND	1	108	4.	9.	8.	16.	83.	76.	1.57	92.	321.	413.
			7	11.	4.	5.	35.	48.	67.	1.57	92.	251.	343.
10	BEND	1	7	11.	4.	5.	35.	48.	67.	1.57	92.	251.	343.
			8	14.	9.	4.	44.	13.	33.	1.57	92.	158.	251.
11	BEND	1	8	14.	9.	4.	44.	13.	33.	1.57	92.	158.	251.
			9	9.	14.	15.	6.	73.	41.	1.57	92.	235.	327.
12	BEND	1	9	9.	14.	15.	6.	73.	41.	1.57	92.	235.	327.
			109	4.	18.	21.	57.	87.	30.	1.57	92.	304.	396.
13	TAN	1	109	18.	21.	4.	87.	30.	57.	1.00	92.	193.	285.
			11	28.	28.	4.	46.	30.	276.	1.00	92.	503.	595.
14	TAN	1	11	35.	28.	4.	46.	30.	276.	1.00	92.	503.	595.
			110	28.	33.	4.	14.	30.	77.	1.57	92.	235.	327.
15	BEND	1	110	28.	4.	33.	14.	77.	30.	1.57	65.	180.	246.
			13	40.	4.	42.	27.	50.	13.	1.57	65.	125.	190.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	40.	4.	42.	27.	50.	13.	1.57	65.	125.	190.
			111	35.	4.	25.	23.	25.	8.	1.57	65.	76.	141.
17	TAN	1	111	35.	25.	4.	23.	8.	25.	1.00	92.	63.	155.
			15	39.	19.	4.	8.	8.	220.	1.57	92.	619.	711.
18	TAN	1	65	35.	301.	29.	380.	24.	88.	1.57	92.	1098.	1190.
			16	32.	306.	29.	247.	24.	124.	1.57	92.	780.	872.
19	TAN	1	16	8.	267.	29.	247.	24.	124.	1.57	65.	598.	663.
			18	12.	272.	29.	132.	24.	135.	1.57	65.	410.	475.
20	TAN	2	18	12.	272.	29.	132.	24.	135.	1.57	75.	919.	994.
			69	15.	277.	29.	33.	24.	130.	1.00	75.	419.	494.
21	TAN	2	69	26.	261.	29.	103.	66.	130.	1.00	75.	547.	623.
			19	27.	261.	29.	105.	66.	127.	1.57	75.	857.	932.
22	TAN	2	69	12.	0.	16.	81.	0.	59.	1.00	53.	1421.	1474.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	27.	261.	29.	105.	66.	127.	1.57	63.	383.	445.
			20	33.	270.	29.	172.	66.	303.	1.00	63.	486.	548.
24	TAN	2	20	172.	175.	29.	66.	172.	303.	1.00	63.	486.	548.
			21	164.	181.	29.	107.	172.	995.	1.57	63.	2188.	2251.
25	TAN	2	21	164.	181.	29.	107.	172.	995.	1.57	93.	928.	1021.
			22	159.	185.	29.	176.	172.	1383.	1.00	93.	815.	908.
26	TAN	2	22	153.	185.	79.	176.	172.	1383.	1.00	93.	815.	908.
			101	152.	185.	79.	190.	172.	1456.	1.57	93.	1351.	1444.
27	TEE	2	101	152.	185.	79.	190.	172.	1456.	1.57	67.	1047.	1114.
			112	146.	190.	79.	270.	172.	1796.	1.57	67.	825.	893.
28	TEE	2	102	50.	50.	18.	145.	439.	1272.	1.57	67.	958.	1025.
			112	54.	56.	18.	105.	439.	1390.	1.57	67.	699.	767.
29	TEE	2	100	247.	84.	62.	108.	169.	970.	1.57	67.	701.	768.
			112	243.	90.	62.	134.	169.	412.	1.57	67.	228.	295.
30	TAN	2	100	247.	84.	62.	108.	169.	970.	1.57	93.	905.	998.
			26	253.	76.	62.	302.	169.	1899.	1.00	93.	1120.	1213.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	82.	76.	16.	302.	169.	1899.	1.00	93.	1120.	1213.
			113	63.	88.	16.	191.	169.	940.	1.00	93.	565.	658.
32	TAN	2	113	63.	88.	16.	191.	169.	940.	1.00	93.	565.	658.
			114	44.	115.	16.	359.	169.	234.	1.00	93.	267.	360.
33	BEND	2	114	16.	44.	115.	234.	359.	169.	1.10	93.	294.	387.
			28	77.	37.	100.	113.	214.	95.	1.10	93.	166.	259.
34	BEND	2	28	77.	37.	100.	113.	214.	95.	1.10	93.	166.	259.
			115	135.	30.	16.	121.	309.	0.	1.10	93.	212.	305.
35	TAN	2	115	30.	16.	135.	309.	0.	121.	1.00	93.	193.	286.
			30	26.	16.	141.	722.	0.	146.	1.00	93.	427.	520.
36	TAN	2	30	25.	16.	55.	722.	0.	146.	1.00	93.	427.	520.
			104	8.	16.	22.	207.	0.	202.	1.00	93.	168.	261.
37	TAN	2	104	8.	16.	22.	207.	0.	202.	1.00	93.	168.	261.
			32	26.	16.	30.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	50.	50.	18.	145.	439.	1272.	1.00	63.	1852.	1914.
			116	41.	37.	18.	303.	439.	859.	1.00	63.	1383.	1446.
39	BEND	3	116	28.	35.	37.	908.	72.	439.	1.00	63.	1383.	1446.
			44	27.	31.	40.	813.	134.	273.	1.00	63.	1188.	1251.
40	BEND	3	44	27.	31.	40.	813.	134.	273.	1.00	63.	1188.	1251.
			117	24.	26.	25.	262.	213.	717.	1.00	63.	1084.	1146.
41	TAN	3	117	26.	25.	24.	213.	717.	262.	1.57	63.	1707.	1770.
			46	4.	19.	28.	134.	717.	103.	1.57	63.	1587.	1649.
42	TAN	4	46	4.	19.	28.	141.	715.	103.	1.57	261.	993.	1255.
			47	3.	18.	36.	228.	715.	107.	1.00	261.	649.	911.
43	TAN	4	47	116.	150.	18.	109.	107.	717.	1.00	261.	628.	889.
			48	122.	141.	18.	133.	107.	92.	1.57	261.	262.	523.
44	TAN	4	48	122.	141.	18.	133.	107.	92.	1.57	404.	1901.	2305.
			66	126.	135.	18.	302.	107.	1074.	1.57	404.	10988.	11392.
45	TEE	4	66	18.	135.	126.	1074.	107.	302.	1.57	599.	2415.	3014.
			118	18.	132.	128.	1265.	107.	329.	1.57	599.	1803.	2402.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	29.	30.	155.	1225.	294.	808.	1.57	599.	3224.	3823.
			118	29.	33.	153.	993.	294.	763.	1.57	599.	1827.	2426.
47	TEE	4	68	100.	8.	23.	143.	279.	562.	1.57	599.	1386.	1985.
			118	103.	8.	25.	180.	279.	720.	1.57	599.	1180.	1779.
48	TAN	4	67	155.	30.	29.	808.	294.	1225.	1.57	599.	3224.	3823.
			50	162.	20.	29.	974.	294.	2118.	1.57	599.	5064.	5663.
49	TAN	4	68	23.	12.	100.	562.	273.	153.	1.57	599.	1386.	1985.
			119	14.	12.	88.	223.	273.	17.	1.57	599.	760.	1359.
50	BEND	4	119	88.	14.	12.	17.	223.	273.	1.57	599.	760.	1359.
			52	54.	13.	67.	190.	309.	187.	1.57	599.	880.	1479.
51	BEND	4	52	54.	13.	67.	190.	309.	187.	1.57	599.	880.	1479.
			120	12.	11.	83.	254.	333.	5.	1.57	599.	902.	1501.
52	TAN	4	120	11.	83.	12.	333.	5.	254.	1.57	599.	902.	1501.
			121	5.	61.	12.	175.	5.	209.	1.00	599.	373.	972.
53	TAN	4	121	5.	61.	12.	175.	5.	209.	1.57	599.	587.	1186.
			54	21.	39.	12.	17.	5.	373.	1.00	599.	511.	1111.
54	TAN	4	54	30.	39.	9.	17.	5.	373.	1.00	599.	511.	1111.
			122	18.	21.	9.	81.	5.	122.	1.00	599.	201.	800.
55	TAN	4	122	18.	21.	9.	81.	5.	122.	1.00	599.	201.	800.
			123	5.	3.	9.	178.	5.	5.	1.00	599.	244.	843.
56	BEND	4	123	9.	5.	3.	5.	178.	5.	1.00	599.	244.	843.
			56	0.	1.	13.	2.	207.	6.	1.00	599.	283.	883.
57	BEND	4	56	0.	1.	13.	2.	207.	6.	1.00	599.	283.	883.
			124	17.	7.	9.	19.	168.	0.	1.00	599.	231.	830.
58	TAN	4	124	7.	9.	17.	168.	0.	19.	1.00	599.	231.	830.
			125	23.	9.	40.	205.	0.	210.	1.00	599.	402.	1001.
59	TAN	4	125	23.	9.	40.	205.	0.	210.	1.00	599.	402.	1001.
			58	38.	9.	62.	876.	0.	613.	1.00	599.	1463.	2062.
60	TAN	4	58	60.	9.	85.	876.	0.	613.	1.00	599.	1463.	2062.
			126	38.	9.	54.	436.	0.	291.	1.00	599.	717.	1316.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	38.	9.	54.	436.	0.	291.	1.00	599.	717.	1316.
			59	16.	9.	22.	1120.	0.	783.	1.00	599.	1869.	2469.
62	TAN	4	59	16.	9.	22.	1120.	0.	783.	1.57	261.	1843.	2105.
			127	38.	9.	55.	1069.	0.	749.	1.57	261.	1761.	2022.
63	TAN	4	127	38.	9.	55.	1069.	0.	749.	1.57	261.	1761.	2022.
			61	92.	9.	132.	788.	0.	553.	1.57	261.	1299.	1560.
64	TAN	4	61	92.	9.	132.	788.	0.	553.	1.00	599.	1317.	1916.
			62	99.	9.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2503.	1	2595.
2	24	2188.	24	2251.
3	38	1852.	38	1914.
4	44	10988.	44	11392.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	54.	-254.	25.	1328.	-434.	125.
11	-55.	63.	9.	-60.	91.	553.
15	39.	-19.	-4.	8.	-8.	-220.
22	-369.	313.	108.	-345.	351.	2766.
26	335.	152.	78.	604.	337.	3798.
30	50.	195.	-32.	1444.	292.	-0.
32	26.	30.	-16.	0.	0.	-0.
50	162.	20.	29.	974.	294.	2118.
54	51.	77.	21.	33.	11.	747.
58	99.	148.	-19.	1752.	1225.	-0.
62	99.	142.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	19.	102.	177.	991.	54.	109.	1.00	92.	1781.	1873.
			63	19.	97.	174.	341.	54.	26.	1.57	92.	974.	1066.
2	TEE	1	63	174.	97.	19.	26.	54.	341.	1.57	65.	747.	812.
			105	173.	96.	19.	50.	54.	602.	1.57	65.	835.	900.
3	TEE	1	64	22.	33.	10.	90.	41.	189.	1.57	65.	460.	525.
			105	24.	34.	10.	104.	41.	190.	1.57	65.	309.	374.
4	TEE	1	65	54.	170.	15.	41.	118.	459.	1.57	65.	1025.	1090.
			105	56.	171.	15.	59.	118.	544.	1.57	65.	791.	856.
5	TAN	1	64	10.	33.	22.	189.	41.	90.	1.00	92.	381.	473.
			106	10.	21.	7.	142.	41.	89.	1.57	92.	485.	577.
6	BEND	1	106	10.	7.	21.	142.	89.	41.	1.57	65.	372.	437.
			4	9.	8.	21.	86.	88.	120.	1.57	65.	370.	435.
7	BEND	1	4	9.	8.	21.	86.	88.	120.	1.57	65.	370.	435.
			107	19.	8.	10.	37.	70.	141.	1.57	65.	348.	413.
8	TAN	1	107	8.	10.	19.	70.	141.	37.	1.00	92.	288.	381.
			108	10.	10.	16.	19.	141.	53.	1.00	92.	270.	363.
9	BEND	1	108	16.	10.	10.	53.	19.	141.	1.57	92.	426.	518.
			7	3.	12.	15.	21.	61.	152.	1.57	92.	465.	557.
10	BEND	1	7	3.	12.	15.	21.	61.	152.	1.57	92.	465.	557.
			8	10.	17.	9.	62.	41.	116.	1.57	92.	388.	480.
11	BEND	1	8	10.	17.	9.	62.	41.	116.	1.57	92.	388.	480.
			9	11.	21.	3.	45.	12.	80.	1.57	92.	260.	352.
12	BEND	1	9	11.	21.	3.	45.	12.	80.	1.57	92.	260.	352.
			109	2.	26.	10.	32.	45.	58.	1.57	92.	224.	316.
13	TAN	1	109	26.	10.	2.	45.	58.	32.	1.00	92.	142.	234.
			11	35.	10.	5.	34.	58.	313.	1.00	92.	571.	664.
14	TAN	1	11	45.	10.	5.	34.	58.	313.	1.00	92.	571.	664.
			110	38.	10.	10.	41.	58.	36.	1.57	92.	224.	316.
15	BEND	1	110	38.	10.	10.	41.	36.	58.	1.57	65.	172.	237.
			13	26.	11.	32.	63.	22.	70.	1.57	65.	209.	274.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	26.	11.	32.	63.	22.	70.	1.57	65.	209.	274.
			111	10.	12.	35.	75.	28.	58.	1.57	65.	213.	278.
17	TAN	1	111	10.	35.	12.	75.	58.	28.	1.00	92.	176.	268.
			15	10.	29.	16.	152.	58.	62.	1.57	92.	489.	581.
18	TAN	1	65	15.	168.	61.	459.	119.	37.	1.57	92.	1335.	1428.
			16	15.	166.	57.	201.	119.	50.	1.57	92.	671.	763.
19	TAN	1	16	15.	127.	30.	201.	119.	50.	1.57	65.	514.	579.
			18	15.	125.	26.	157.	119.	110.	1.57	65.	487.	552.
20	TAN	2	18	15.	125.	26.	157.	119.	110.	1.57	75.	1091.	1166.
			69	15.	123.	23.	78.	119.	198.	1.00	75.	746.	822.
21	TAN	2	69	15.	107.	28.	157.	119.	198.	1.00	75.	855.	930.
			19	15.	107.	28.	150.	119.	201.	1.57	75.	1342.	1417.
22	TAN	2	69	0.	12.	16.	82.	0.	0.	1.00	53.	1169.	1222.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	15.	107.	28.	150.	119.	201.	1.57	63.	599.	661.
			20	15.	104.	34.	59.	119.	300.	1.00	63.	448.	511.
24	TAN	2	20	124.	15.	177.	119.	59.	300.	1.00	63.	448.	511.
			21	128.	15.	182.	958.	59.	456.	1.57	63.	2290.	2352.
25	TAN	2	21	128.	15.	182.	958.	59.	456.	1.57	93.	971.	1064.
			22	129.	15.	186.	1400.	59.	765.	1.00	93.	926.	1019.
26	TAN	2	22	146.	15.	423.	1400.	59.	765.	1.00	93.	926.	1019.
			101	145.	15.	423.	1197.	59.	727.	1.57	93.	1280.	1373.
27	TEE	2	101	145.	15.	423.	1197.	59.	727.	1.57	67.	992.	1059.
			112	139.	15.	418.	242.	59.	549.	1.57	67.	273.	340.
28	TEE	2	102	20.	74.	128.	1328.	188.	112.	1.57	67.	953.	1020.
			112	20.	80.	133.	1626.	188.	74.	1.57	67.	744.	811.
29	TEE	2	100	28.	93.	281.	957.	60.	496.	1.57	67.	764.	831.
			112	28.	100.	285.	1568.	60.	508.	1.57	67.	742.	809.
30	TAN	2	100	28.	93.	281.	957.	60.	496.	1.57	93.	986.	1080.
			26	28.	86.	275.	165.	60.	476.	1.00	93.	294.	388.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	15.	86.	30.	165.	60.	476.	1.00	93.	294.	388.
			113	15.	71.	10.	139.	60.	282.	1.00	93.	186.	279.
32	TAN	2	113	15.	71.	10.	139.	60.	282.	1.00	93.	186.	279.
			114	15.	60.	28.	108.	60.	88.	1.00	93.	88.	181.
33	BEND	2	114	28.	15.	60.	88.	108.	60.	1.10	93.	97.	190.
			28	22.	15.	65.	42.	141.	79.	1.10	93.	107.	200.
34	BEND	2	28	22.	15.	65.	42.	141.	79.	1.10	93.	107.	200.
			115	53.	15.	42.	148.	63.	0.	1.10	93.	103.	196.
35	TAN	2	115	15.	42.	53.	63.	0.	148.	1.00	93.	93.	187.
			30	15.	46.	50.	178.	0.	192.	1.00	93.	152.	245.
36	TAN	2	30	7.	46.	33.	178.	0.	192.	1.00	93.	152.	245.
			104	7.	70.	8.	181.	0.	82.	1.00	93.	116.	209.
37	TAN	2	104	7.	70.	8.	181.	0.	82.	1.00	93.	116.	209.
			32	7.	87.	27.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	20.	74.	128.	1328.	188.	112.	1.00	63.	1842.	1905.
			116	20.	61.	120.	197.	188.	261.	1.00	63.	516.	579.
39	BEND	3	116	121.	11.	61.	251.	139.	188.	1.00	63.	470.	532.
			44	78.	10.	111.	260.	437.	31.	1.00	63.	696.	759.
40	BEND	3	44	78.	10.	111.	260.	437.	31.	1.00	63.	696.	759.
			117	48.	9.	112.	129.	516.	188.	1.00	63.	772.	834.
41	TAN	3	117	9.	112.	48.	516.	188.	129.	1.57	63.	1216.	1278.
			46	3.	89.	46.	384.	188.	26.	1.57	63.	922.	985.
42	TAN	4	46	4.	89.	46.	382.	192.	26.	1.57	261.	577.	839.
			47	3.	84.	54.	477.	192.	40.	1.00	261.	442.	703.
43	TAN	4	47	20.	204.	50.	511.	40.	62.	1.00	261.	442.	703.
			48	20.	208.	56.	260.	40.	46.	1.57	261.	360.	621.
44	TAN	4	48	20.	208.	56.	260.	40.	46.	1.57	404.	2616.	3020.
			66	20.	210.	61.	359.	40.	238.	1.57	404.	4240.	4644.
45	TEE	4	66	61.	210.	20.	238.	40.	359.	1.57	599.	932.	1531.
			118	62.	211.	20.	269.	40.	451.	1.57	599.	723.	1323.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	88.	249.	22.	244.	46.	886.	1.57	599.	1983.	2582.
			118	86.	248.	22.	211.	46.	755.	1.57	599.	1077.	1676.
47	TEE	4	68	100.	33.	2.	6.	58.	645.	1.57	599.	1395.	1995.
			118	103.	34.	2.	9.	58.	804.	1.57	599.	1107.	1706.
48	TAN	4	67	22.	249.	88.	886.	46.	244.	1.57	599.	1983.	2582.
			50	22.	253.	95.	1403.	46.	370.	1.57	599.	3127.	3727.
49	TAN	4	68	2.	36.	101.	645.	58.	8.	1.57	599.	1395.	1995.
			119	2.	28.	88.	281.	58.	5.	1.57	599.	618.	1218.
50	BEND	4	119	88.	2.	28.	5.	281.	58.	1.57	599.	618.	1218.
			52	65.	2.	76.	36.	360.	45.	1.57	599.	786.	1385.
51	BEND	4	52	65.	2.	76.	36.	360.	45.	1.57	599.	786.	1385.
			120	25.	2.	84.	55.	369.	8.	1.57	599.	804.	1404.
52	TAN	4	120	2.	84.	25.	369.	8.	55.	1.57	599.	804.	1404.
			121	2.	62.	12.	150.	8.	32.	1.00	599.	210.	809.
53	TAN	4	121	2.	62.	12.	150.	8.	32.	1.57	599.	331.	930.
			54	2.	40.	28.	138.	8.	9.	1.00	599.	189.	788.
54	TAN	4	54	0.	40.	30.	138.	8.	9.	1.00	599.	189.	788.
			122	0.	22.	17.	112.	8.	6.	1.00	599.	154.	754.
55	TAN	4	122	0.	22.	17.	112.	8.	6.	1.00	599.	154.	754.
			123	0.	4.	10.	230.	8.	2.	1.00	599.	314.	913.
56	BEND	4	123	10.	0.	4.	2.	230.	8.	1.00	599.	314.	913.
			56	8.	0.	14.	6.	227.	5.	1.00	599.	311.	910.
57	BEND	4	56	8.	0.	14.	6.	227.	5.	1.00	599.	311.	910.
			124	17.	0.	21.	6.	164.	0.	1.00	599.	225.	824.
58	TAN	4	124	0.	21.	17.	164.	0.	6.	1.00	599.	225.	824.
			125	0.	37.	40.	214.	0.	1.	1.00	599.	293.	892.
59	TAN	4	125	0.	37.	40.	214.	0.	1.	1.00	599.	293.	892.
			58	0.	53.	63.	891.	0.	3.	1.00	599.	1219.	1818.
60	TAN	4	58	0.	53.	86.	891.	0.	3.	1.00	599.	1219.	1818.
			126	0.	76.	54.	449.	0.	2.	1.00	599.	615.	1214.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	76.	54.	449.	0.	2.	1.00	599.	615.	1214.
			59	0.	98.	23.	1125.	0.	1.	1.00	599.	1539.	2138.
62	TAN	4	59	0.	98.	23.	1125.	0.	1.	1.57	261.	1517.	1779.
			127	0.	152.	56.	1072.	0.	1.	1.57	261.	1447.	1708.
63	TAN	4	127	0.	152.	56.	1072.	0.	1.	1.57	261.	1447.	1708.
			61	0.	206.	132.	790.	0.	0.	1.57	261.	1066.	1328.
64	TAN	4	61	0.	206.	132.	790.	0.	0.	1.00	599.	1082.	1681.
			62	0.	213.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1781.	1	1873.
2	24	2290.	24	2352.
3	38	1842.	38	1905.
4	44	4240.	44	4644.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	19.	-177.	102.	991.	-109.	54.
11	-19.	80.	10.	-116.	69.	626.
15	10.	-29.	-16.	152.	-58.	-62.
22	-30.	276.	609.	-117.	2799.	1530.
26	43.	172.	305.	330.	120.	952.
30	22.	84.	-93.	356.	384.	-0.
32	7.	27.	-87.	0.	0.	-0.
50	22.	253.	95.	1403.	46.	370.
54	2.	79.	58.	275.	16.	18.
58	0.	148.	-107.	1781.	6.	-0.
62	0.	142.	-213.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	12.	93.	154.	772.	55.	68.	1.00	92.	1386.	1478.
			63	12.	88.	161.	433.	55.	29.	1.57	92.	1229.	1321.
2	TEE	1	63	161.	88.	12.	29.	55.	433.	1.57	65.	943.	1008.
			105	163.	86.	12.	35.	55.	676.	1.57	65.	934.	999.
3	TEE	1	64	32.	33.	9.	75.	69.	388.	1.57	65.	865.	931.
			105	34.	34.	9.	88.	69.	437.	1.57	65.	628.	693.
4	TEE	1	65	43.	196.	8.	33.	119.	302.	1.57	65.	704.	769.
			105	45.	194.	8.	26.	119.	371.	1.57	65.	570.	635.
5	TAN	1	64	9.	33.	32.	388.	69.	75.	1.00	92.	716.	808.
			106	9.	21.	15.	58.	69.	87.	1.57	92.	351.	443.
6	BEND	1	106	9.	15.	21.	58.	87.	69.	1.57	65.	269.	334.
			4	9.	13.	20.	29.	86.	85.	1.57	65.	268.	333.
7	BEND	1	4	9.	13.	20.	29.	86.	85.	1.57	65.	268.	333.
			107	19.	11.	9.	49.	68.	72.	1.57	65.	239.	304.
8	TAN	1	107	11.	9.	19.	68.	72.	49.	1.00	92.	198.	290.
			108	7.	9.	15.	15.	72.	21.	1.00	92.	137.	229.
9	BEND	1	108	15.	7.	9.	21.	15.	72.	1.57	92.	216.	308.
			7	3.	2.	15.	37.	56.	64.	1.57	92.	262.	354.
10	BEND	1	7	3.	2.	15.	37.	56.	64.	1.57	92.	262.	354.
			8	9.	7.	9.	53.	41.	26.	1.57	92.	200.	292.
11	BEND	1	8	9.	7.	9.	53.	41.	26.	1.57	92.	200.	292.
			9	10.	11.	3.	17.	11.	25.	1.57	92.	90.	182.
12	BEND	1	9	10.	11.	3.	17.	11.	25.	1.57	92.	90.	182.
			109	2.	16.	9.	63.	40.	8.	1.57	92.	211.	303.
13	TAN	1	109	16.	9.	2.	40.	8.	63.	1.00	92.	134.	226.
			11	26.	9.	5.	26.	8.	249.	1.00	92.	448.	540.
14	TAN	1	11	37.	9.	5.	26.	8.	249.	1.00	92.	448.	540.
			110	30.	9.	10.	29.	8.	32.	1.57	92.	124.	216.
15	BEND	1	110	30.	10.	9.	29.	32.	8.	1.57	65.	95.	160.
			13	21.	11.	25.	37.	18.	25.	1.57	65.	105.	170.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	21.	11.	25.	37.	18.	25.	1.57	65.	105.	170.
			111	9.	12.	26.	25.	22.	45.	1.57	65.	122.	187.
17	TAN	1	111	9.	26.	12.	25.	45.	22.	1.00	92.	101.	193.
			15	9.	21.	16.	103.	45.	65.	1.57	92.	366.	458.
18	TAN	1	65	8.	194.	50.	302.	118.	29.	1.57	92.	916.	1008.
			16	8.	199.	47.	92.	118.	63.	1.57	92.	456.	548.
19	TAN	1	16	8.	160.	20.	92.	118.	63.	1.57	65.	350.	415.
			18	8.	165.	16.	89.	118.	94.	1.57	65.	378.	443.
20	TAN	2	18	8.	165.	16.	89.	118.	94.	1.57	75.	847.	922.
			69	8.	170.	13.	76.	118.	139.	1.00	75.	607.	683.
21	TAN	2	69	8.	154.	17.	146.	118.	139.	1.00	75.	717.	793.
			19	8.	154.	18.	142.	118.	141.	1.57	75.	1123.	1198.
22	TAN	2	69	0.	12.	16.	81.	0.	0.	1.00	53.	1153.	1207.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	8.	154.	18.	142.	118.	141.	1.57	63.	501.	564.
			20	8.	163.	24.	19.	118.	192.	1.00	63.	310.	373.
24	TAN	2	20	65.	8.	166.	118.	19.	192.	1.00	63.	310.	373.
			21	57.	8.	172.	897.	19.	175.	1.57	63.	1970.	2033.
25	TAN	2	21	57.	8.	172.	897.	19.	175.	1.57	93.	835.	928.
			22	52.	8.	176.	1314.	19.	306.	1.00	93.	783.	876.
26	TAN	2	22	85.	8.	396.	1314.	19.	306.	1.00	93.	783.	876.
			101	84.	8.	395.	1124.	19.	347.	1.57	93.	1075.	1168.
27	TEE	2	101	84.	8.	395.	1124.	19.	347.	1.57	67.	833.	900.
			112	78.	8.	391.	241.	19.	532.	1.57	67.	263.	330.
28	TEE	2	102	19.	71.	122.	1196.	196.	77.	1.57	67.	860.	927.
			112	19.	77.	126.	1479.	196.	37.	1.57	67.	679.	746.
29	TEE	2	100	22.	36.	261.	974.	65.	503.	1.57	67.	777.	844.
			112	22.	42.	265.	1460.	65.	529.	1.57	67.	699.	766.
30	TAN	2	100	22.	36.	261.	974.	65.	503.	1.57	93.	1003.	1096.
			26	22.	28.	256.	200.	65.	461.	1.00	93.	294.	387.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	28.	32.	200.	65.	461.	1.00	93.	294.	387.
			113	14.	40.	13.	141.	65.	273.	1.00	93.	182.	275.
32	TAN	2	113	14.	40.	13.	141.	65.	273.	1.00	93.	182.	275.
			114	14.	67.	31.	140.	65.	85.	1.00	93.	102.	195.
33	BEND	2	114	31.	14.	67.	85.	140.	65.	1.10	93.	112.	205.
			28	35.	14.	81.	46.	154.	81.	1.10	93.	115.	208.
34	BEND	2	28	35.	14.	81.	46.	154.	81.	1.10	93.	115.	208.
			115	87.	14.	45.	150.	159.	0.	1.10	93.	140.	233.
35	TAN	2	115	14.	45.	87.	159.	0.	150.	1.00	93.	127.	220.
			30	14.	49.	93.	394.	0.	193.	1.00	93.	255.	348.
36	TAN	2	30	7.	49.	43.	394.	0.	193.	1.00	93.	255.	348.
			104	7.	72.	10.	66.	0.	83.	1.00	93.	61.	155.
37	TAN	2	104	7.	72.	10.	66.	0.	83.	1.00	93.	61.	155.
			32	7.	90.	18.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	19.	71.	122.	1196.	196.	77.	1.00	63.	1662.	1725.
			116	19.	58.	113.	126.	196.	238.	1.00	63.	456.	519.
39	BEND	3	116	114.	12.	58.	263.	61.	196.	1.00	63.	456.	519.
			44	70.	11.	114.	276.	399.	27.	1.00	63.	665.	728.
40	BEND	3	44	70.	11.	114.	276.	399.	27.	1.00	63.	665.	728.
			117	45.	10.	105.	133.	532.	196.	1.00	63.	797.	860.
41	TAN	3	117	10.	105.	45.	532.	196.	133.	1.57	63.	1256.	1318.
			46	4.	82.	49.	325.	196.	28.	1.57	63.	820.	882.
42	TAN	4	46	4.	82.	49.	323.	199.	28.	1.57	261.	513.	774.
			47	3.	77.	57.	503.	199.	45.	1.00	261.	465.	726.
43	TAN	4	47	19.	171.	43.	538.	45.	62.	1.00	261.	465.	727.
			48	19.	162.	49.	298.	45.	39.	1.57	261.	410.	672.
44	TAN	4	48	19.	162.	49.	298.	45.	39.	1.57	404.	2984.	3388.
			66	19.	156.	54.	334.	45.	218.	1.57	404.	3937.	4341.
45	TEE	4	66	54.	156.	19.	218.	45.	334.	1.57	599.	865.	1464.
			118	56.	153.	19.	247.	45.	416.	1.57	599.	669.	1268.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	95.	47.	21.	225.	51.	920.	1.57	599.	2043.	2643.
			118	93.	49.	21.	193.	51.	778.	1.57	599.	1103.	1702.
47	TEE	4	68	100.	33.	2.	6.	54.	634.	1.57	599.	1371.	1970.
			118	103.	35.	2.	9.	54.	792.	1.57	599.	1090.	1690.
48	TAN	4	67	21.	47.	95.	920.	51.	225.	1.57	599.	2043.	2643.
			50	21.	37.	102.	1476.	51.	342.	1.57	599.	3267.	3866.
49	TAN	4	68	2.	37.	101.	634.	54.	8.	1.57	599.	1371.	1970.
			119	2.	28.	88.	290.	54.	6.	1.57	599.	636.	1235.
50	BEND	4	119	88.	2.	28.	6.	290.	54.	1.57	599.	636.	1235.
			52	64.	2.	76.	33.	369.	42.	1.57	599.	803.	1402.
51	BEND	4	52	64.	2.	76.	33.	369.	42.	1.57	599.	803.	1402.
			120	25.	2.	84.	51.	377.	8.	1.57	599.	821.	1420.
52	TAN	4	120	2.	84.	25.	377.	8.	51.	1.57	599.	821.	1420.
			121	2.	62.	13.	155.	8.	29.	1.00	599.	217.	816.
53	TAN	4	121	2.	62.	13.	155.	8.	29.	1.57	599.	341.	940.
			54	2.	39.	28.	140.	8.	10.	1.00	599.	192.	791.
54	TAN	4	54	0.	39.	30.	140.	8.	10.	1.00	599.	192.	791.
			122	0.	21.	18.	113.	8.	6.	1.00	599.	155.	754.
55	TAN	4	122	0.	21.	18.	113.	8.	6.	1.00	599.	155.	754.
			123	0.	3.	10.	233.	8.	2.	1.00	599.	318.	918.
56	BEND	4	123	10.	0.	3.	2.	233.	8.	1.00	599.	318.	918.
			56	8.	0.	15.	6.	231.	5.	1.00	599.	316.	915.
57	BEND	4	56	8.	0.	15.	6.	231.	5.	1.00	599.	316.	915.
			124	18.	0.	22.	6.	167.	0.	1.00	599.	229.	828.
58	TAN	4	124	0.	22.	18.	167.	0.	6.	1.00	599.	229.	828.
			125	0.	38.	40.	214.	0.	1.	1.00	599.	293.	892.
59	TAN	4	125	0.	38.	40.	214.	0.	1.	1.00	599.	293.	892.
			58	0.	54.	63.	894.	0.	3.	1.00	599.	1223.	1822.
60	TAN	4	58	0.	54.	86.	894.	0.	3.	1.00	599.	1223.	1822.
			126	0.	76.	54.	447.	0.	2.	1.00	599.	612.	1211.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	76.	54.	447.	0.	2.	1.00	599.	612.	1211.
			59	0.	98.	23.	1124.	0.	1.	1.00	599.	1538.	2137.
62	TAN	4	59	0.	98.	23.	1124.	0.	1.	1.57	261.	1516.	1778.
			127	0.	152.	56.	1072.	0.	1.	1.57	261.	1446.	1707.
63	TAN	4	127	0.	152.	56.	1072.	0.	1.	1.57	261.	1446.	1707.
			61	0.	206.	132.	790.	0.	0.	1.57	261.	1066.	1327.
64	TAN	4	61	0.	206.	132.	790.	0.	0.	1.00	599.	1081.	1680.
			62	0.	213.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1386.	1	1478.
2	24	1970.	24	2033.
3	38	1662.	38	1725.
4	44	3937.	44	4341.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	12.	-154.	93.	772.	-68.	55.
11	-18.	62.	10.	-16.	52.	499.
15	9.	-21.	-16.	103.	-45.	-65.
22	-16.	138.	572.	-38.	2629.	612.
26	36.	56.	288.	400.	129.	922.
30	21.	136.	-98.	789.	386.	-0.
32	7.	18.	-90.	0.	0.	-0.
50	21.	37.	102.	1476.	51.	342.
54	2.	79.	59.	280.	16.	19.
58	0.	149.	-107.	1788.	7.	-0.
62	0.	142.	-213.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	17.	29.	212.	1208.	109.	166.	1.00	92.	2183.	2275.
			63	12.	29.	209.	280.	109.	62.	1.57	92.	862.	955.
2	TEE	1	63	209.	29.	12.	62.	109.	280.	1.57	65.	662.	727.
			105	208.	29.	13.	77.	109.	593.	1.57	65.	851.	916.
3	TEE	1	64	22.	3.	16.	112.	52.	179.	1.57	65.	468.	533.
			105	24.	3.	18.	137.	52.	179.	1.57	65.	328.	393.
4	TEE	1	65	19.	208.	32.	92.	55.	384.	1.57	65.	859.	924.
			105	19.	209.	31.	135.	55.	414.	1.57	65.	607.	672.
5	TAN	1	64	16.	3.	22.	179.	52.	112.	1.00	92.	387.	479.
			106	4.	3.	7.	133.	52.	79.	1.57	92.	458.	550.
6	BEND	1	106	4.	7.	3.	133.	79.	52.	1.57	65.	351.	416.
			4	2.	8.	4.	87.	79.	108.	1.57	65.	344.	409.
7	BEND	1	4	2.	8.	4.	87.	79.	108.	1.57	65.	344.	409.
			107	3.	8.	2.	48.	76.	132.	1.57	65.	344.	409.
8	TAN	1	107	8.	2.	3.	76.	132.	48.	1.00	92.	284.	376.
			108	10.	4.	3.	65.	132.	51.	1.00	92.	277.	370.
9	BEND	1	108	3.	10.	4.	51.	65.	132.	1.57	92.	437.	529.
			7	7.	12.	3.	23.	43.	138.	1.57	92.	411.	503.
10	BEND	1	7	7.	12.	3.	23.	43.	138.	1.57	92.	411.	503.
			8	11.	16.	3.	53.	3.	105.	1.57	92.	330.	422.
11	BEND	1	8	11.	16.	3.	53.	3.	105.	1.57	92.	330.	422.
			9	8.	21.	12.	36.	47.	77.	1.57	92.	274.	366.
12	BEND	1	9	8.	21.	12.	36.	47.	77.	1.57	92.	274.	366.
			109	3.	26.	17.	30.	62.	66.	1.57	92.	269.	361.
13	TAN	1	109	26.	17.	3.	62.	66.	30.	1.00	92.	171.	263.
			11	35.	24.	3.	38.	66.	324.	1.00	92.	593.	685.
14	TAN	1	11	51.	24.	3.	38.	66.	324.	1.00	92.	593.	685.
			110	44.	29.	3.	20.	66.	68.	1.57	92.	271.	364.
15	BEND	1	110	44.	3.	29.	20.	68.	66.	1.57	65.	208.	273.
			13	36.	3.	51.	36.	51.	59.	1.57	65.	185.	250.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	36.	3.	51.	36.	51.	59.	1.57	65.	185.	250.
			111	31.	3.	40.	70.	36.	16.	1.57	65.	173.	238.
17	TAN	1	111	31.	40.	3.	70.	16.	36.	1.00	92.	143.	236.
			15	35.	35.	3.	84.	16.	188.	1.57	92.	579.	671.
18	TAN	1	65	32.	207.	27.	384.	58.	90.	1.57	92.	1120.	1212.
			16	36.	205.	27.	259.	58.	84.	1.57	92.	784.	876.
19	TAN	1	16	19.	166.	27.	259.	58.	84.	1.57	65.	601.	666.
			18	15.	164.	27.	152.	58.	124.	1.57	65.	440.	506.
20	TAN	2	18	15.	164.	27.	152.	58.	124.	1.57	75.	987.	1062.
			69	15.	162.	27.	14.	58.	201.	1.00	75.	642.	718.
21	TAN	2	69	23.	146.	27.	93.	32.	201.	1.00	75.	686.	761.
			19	23.	146.	27.	90.	32.	202.	1.57	75.	1078.	1154.
22	TAN	2	69	11.	0.	16.	82.	0.	57.	1.00	53.	1424.	1478.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	23.	146.	27.	90.	32.	202.	1.57	63.	481.	544.
			20	17.	142.	27.	111.	32.	287.	1.00	63.	423.	486.
24	TAN	2	20	163.	160.	27.	32.	111.	287.	1.00	63.	423.	486.
			21	166.	154.	27.	130.	111.	743.	1.57	63.	1644.	1706.
25	TAN	2	21	166.	154.	27.	130.	111.	743.	1.57	93.	697.	790.
			22	168.	150.	27.	194.	111.	1145.	1.00	93.	677.	770.
26	TAN	2	22	169.	150.	83.	194.	111.	1145.	1.00	93.	677.	770.
			101	168.	150.	83.	184.	111.	1118.	1.57	93.	1040.	1133.
27	TEE	2	101	168.	150.	83.	184.	111.	1118.	1.57	67.	806.	873.
			112	162.	145.	83.	141.	111.	993.	1.57	67.	458.	525.
28	TEE	2	102	18.	48.	20.	191.	234.	391.	1.57	67.	350.	417.
			112	22.	54.	20.	210.	234.	355.	1.57	67.	249.	316.
29	TEE	2	100	119.	101.	63.	108.	98.	415.	1.57	67.	311.	378.
			112	123.	108.	63.	215.	98.	638.	1.57	67.	310.	378.
30	TAN	2	100	119.	101.	63.	108.	98.	415.	1.57	93.	401.	495.
			26	113.	94.	63.	181.	98.	845.	1.00	93.	504.	598.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	26.	94.	12.	181.	98.	845.	1.00	93.	504.	598.
			113	22.	78.	12.	81.	98.	686.	1.00	93.	405.	498.
32	TAN	2	113	22.	78.	12.	81.	98.	686.	1.00	93.	405.	498.
			114	41.	68.	12.	199.	98.	275.	1.00	93.	205.	298.
33	BEND	2	114	12.	41.	68.	275.	199.	98.	1.10	93.	225.	318.
			28	37.	48.	54.	75.	135.	56.	1.10	93.	105.	198.
34	BEND	2	28	37.	48.	54.	75.	135.	56.	1.10	93.	105.	198.
			115	60.	54.	12.	209.	113.	0.	1.10	93.	152.	245.
35	TAN	2	115	54.	12.	60.	113.	0.	209.	1.00	93.	138.	231.
			30	59.	12.	58.	286.	0.	379.	1.00	93.	275.	369.
36	TAN	2	30	34.	12.	37.	286.	0.	379.	1.00	93.	275.	369.
			104	11.	12.	12.	228.	0.	89.	1.00	93.	142.	235.
37	TAN	2	104	11.	12.	12.	228.	0.	89.	1.00	93.	142.	235.
			32	16.	12.	31.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	18.	48.	20.	191.	234.	391.	1.00	63.	676.	739.
			116	9.	35.	20.	247.	234.	473.	1.00	63.	797.	860.
39	BEND	3	116	18.	10.	35.	469.	132.	234.	1.00	63.	740.	803.
			44	27.	6.	24.	523.	98.	186.	1.00	63.	772.	834.
40	BEND	3	44	27.	6.	24.	523.	98.	186.	1.00	63.	772.	834.
			117	22.	1.	21.	259.	121.	508.	1.00	63.	797.	860.
41	TAN	3	117	1.	21.	22.	121.	508.	259.	1.57	63.	1256.	1319.
			46	22.	27.	20.	147.	508.	9.	1.57	63.	1140.	1203.
42	TAN	4	46	22.	27.	20.	152.	508.	9.	1.57	261.	716.	977.
			47	27.	28.	28.	131.	508.	109.	1.00	261.	459.	720.
43	TAN	4	47	88.	178.	20.	97.	109.	505.	1.00	261.	450.	712.
			48	82.	182.	20.	55.	109.	73.	1.57	261.	192.	454.
44	TAN	4	48	82.	182.	20.	55.	109.	73.	1.57	404.	1399.	1803.
			66	77.	184.	20.	246.	109.	689.	1.57	404.	7253.	7657.
45	TEE	4	66	20.	184.	77.	689.	109.	246.	1.57	599.	1594.	2193.
			118	20.	185.	76.	804.	109.	276.	1.57	599.	1186.	1786.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	17.	227.	64.	697.	10.	700.	1.57	599.	2129.	2728.
			118	17.	226.	65.	600.	10.	674.	1.57	599.	1235.	1834.
47	TEE	4	68	100.	8.	9.	91.	200.	552.	1.57	599.	1280.	1879.
			118	103.	8.	11.	106.	200.	710.	1.57	599.	1073.	1672.
48	TAN	4	67	64.	227.	17.	700.	10.	697.	1.57	599.	2129.	2728.
			50	57.	230.	17.	798.	10.	1037.	1.57	599.	2820.	3419.
49	TAN	4	68	9.	11.	100.	552.	203.	83.	1.57	599.	1280.	1879.
			119	1.	11.	87.	197.	203.	51.	1.57	599.	620.	1219.
50	BEND	4	119	87.	1.	11.	51.	197.	203.	1.57	599.	620.	1219.
			52	53.	2.	67.	106.	285.	180.	1.57	599.	761.	1360.
51	BEND	4	52	53.	2.	67.	106.	285.	180.	1.57	599.	761.	1360.
			120	11.	4.	83.	199.	310.	54.	1.57	599.	802.	1401.
52	TAN	4	120	4.	83.	11.	310.	54.	199.	1.57	599.	802.	1401.
			121	19.	61.	11.	160.	54.	50.	1.00	599.	241.	840.
53	TAN	4	121	19.	61.	11.	160.	54.	50.	1.57	599.	380.	979.
			54	35.	38.	11.	11.	54.	307.	1.00	599.	426.	1025.
54	TAN	4	54	28.	38.	9.	11.	54.	307.	1.00	599.	426.	1025.
			122	15.	20.	9.	78.	54.	82.	1.00	599.	171.	771.
55	TAN	4	122	15.	20.	9.	78.	54.	82.	1.00	599.	171.	771.
			123	2.	2.	9.	168.	54.	11.	1.00	599.	242.	841.
56	BEND	4	123	9.	2.	2.	11.	168.	54.	1.00	599.	242.	841.
			56	0.	3.	12.	43.	195.	30.	1.00	599.	276.	875.
57	BEND	4	56	0.	3.	12.	43.	195.	30.	1.00	599.	276.	875.
			124	16.	9.	9.	24.	157.	0.	1.00	599.	218.	817.
58	TAN	4	124	9.	9.	16.	157.	0.	24.	1.00	599.	218.	817.
			125	25.	9.	39.	205.	0.	200.	1.00	599.	392.	991.
59	TAN	4	125	25.	9.	39.	205.	0.	200.	1.00	599.	392.	991.
			58	41.	9.	61.	865.	0.	634.	1.00	599.	1467.	2067.
60	TAN	4	58	61.	9.	85.	865.	0.	634.	1.00	599.	1467.	2067.
			126	38.	9.	54.	433.	0.	277.	1.00	599.	703.	1303.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	38.	9.	54.	433.	0.	277.	1.00	599.	703.	1303.
			59	16.	9.	22.	1118.	0.	778.	1.00	599.	1864.	2463.
62	TAN	4	59	16.	9.	22.	1118.	0.	778.	1.57	261.	1838.	2099.
			127	38.	9.	55.	1068.	0.	745.	1.57	261.	1757.	2018.
63	TAN	4	127	38.	9.	55.	1068.	0.	745.	1.57	261.	1757.	2018.
			61	92.	9.	132.	787.	0.	550.	1.57	261.	1296.	1557.
64	TAN	4	61	92.	9.	132.	787.	0.	550.	1.00	599.	1314.	1913.
			62	99.	9.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2183.	1	2275.
2	24	1644.	24	1706.
3	41	1256.	41	1319.
4	44	7253.	44	7657.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	17.	-212.	29.	1208.	-166.	109.
11	-48.	86.	6.	-132.	76.	647.
15	35.	-35.	-3.	84.	-16.	-188.
22	-301.	338.	110.	-222.	389.	2290.
26	139.	187.	75.	361.	195.	1690.
30	93.	95.	-24.	572.	758.	-0.
32	16.	31.	-12.	0.	0.	-0.
50	57.	230.	17.	798.	10.	1037.
54	63.	77.	20.	22.	107.	613.
58	101.	146.	-17.	1730.	1268.	-0.
62	99.	142.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	11.	20.	189.	988.	109.	124.	1.00	92.	1787.	1880.
			63	6.	20.	196.	372.	109.	66.	1.57	92.	1104.	1196.
2	TEE	1	63	196.	20.	6.	66.	109.	372.	1.57	65.	847.	912.
			105	198.	20.	7.	62.	109.	667.	1.57	65.	946.	1011.
3	TEE	1	64	32.	3.	15.	97.	80.	378.	1.57	65.	858.	923.
			105	34.	3.	17.	121.	80.	427.	1.57	65.	631.	696.
4	TEE	1	65	8.	234.	25.	83.	56.	228.	1.57	65.	536.	601.
			105	8.	232.	24.	102.	56.	240.	1.57	65.	377.	442.
5	TAN	1	64	15.	3.	32.	378.	80.	97.	1.00	92.	710.	802.
			106	4.	3.	15.	49.	80.	76.	1.57	92.	339.	431.
6	BEND	1	106	4.	15.	3.	49.	76.	80.	1.57	65.	260.	325.
			4	1.	13.	3.	31.	77.	73.	1.57	65.	238.	303.
7	BEND	1	4	1.	13.	3.	31.	77.	73.	1.57	65.	238.	303.
			107	3.	11.	1.	60.	74.	63.	1.57	65.	246.	311.
8	TAN	1	107	11.	1.	3.	74.	63.	60.	1.00	92.	204.	296.
			108	7.	3.	3.	60.	63.	20.	1.00	92.	160.	252.
9	BEND	1	108	3.	7.	3.	20.	60.	63.	1.57	92.	252.	344.
			7	7.	2.	3.	39.	38.	50.	1.57	92.	207.	300.
10	BEND	1	7	7.	2.	3.	39.	38.	50.	1.57	92.	207.	300.
			8	10.	7.	3.	44.	2.	14.	1.57	92.	130.	222.
11	BEND	1	8	10.	7.	3.	44.	2.	14.	1.57	92.	130.	222.
			9	7.	11.	11.	8.	46.	23.	1.57	92.	145.	237.
12	BEND	1	9	7.	11.	11.	8.	46.	23.	1.57	92.	145.	237.
			109	3.	16.	16.	61.	58.	16.	1.57	92.	241.	333.
13	TAN	1	109	16.	16.	3.	58.	16.	61.	1.00	92.	153.	245.
			11	25.	23.	3.	29.	16.	260.	1.00	92.	468.	560.
14	TAN	1	11	43.	23.	3.	29.	16.	260.	1.00	92.	468.	560.
			110	35.	28.	3.	8.	16.	64.	1.57	92.	185.	278.
15	BEND	1	110	35.	3.	28.	8.	64.	16.	1.57	65.	142.	207.
			13	31.	3.	44.	10.	47.	14.	1.57	65.	107.	172.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	31.	3.	44.	10.	47.	14.	1.57	65.	107.	172.
			111	31.	3.	32.	20.	30.	3.	1.57	65.	78.	144.
17	TAN	1	111	31.	32.	3.	20.	3.	30.	1.00	92.	65.	157.
			15	35.	27.	3.	35.	3.	191.	1.57	92.	544.	637.
18	TAN	1	65	25.	233.	17.	228.	57.	82.	1.57	92.	699.	791.
			16	28.	238.	17.	150.	57.	97.	1.57	92.	528.	620.
19	TAN	1	16	12.	199.	17.	150.	57.	97.	1.57	65.	405.	470.
			18	8.	204.	17.	83.	57.	108.	1.57	65.	318.	384.
20	TAN	2	18	8.	204.	17.	83.	57.	108.	1.57	75.	714.	789.
			69	8.	209.	17.	13.	57.	142.	1.00	75.	472.	548.
21	TAN	2	69	16.	193.	17.	83.	31.	142.	1.00	75.	514.	589.
			19	16.	193.	17.	82.	31.	142.	1.57	75.	805.	880.
22	TAN	2	69	11.	0.	16.	81.	0.	57.	1.00	53.	1412.	1465.
			70	11.	0.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	16.	193.	17.	82.	31.	142.	1.57	63.	359.	422.
			20	10.	202.	17.	71.	31.	179.	1.00	63.	267.	330.
24	TAN	2	20	104.	152.	17.	31.	71.	179.	1.00	63.	267.	330.
			21	96.	147.	17.	69.	71.	462.	1.57	63.	1018.	1081.
25	TAN	2	21	96.	147.	17.	69.	71.	462.	1.57	93.	432.	525.
			22	91.	143.	17.	109.	71.	687.	1.00	93.	405.	498.
26	TAN	2	22	109.	143.	56.	109.	71.	687.	1.00	93.	405.	498.
			101	108.	142.	56.	112.	71.	738.	1.57	93.	685.	779.
27	TEE	2	101	108.	142.	56.	112.	71.	738.	1.57	67.	531.	598.
			112	101.	138.	56.	139.	71.	976.	1.57	67.	446.	513.
28	TEE	2	102	16.	45.	14.	59.	242.	356.	1.57	67.	308.	375.
			112	21.	51.	14.	63.	242.	317.	1.57	67.	225.	292.
29	TEE	2	100	113.	44.	43.	124.	102.	422.	1.57	67.	320.	387.
			112	117.	50.	43.	107.	102.	659.	1.57	67.	309.	376.
30	TAN	2	100	113.	44.	43.	124.	102.	422.	1.57	93.	412.	506.
			26	107.	36.	43.	215.	102.	830.	1.00	93.	501.	594.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	25.	36.	14.	215.	102.	830.	1.00	93.	501.	594.
			113	21.	48.	14.	83.	102.	678.	1.00	93.	400.	494.
32	TAN	2	113	21.	48.	14.	83.	102.	678.	1.00	93.	400.	494.
			114	40.	75.	14.	230.	102.	272.	1.00	93.	215.	308.
33	BEND	2	114	14.	40.	75.	272.	230.	102.	1.10	93.	236.	330.
			28	50.	47.	70.	78.	148.	58.	1.10	93.	113.	206.
34	BEND	2	28	50.	47.	70.	78.	148.	58.	1.10	93.	113.	206.
			115	95.	54.	14.	211.	209.	0.	1.10	93.	190.	283.
35	TAN	2	115	54.	14.	95.	209.	0.	211.	1.00	93.	172.	266.
			30	58.	14.	101.	503.	0.	380.	1.00	93.	365.	459.
36	TAN	2	30	34.	14.	47.	503.	0.	380.	1.00	93.	365.	459.
			104	11.	14.	14.	113.	0.	90.	1.00	93.	84.	177.
37	TAN	2	104	11.	14.	14.	113.	0.	90.	1.00	93.	84.	177.
			32	16.	14.	22.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	16.	45.	14.	59.	242.	356.	1.00	63.	595.	657.
			116	7.	32.	14.	176.	242.	451.	1.00	63.	740.	803.
39	BEND	3	116	11.	11.	32.	481.	54.	242.	1.00	63.	740.	803.
			44	20.	6.	27.	540.	61.	182.	1.00	63.	784.	847.
40	BEND	3	44	20.	6.	27.	540.	61.	182.	1.00	63.	784.	847.
			117	19.	2.	14.	263.	137.	516.	1.00	63.	815.	877.
41	TAN	3	117	2.	14.	19.	137.	516.	263.	1.57	63.	1283.	1346.
			46	22.	20.	23.	88.	516.	11.	1.57	63.	1129.	1191.
42	TAN	4	46	22.	20.	23.	93.	515.	11.	1.57	261.	707.	968.
			47	27.	21.	31.	157.	515.	114.	1.00	261.	472.	733.
43	TAN	4	47	87.	145.	14.	124.	114.	505.	1.00	261.	456.	717.
			48	80.	136.	14.	94.	114.	66.	1.57	261.	218.	480.
44	TAN	4	48	80.	136.	14.	94.	114.	66.	1.57	404.	1588.	1992.
			66	76.	129.	14.	221.	114.	669.	1.57	404.	7000.	7404.
45	TEE	4	66	14.	129.	76.	669.	114.	221.	1.57	599.	1538.	2138.
			118	14.	127.	74.	782.	114.	241.	1.57	599.	1146.	1745.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	25.	24.	62.	677.	16.	734.	1.57	599.	2152.	2751.
			118	25.	27.	64.	583.	16.	697.	1.57	599.	1244.	1843.
47	TEE	4	68	100.	8.	9.	90.	195.	541.	1.57	599.	1255.	1854.
			118	103.	8.	11.	105.	195.	699.	1.57	599.	1055.	1654.
48	TAN	4	67	62.	24.	25.	734.	16.	677.	1.57	599.	2152.	2751.
			50	55.	15.	25.	872.	16.	1008.	1.57	599.	2873.	3472.
49	TAN	4	68	9.	12.	100.	541.	199.	83.	1.57	599.	1255.	1854.
			119	0.	12.	87.	206.	199.	52.	1.57	599.	627.	1227.
50	BEND	4	119	87.	0.	12.	52.	206.	199.	1.57	599.	627.	1227.
			52	53.	2.	67.	104.	293.	176.	1.57	599.	771.	1370.
51	BEND	4	52	53.	2.	67.	104.	293.	176.	1.57	599.	771.	1370.
			120	12.	3.	83.	195.	318.	54.	1.57	599.	812.	1411.
52	TAN	4	120	3.	83.	12.	318.	54.	195.	1.57	599.	812.	1411.
			121	19.	60.	12.	165.	54.	47.	1.00	599.	247.	846.
53	TAN	4	121	19.	60.	12.	165.	54.	47.	1.57	599.	388.	988.
			54	35.	38.	12.	13.	54.	307.	1.00	599.	427.	1026.
54	TAN	4	54	28.	38.	9.	13.	54.	307.	1.00	599.	427.	1026.
			122	15.	20.	9.	79.	54.	82.	1.00	599.	172.	771.
55	TAN	4	122	15.	20.	9.	79.	54.	82.	1.00	599.	172.	771.
			123	2.	2.	9.	171.	54.	11.	1.00	599.	246.	845.
56	BEND	4	123	9.	2.	2.	11.	171.	54.	1.00	599.	246.	845.
			56	0.	3.	12.	43.	198.	30.	1.00	599.	280.	880.
57	BEND	4	56	0.	3.	12.	43.	198.	30.	1.00	599.	280.	880.
			124	16.	9.	9.	24.	160.	0.	1.00	599.	222.	821.
58	TAN	4	124	9.	9.	16.	160.	0.	24.	1.00	599.	222.	821.
			125	25.	9.	39.	205.	0.	200.	1.00	599.	392.	991.
59	TAN	4	125	25.	9.	39.	205.	0.	200.	1.00	599.	392.	991.
			58	41.	9.	62.	868.	0.	635.	1.00	599.	1471.	2071.
60	TAN	4	58	61.	9.	85.	868.	0.	635.	1.00	599.	1471.	2071.
			126	38.	9.	54.	431.	0.	277.	1.00	599.	701.	1301.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	38.	9.	54.	431.	0.	277.	1.00	599.	701.	1301.
			59	16.	9.	22.	1118.	0.	778.	1.00	599.	1863.	2462.
62	TAN	4	59	16.	9.	22.	1118.	0.	778.	1.57	261.	1837.	2098.
			127	38.	9.	55.	1067.	0.	745.	1.57	261.	1756.	2017.
63	TAN	4	127	38.	9.	55.	1067.	0.	745.	1.57	261.	1756.	2017.
			61	92.	9.	132.	787.	0.	550.	1.57	261.	1295.	1557.
64	TAN	4	61	92.	9.	132.	787.	0.	550.	1.00	599.	1314.	1913.
			62	99.	9.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1787.	1	1880.
2	22	1412.	22	1465.
3	41	1283.	41	1346.
4	44	7000.	44	7404.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	11.	-189.	20.	988.	-124.	109.
11	-46.	68.	6.	-32.	59.	520.
15	35.	-27.	-3.	35.	-3.	-191.
22	-286.	200.	72.	-143.	218.	1373.
26	133.	72.	57.	431.	205.	1660.
30	92.	148.	-29.	1005.	760.	-0.
32	16.	22.	-14.	0.	0.	-0.
50	55.	15.	25.	872.	16.	1008.
54	63.	76.	20.	26.	108.	614.
58	101.	147.	-18.	1736.	1269.	-0.
62	99.	142.	-9.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	17.	27.	178.	992.	47.	208.	1.00	92.	1810.	1902.
			63	17.	22.	175.	349.	47.	92.	1.57	92.	1022.	1114.
2	TEE	1	63	175.	22.	17.	92.	47.	349.	1.57	65.	784.	849.
			105	174.	21.	17.	100.	47.	611.	1.57	65.	853.	918.
3	TEE	1	64	23.	34.	6.	59.	46.	201.	1.57	65.	463.	528.
			105	25.	35.	6.	54.	46.	203.	1.57	65.	304.	369.
4	TEE	1	65	47.	170.	14.	47.	118.	493.	1.57	65.	1098.	1163.
			105	46.	171.	14.	62.	118.	566.	1.57	65.	820.	885.
5	TAN	1	64	6.	34.	23.	201.	46.	59.	1.00	92.	383.	475.
			106	6.	22.	8.	138.	46.	117.	1.57	92.	524.	616.
6	BEND	1	106	6.	8.	22.	138.	117.	46.	1.57	65.	402.	467.
			4	12.	9.	19.	85.	111.	113.	1.57	65.	388.	453.
7	BEND	1	4	12.	9.	19.	85.	111.	113.	1.57	65.	388.	453.
			107	19.	9.	6.	40.	92.	135.	1.57	65.	363.	428.
8	TAN	1	107	9.	6.	19.	92.	135.	40.	1.00	92.	300.	392.
			108	11.	6.	16.	16.	135.	53.	1.00	92.	261.	353.
9	BEND	1	108	16.	11.	6.	53.	16.	135.	1.57	92.	411.	503.
			7	6.	13.	13.	25.	51.	150.	1.57	92.	451.	544.
10	BEND	1	7	6.	13.	13.	25.	51.	150.	1.57	92.	451.	544.
			8	6.	18.	10.	53.	46.	122.	1.57	92.	397.	489.
11	BEND	1	8	6.	18.	10.	53.	46.	122.	1.57	92.	397.	489.
			9	9.	22.	2.	38.	16.	93.	1.57	92.	287.	379.
12	BEND	1	9	9.	22.	2.	38.	16.	93.	1.57	92.	287.	379.
			109	3.	27.	6.	32.	23.	75.	1.57	92.	238.	330.
13	TAN	1	109	27.	6.	3.	23.	75.	32.	1.00	92.	151.	243.
			11	36.	6.	4.	19.	75.	322.	1.00	92.	590.	682.
14	TAN	1	11	43.	6.	4.	19.	75.	322.	1.00	92.	590.	682.
			110	36.	6.	9.	53.	75.	35.	1.57	92.	275.	367.
15	BEND	1	110	36.	9.	6.	53.	35.	75.	1.57	65.	211.	276.
			13	27.	11.	26.	55.	17.	94.	1.57	65.	237.	303.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	27.	11.	26.	55.	17.	94.	1.57	65.	237.	303.
			111	6.	12.	33.	58.	26.	69.	1.57	65.	201.	266.
17	TAN	1	111	6.	33.	12.	58.	69.	26.	1.00	92.	166.	258.
			15	6.	27.	16.	125.	69.	47.	1.57	92.	422.	514.
18	TAN	1	65	14.	168.	54.	493.	118.	50.	1.57	92.	1432.	1524.
			16	14.	166.	57.	236.	118.	58.	1.57	92.	759.	851.
19	TAN	1	16	14.	127.	30.	236.	118.	58.	1.57	65.	582.	647.
			18	14.	125.	33.	121.	118.	111.	1.57	65.	435.	500.
20	TAN	2	18	14.	125.	33.	121.	118.	111.	1.57	75.	976.	1051.
			69	14.	123.	36.	102.	118.	187.	1.00	75.	747.	822.
21	TAN	2	69	14.	107.	25.	181.	118.	187.	1.00	75.	876.	951.
			19	14.	107.	25.	177.	118.	190.	1.57	75.	1380.	1455.
22	TAN	2	69	0.	11.	16.	82.	0.	0.	1.00	53.	1169.	1222.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	14.	107.	25.	177.	118.	190.	1.57	63.	616.	678.
			20	14.	104.	31.	207.	118.	277.	1.00	63.	500.	562.
24	TAN	2	20	124.	14.	150.	118.	207.	277.	1.00	63.	500.	562.
			21	128.	14.	144.	764.	207.	479.	1.57	63.	1994.	2056.
25	TAN	2	21	128.	14.	144.	764.	207.	479.	1.57	93.	845.	938.
			22	129.	14.	141.	1106.	207.	788.	1.00	93.	796.	890.
26	TAN	2	22	144.	14.	287.	1106.	207.	788.	1.00	93.	796.	890.
			101	143.	14.	288.	968.	207.	749.	1.57	93.	1133.	1227.
27	TEE	2	101	143.	14.	288.	968.	207.	749.	1.57	67.	878.	945.
			112	137.	14.	293.	309.	207.	566.	1.57	67.	325.	392.
28	TEE	2	102	15.	56.	49.	702.	171.	74.	1.57	67.	514.	581.
			112	15.	62.	45.	810.	171.	109.	1.57	67.	386.	454.
29	TEE	2	100	25.	78.	252.	376.	145.	452.	1.57	67.	428.	495.
			112	25.	84.	248.	911.	145.	457.	1.57	67.	469.	536.
30	TAN	2	100	25.	78.	252.	376.	145.	452.	1.57	93.	553.	646.
			26	25.	70.	258.	629.	145.	469.	1.00	93.	463.	556.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	70.	49.	629.	145.	469.	1.00	93.	463.	556.
			113	14.	55.	30.	111.	145.	278.	1.00	93.	193.	286.
32	TAN	2	113	14.	55.	30.	111.	145.	278.	1.00	93.	193.	286.
			114	14.	44.	10.	154.	145.	87.	1.00	93.	133.	226.
33	BEND	2	114	10.	14.	44.	87.	154.	145.	1.10	93.	146.	239.
			28	26.	14.	33.	102.	111.	136.	1.10	93.	130.	223.
34	BEND	2	28	26.	14.	33.	102.	111.	136.	1.10	93.	130.	223.
			115	37.	14.	23.	227.	54.	0.	1.10	93.	149.	242.
35	TAN	2	115	14.	23.	37.	54.	0.	227.	1.00	93.	135.	229.
			30	14.	27.	34.	156.	0.	268.	1.00	93.	180.	273.
36	TAN	2	30	10.	27.	33.	156.	0.	268.	1.00	93.	180.	273.
			104	10.	50.	7.	172.	0.	115.	1.00	93.	120.	213.
37	TAN	2	104	10.	50.	7.	172.	0.	115.	1.00	93.	120.	213.
			32	10.	68.	27.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	15.	56.	49.	702.	171.	74.	1.00	63.	993.	1056.
			116	15.	43.	58.	211.	171.	135.	1.00	63.	414.	477.
39	BEND	3	116	60.	0.	43.	134.	184.	171.	1.00	63.	389.	452.
			44	54.	2.	61.	205.	182.	35.	1.00	63.	379.	441.
40	BEND	3	44	54.	2.	61.	205.	182.	35.	1.00	63.	379.	441.
			117	31.	3.	69.	159.	252.	126.	1.00	63.	442.	505.
41	TAN	3	117	3.	69.	31.	252.	126.	159.	1.57	63.	697.	759.
			46	9.	91.	28.	212.	126.	21.	1.57	63.	533.	596.
42	TAN	4	46	10.	91.	28.	211.	128.	21.	1.57	261.	334.	595.
			47	11.	97.	36.	226.	128.	36.	1.00	261.	224.	485.
43	TAN	4	47	15.	186.	35.	252.	36.	67.	1.00	261.	225.	486.
			48	15.	190.	29.	109.	36.	14.	1.57	261.	156.	417.
44	TAN	4	48	15.	190.	29.	109.	36.	14.	1.57	404.	1134.	1538.
			66	15.	192.	25.	215.	36.	159.	1.57	404.	2645.	3049.
45	TEE	4	66	25.	192.	15.	159.	36.	215.	1.57	599.	581.	1180.
			118	23.	193.	15.	182.	36.	251.	1.57	599.	431.	1030.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	15.	232.	17.	167.	37.	669.	1.57	599.	1489.	2088.
			118	13.	231.	17.	142.	37.	680.	1.57	599.	954.	1553.
47	TEE	4	68	102.	30.	1.	4.	40.	518.	1.57	599.	1119.	1719.
			118	104.	32.	1.	6.	40.	679.	1.57	599.	932.	1532.
48	TAN	4	67	17.	232.	15.	669.	37.	167.	1.57	599.	1489.	2088.
			50	17.	235.	21.	607.	37.	261.	1.57	599.	1426.	2025.
49	TAN	4	68	1.	34.	100.	518.	40.	5.	1.57	599.	1119.	1719.
			119	1.	25.	88.	171.	40.	4.	1.57	599.	377.	977.
50	BEND	4	119	88.	1.	25.	4.	171.	40.	1.57	599.	377.	977.
			52	60.	1.	77.	24.	255.	31.	1.57	599.	557.	1156.
51	BEND	4	52	60.	1.	77.	24.	255.	31.	1.57	599.	557.	1156.
			120	22.	1.	84.	38.	291.	6.	1.57	599.	633.	1232.
52	TAN	4	120	1.	84.	22.	291.	6.	38.	1.57	599.	633.	1232.
			121	1.	61.	15.	198.	6.	22.	1.00	599.	273.	872.
53	TAN	4	121	1.	61.	15.	198.	6.	22.	1.57	599.	430.	1030.
			54	1.	39.	31.	108.	6.	7.	1.00	599.	148.	747.
54	TAN	4	54	0.	39.	26.	108.	6.	7.	1.00	599.	148.	747.
			122	0.	21.	14.	101.	6.	4.	1.00	599.	138.	738.
55	TAN	4	122	0.	21.	14.	101.	6.	4.	1.00	599.	138.	738.
			123	0.	3.	14.	176.	6.	2.	1.00	599.	241.	841.
56	BEND	4	123	14.	0.	3.	2.	176.	6.	1.00	599.	241.	841.
			56	8.	0.	20.	4.	190.	4.	1.00	599.	260.	859.
57	BEND	4	56	8.	0.	20.	4.	190.	4.	1.00	599.	260.	859.
			124	17.	0.	25.	4.	173.	0.	1.00	599.	237.	836.
58	TAN	4	124	0.	25.	17.	173.	0.	4.	1.00	599.	237.	836.
			125	0.	41.	39.	212.	0.	1.	1.00	599.	290.	889.
59	TAN	4	125	0.	41.	39.	212.	0.	1.	1.00	599.	290.	889.
			58	0.	57.	62.	864.	0.	2.	1.00	599.	1182.	1781.
60	TAN	4	58	0.	57.	85.	864.	0.	2.	1.00	599.	1182.	1781.
			126	0.	80.	54.	432.	0.	2.	1.00	599.	592.	1191.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	80.	54.	432.	0.	2.	1.00	599.	592.	1191.
			59	0.	102.	22.	1118.	0.	1.	1.00	599.	1530.	2129.
62	TAN	4	59	0.	102.	22.	1118.	0.	1.	1.57	261.	1509.	1770.
			127	0.	156.	55.	1068.	0.	0.	1.57	261.	1440.	1702.
63	TAN	4	127	0.	156.	55.	1068.	0.	0.	1.57	261.	1440.	1702.
			61	0.	210.	132.	787.	0.	0.	1.57	261.	1062.	1323.
64	TAN	4	61	0.	210.	132.	787.	0.	0.	1.00	599.	1077.	1676.
			62	0.	217.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1810.	1	1902.
2	24	1994.	24	2056.
3	38	993.	38	1056.
4	44	2645.	44	3049.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	17.	-178.	27.	992.	-208.	47.
11	-12.	80.	9.	-150.	37.	643.
15	6.	-27.	-16.	125.	-69.	-47.
22	-27.	273.	428.	-414.	2211.	1575.
26	39.	140.	307.	1258.	289.	939.
30	24.	67.	-54.	312.	536.	-0.
32	10.	27.	-68.	0.	0.	-0.
50	17.	235.	21.	607.	37.	261.
54	1.	78.	57.	215.	12.	14.
58	0.	147.	-115.	1728.	5.	-0.
62	0.	142.	-217.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	17.	155.	773.	48.	167.	1.00	92.	1413.	1505.
			63	10.	12.	162.	440.	48.	96.	1.57	92.	1272.	1364.
2	TEE	1	63	162.	12.	10.	96.	48.	440.	1.57	65.	976.	1041.
			105	164.	11.	10.	85.	48.	684.	1.57	65.	949.	1014.
3	TEE	1	64	33.	33.	5.	44.	74.	400.	1.57	65.	882.	947.
			105	35.	35.	5.	38.	74.	451.	1.57	65.	639.	704.
4	TEE	1	65	36.	196.	6.	38.	119.	337.	1.57	65.	775.	840.
			105	35.	194.	6.	29.	119.	392.	1.57	65.	596.	662.
5	TAN	1	64	5.	33.	33.	400.	74.	44.	1.00	92.	730.	823.
			106	5.	21.	16.	54.	74.	114.	1.57	92.	411.	503.
6	BEND	1	106	5.	16.	21.	54.	114.	74.	1.57	65.	315.	380.
			4	11.	14.	18.	29.	109.	78.	1.57	65.	296.	361.
7	BEND	1	4	11.	14.	18.	29.	109.	78.	1.57	65.	296.	361.
			107	19.	12.	5.	53.	89.	67.	1.57	65.	266.	331.
8	TAN	1	107	12.	5.	19.	89.	67.	53.	1.00	92.	220.	313.
			108	8.	5.	16.	11.	67.	22.	1.00	92.	127.	219.
9	BEND	1	108	16.	8.	5.	22.	11.	67.	1.57	92.	200.	292.
			7	6.	3.	13.	40.	46.	62.	1.57	92.	245.	338.
10	BEND	1	7	6.	3.	13.	40.	46.	62.	1.57	92.	245.	338.
			8	5.	8.	9.	44.	45.	32.	1.57	92.	199.	291.
11	BEND	1	8	5.	8.	9.	44.	45.	32.	1.57	92.	199.	291.
			9	8.	12.	1.	9.	15.	39.	1.57	92.	121.	213.
12	BEND	1	9	8.	12.	1.	9.	15.	39.	1.57	92.	121.	213.
			109	3.	17.	5.	63.	19.	25.	1.57	92.	198.	290.
13	TAN	1	109	17.	5.	3.	19.	25.	63.	1.00	92.	126.	218.
			11	26.	5.	4.	10.	25.	258.	1.00	92.	463.	555.
14	TAN	1	11	35.	5.	4.	10.	25.	258.	1.00	92.	463.	555.
			110	28.	5.	9.	41.	25.	31.	1.57	92.	159.	252.
15	BEND	1	110	28.	9.	5.	41.	31.	25.	1.57	65.	122.	187.
			13	22.	10.	19.	29.	12.	49.	1.57	65.	126.	191.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	BEND	1	13	22.	10.	19.	29.	12.	49.	1.57	65.	126.	191.
			111	5.	12.	25.	8.	20.	56.	1.57	65.	129.	194.
17	TAN	1	111	5.	25.	12.	8.	56.	20.	1.00	92.	107.	199.
			15	5.	19.	16.	76.	56.	50.	1.57	92.	301.	393.
18	TAN	1	65	6.	194.	44.	337.	118.	43.	1.57	92.	1010.	1102.
			16	6.	199.	47.	127.	118.	70.	1.57	92.	525.	617.
19	TAN	1	16	6.	160.	19.	127.	118.	70.	1.57	65.	403.	468.
			18	6.	165.	23.	52.	118.	94.	1.57	65.	344.	409.
20	TAN	2	18	6.	165.	23.	52.	118.	94.	1.57	75.	771.	846.
			69	6.	170.	26.	100.	118.	129.	1.00	75.	617.	692.
21	TAN	2	69	6.	154.	15.	170.	118.	129.	1.00	75.	747.	822.
			19	6.	154.	15.	169.	118.	130.	1.57	75.	1177.	1252.
22	TAN	2	69	0.	11.	16.	81.	0.	0.	1.00	53.	1153.	1207.
			70	0.	11.	16.	0.	0.	0.	1.00	53.	0.	53.
23	TAN	2	19	6.	154.	15.	169.	118.	130.	1.57	63.	525.	588.
			20	6.	163.	21.	168.	118.	169.	1.00	63.	363.	426.
24	TAN	2	20	65.	6.	140.	118.	168.	169.	1.00	63.	363.	426.
			21	57.	6.	134.	703.	168.	198.	1.57	63.	1615.	1678.
25	TAN	2	21	57.	6.	134.	703.	168.	198.	1.57	93.	685.	778.
			22	52.	6.	130.	1021.	168.	329.	1.00	93.	629.	723.
26	TAN	2	22	83.	6.	260.	1021.	168.	329.	1.00	93.	629.	723.
			101	82.	6.	261.	895.	168.	369.	1.57	93.	898.	991.
27	TEE	2	101	82.	6.	261.	895.	168.	369.	1.57	67.	696.	763.
			112	76.	6.	266.	308.	168.	549.	1.57	67.	307.	374.
28	TEE	2	102	14.	53.	43.	570.	178.	39.	1.57	67.	423.	491.
			112	14.	59.	38.	662.	178.	71.	1.57	67.	325.	392.
29	TEE	2	100	19.	20.	233.	392.	150.	459.	1.57	67.	440.	507.
			112	19.	26.	228.	803.	150.	478.	1.57	67.	433.	500.
30	TAN	2	100	19.	20.	233.	392.	150.	459.	1.57	93.	568.	662.
			26	19.	12.	238.	664.	150.	454.	1.00	93.	474.	568.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	2	26	14.	12.	51.	664.	150.	454.	1.00	93.	474.	568.
			113	14.	24.	32.	113.	150.	269.	1.00	93.	190.	283.
32	TAN	2	113	14.	24.	32.	113.	150.	269.	1.00	93.	190.	283.
			114	14.	52.	13.	185.	150.	84.	1.00	93.	146.	240.
33	BEND	2	114	13.	14.	52.	84.	185.	150.	1.10	93.	161.	254.
			28	39.	14.	50.	106.	125.	139.	1.10	93.	137.	230.
34	BEND	2	28	39.	14.	50.	106.	125.	139.	1.10	93.	137.	230.
			115	71.	14.	25.	229.	150.	0.	1.10	93.	175.	268.
35	TAN	2	115	14.	25.	71.	150.	0.	229.	1.00	93.	159.	252.
			30	14.	30.	77.	373.	0.	269.	1.00	93.	266.	360.
36	TAN	2	30	10.	30.	42.	373.	0.	269.	1.00	93.	266.	360.
			104	10.	53.	9.	57.	0.	115.	1.00	93.	75.	168.
37	TAN	2	104	10.	53.	9.	57.	0.	115.	1.00	93.	75.	168.
			32	10.	70.	17.	0.	0.	0.	1.00	93.	0.	93.
38	TAN	3	102	14.	53.	43.	570.	178.	39.	1.00	63.	819.	881.
			116	14.	40.	51.	140.	178.	113.	1.00	63.	346.	409.
39	BEND	3	116	53.	1.	40.	145.	107.	178.	1.00	63.	346.	409.
			44	46.	2.	64.	222.	145.	31.	1.00	63.	365.	428.
40	BEND	3	44	46.	2.	64.	222.	145.	31.	1.00	63.	365.	428.
			117	27.	3.	62.	163.	268.	134.	1.00	63.	467.	530.
41	TAN	3	117	3.	62.	27.	268.	134.	163.	1.57	63.	735.	798.
			46	9.	84.	31.	153.	134.	23.	1.57	63.	441.	504.
42	TAN	4	46	10.	84.	31.	152.	135.	23.	1.57	261.	276.	537.
			47	12.	89.	39.	252.	135.	41.	1.00	261.	247.	508.
43	TAN	4	47	14.	153.	29.	279.	41.	67.	1.00	261.	248.	509.
			48	14.	144.	22.	148.	41.	7.	1.57	261.	207.	468.
44	TAN	4	48	14.	144.	22.	148.	41.	7.	1.57	404.	1504.	1908.
			66	14.	138.	18.	190.	41.	139.	1.57	404.	2346.	2750.
45	TEE	4	66	18.	138.	14.	139.	41.	190.	1.57	599.	515.	1115.
			118	16.	135.	14.	160.	41.	216.	1.57	599.	378.	977.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
46	TEE	4	67	22.	30.	15.	148.	43.	703.	1.57	599.	1552.	2151.
			118	20.	32.	15.	125.	43.	703.	1.57	599.	981.	1581.
47	TEE	4	68	101.	30.	1.	4.	36.	507.	1.57	599.	1095.	1695.
			118	104.	32.	1.	5.	36.	667.	1.57	599.	916.	1516.
48	TAN	4	67	15.	30.	22.	703.	43.	148.	1.57	599.	1552.	2151.
			50	15.	20.	28.	680.	43.	233.	1.57	599.	1552.	2152.
49	TAN	4	68	1.	34.	100.	507.	35.	5.	1.57	599.	1095.	1695.
			119	1.	25.	88.	180.	35.	5.	1.57	599.	395.	994.
50	BEND	4	119	88.	1.	25.	5.	180.	35.	1.57	599.	395.	994.
			52	59.	1.	77.	22.	264.	28.	1.57	599.	574.	1173.
51	BEND	4	52	59.	1.	77.	22.	264.	28.	1.57	599.	574.	1173.
			120	22.	1.	83.	34.	300.	6.	1.57	599.	650.	1249.
52	TAN	4	120	1.	83.	22.	300.	6.	34.	1.57	599.	650.	1249.
			121	1.	61.	15.	204.	6.	20.	1.00	599.	280.	879.
53	TAN	4	121	1.	61.	15.	204.	6.	20.	1.57	599.	441.	1040.
			54	1.	39.	31.	110.	6.	8.	1.00	599.	151.	750.
54	TAN	4	54	0.	39.	26.	110.	6.	8.	1.00	599.	151.	750.
			122	0.	21.	14.	101.	6.	5.	1.00	599.	139.	738.
55	TAN	4	122	0.	21.	14.	101.	6.	5.	1.00	599.	139.	738.
			123	0.	3.	14.	179.	6.	2.	1.00	599.	245.	845.
56	BEND	4	123	14.	0.	3.	2.	179.	6.	1.00	599.	245.	845.
			56	8.	0.	20.	4.	193.	4.	1.00	599.	264.	864.
57	BEND	4	56	8.	0.	20.	4.	193.	4.	1.00	599.	264.	864.
			124	17.	0.	26.	5.	176.	0.	1.00	599.	241.	840.
58	TAN	4	124	0.	26.	17.	176.	0.	5.	1.00	599.	241.	840.
			125	0.	42.	40.	212.	0.	1.	1.00	599.	290.	889.
59	TAN	4	125	0.	42.	40.	212.	0.	1.	1.00	599.	290.	889.
			58	0.	58.	62.	867.	0.	3.	1.00	599.	1186.	1785.
60	TAN	4	58	0.	58.	85.	867.	0.	3.	1.00	599.	1186.	1785.
			126	0.	80.	54.	430.	0.	2.	1.00	599.	589.	1188.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
61	TAN	4	126	0.	80.	54.	430.	0.	2.	1.00	599.	589.	1188.
			59	0.	102.	22.	1117.	0.	1.	1.00	599.	1529.	2128.
62	TAN	4	59	0.	102.	22.	1117.	0.	1.	1.57	261.	1507.	1769.
			127	0.	156.	55.	1067.	0.	1.	1.57	261.	1440.	1701.
63	TAN	4	127	0.	156.	55.	1067.	0.	1.	1.57	261.	1440.	1701.
			61	0.	210.	132.	787.	0.	0.	1.57	261.	1062.	1323.
64	TAN	4	61	0.	210.	132.	787.	0.	0.	1.00	599.	1077.	1676.
			62	0.	217.	142.	0.	0.	0.	1.00	599.	0.	599.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1413.	1	1505.
2	24	1615.	24	1678.
3	38	819.	38	881.
4	44	2346.	44	2750.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	10.	-155.	17.	773.	-167.	48.
11	-11.	62.	9.	-49.	20.	516.
15	5.	-19.	-16.	76.	-56.	-50.
22	-13.	135.	391.	-335.	2041.	658.
26	33.	25.	289.	1327.	299.	909.
30	24.	119.	-59.	745.	537.	-0.
32	10.	17.	-70.	0.	0.	-0.
50	15.	20.	28.	680.	43.	233.
54	1.	77.	57.	219.	12.	15.
58	0.	147.	-115.	1734.	6.	-0.
62	0.	142.	-217.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 23

```
* CPU SECONDS ** THIS STEP "STRE" TIME IS   21.79 ** LAST STEP "COMB" TIME IS   12.52 ** DELTA TIME IS    9.27 *
* ELAPSED SECONDS                           231.9                               151.0                      80.9 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   21.79 ** LAST STEP "STRE" TIME IS   21.79 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           231.9                               231.9                       0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   21.82 ** LAST STEP "SUPR" TIME IS   21.79 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           232.0                               231.9                       0.1 *
```

1"-SW-108-CS.3N-SP

GROUP 6

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS 00-4-1371 GROUP 6
GEOMETRY
GROUP 6  LINE  108
COORDINATES
1 0' 0' 0'
2 0'7-1/2 0' 0'
5 0'6 0' 0' 2
3 1'0 0' 0' 5
8 2'0-3/16 0' 0' 5
9 0' -0'4-15/16 0' 8
10 0' -5'1-15/16 0' 8
11 0' 0' 0'3-1/2 10
12 0' 0' 0'8-1/2 10
13 0' 0' 0'3 12
14 0' 0' 0'6 12
15 0' 2'5 0' 13
16 0' 0' 0'9-1/2 14
17 0' 0' 0'6 16
18 0' 0' 0'7-1/2 17
19 0' 0' 0'6 18
20 0' 0' 0'5-1/2 19
BOUNDARY
1 ANCHOR
9 ZXSTOP
11 SPECIAL 1 1 1 0 0 0
20 SPECIAL 1 1 1 0 0 0
15 ANCHOR
MATERIAL C106
70 27900000 .3 .00000607
85 27900000 .3 .00000607
SIF
100 2.1 2.1
BRANCH 1 C106 150.3 1
RUN 1 2 1.315 .179 2.48 3
RUN 2 5 0  0 60 3
RUN 5 3 1.315 .179 2.48 1
RUN 3 0 0  0 0 2
ELBOW 8 0'1-1/2 1.315 .179 2.48 0 100
RUN 0 9 0 0 0 1
RUN 9 0 0 0 0 0 0 3
ELBOW 10 0'1-1/2 1.315 .179 2.48 0 100
RUN 0 11 0 0 0 1
RUN 11 12 0 0 0 2
RUN 12 13 0 0 300 1
RUN 13 14 0 0 300 2
RUN 14 16 1.315 .179 2.48 3
VALVE 16 17 1.315 .179 15 3 0 MOTOR 0'6 0' 0'3 16 5
RUN 17 18 1.315 .179 2.48 3
VALVE 18 19 1.315 .179 15 3
RUN 19 20 1.315 .179 2.48 1
BRANCH 2 C106 0 2
RUN 13 15 3.5 .3 2.48
LOAD 1
DESIGN
DEADWEIGHT -Y 1.0
FORCE 28 0 5
LOAD 2
VERTICAL +Y
```

```
DEADWEIGHT +Y 1.0
FORCE 28 0 5
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
FORCE 28 5
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
FORCE 28 5
LOAD 5
HORIZONTAL +Z
DEADWEIGHT +Z 1.0
FORCE 28 0 0 5
LOAD 6
HORIZONTAL -Z
DEADWEIGHT -Z 1.0
FORCE 28 0 0 5
LOAD 7
THERMAL
THERMAL 1 85 0 0 0 70
THERMAL 2 70 0 0 0 70
SUPERPOSITION
GROUP-6
16 2 1 -4
OBE + SRV XY
3
1 1.0 2 1.04 3 .94
OBE + SRV X-Y
2
1 2.04 3 .94
OBE + SRV ZY
3
1 1.0 2 1.04 5 .94
OBE + SRV Z-Y
2
1 2.04 5 .94
OBE + SRV -XY
3
1 1.0 2 1.04 4 .94
OBE + SRV -X-Y
2
1 2.04 4 .94
OBE + SRV -ZY
3
1 1.0 2 1.04 6 .94
OBE + SRV -Z-Y
2
1 2.04 6 .94
SSE + SRV + LOCA XY
3
1 1.0 2 1.9 3 1.4
SSE + SRV + LOCA X-Y
2
1 2.9 3 1.4
SSE + SRV + LOCA ZY
3
1 1.0 2 1.9 5 1.4
SSE + SRV + LOCA Z-Y
2
```

```
1 2.9 5 1.4
SSE + SRV + LOCA -XY
3
1 1.0 2 1.9 4 1.4
SSE + SRV + LOCA -X-Y
2
1 2.9 4 1.4
SSE + SRV + LOCA -ZY
3
1 1.0 2 1.90 6 1.4
SSE + SRV + LOCA -Z-Y
2
1 2.9 6 1.4
END OF JOB
```

```
     1    31     0     0                                                    PD1
WPPSS 00-4-1371 GROUP 6
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                              P 1
GROUP 6  LINE  108                                                          P 2
    25    26     7     0     5     7     2     1     0     2     0     0    P 3
     6     2     1     0     1     0     0                                  P 4
     1    26     2     0     0     1     1                                  P 5
     1     0.0          0.0          0.0          0                        P 7
     2     7.50000      0.0          0.0          0                        P 7
     3    25.50000      0.0          0.0          0                        P 7
     5    13.50000      0.0          0.0          0                        P 7
     8    37.24815    -0.43934       0.0          0                        P 7
     9    37.68750    -4.93750       0.0          0                        P 7
    10    37.68750   -61.49815       0.43934      0                        P 7
    11    37.68750   -61.93750       3.50000      0                        P 7
    12    37.68750   -61.93750       8.50000      0                        P 7
    13    37.68750   -61.93750      11.50000      0                        P 7
    14    37.68750   -61.93750      14.50000      0                        P 7
    15    37.68750   -32.93750      11.50000      0                        P 7
    16    37.68750   -61.93750      24.00000      0                        P 7
    17    37.68750   -61.93750      30.00000      0                        P 7
    18    37.68750   -61.93750      37.50000      0                        P 7
    19    37.68750   -61.93750      43.50000      0                        P 7
    20    37.68750   -61.93750      49.00000      0                        P 7
    21    36.18750     0.0          0.0          0                        P 7
    22    37.68750    -1.50000      0.0          0                        P 7
    23    37.68750   -23.43750      0.0          0                        P 7
    24    37.68750   -41.93750      0.0          0                        P 7
    25    37.68750   -60.43750      0.0          0                        P 7
    26    37.68750   -61.93750      1.50000      0                        P 7
    27    37.68750   -61.93750     27.00000      0                        P 7
    28    43.68750   -61.93750     27.00000      0                        P 7
    29    37.68750   -61.93750     40.50000      0                        P 7
    40    36.18750    -1.50000      0.0          0                        P 7
    41    37.68750   -60.43750      1.50000      0                        P 7
  1  3     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  2  3     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  3  4     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  4  3     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  5  3     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  6  3     1.3150      0.1790      2.0000      0.0          0.0          0.0     P11D
  7  3     3.5000      0.3000      2.0000      0.0          0.0          0.0     P11D
   100    2.099999    2.099999   -1.000000                                    P 12.1
    0.207    5.000     0.207    25.000     2.500     0.833     0.207
  1  2 0.70000E 02 0.27900E 08 0.30000E 00 0.60700E-05     0.0  0.0  0.0  P14
       0.85000E 02 0.27900E 08 0.30000E 00 0.60700E-05     0.0  0.0  0.0  P14A
   150.29999     0.0          0.0          0.0          0.0          0.0     P15
    0.0                                                                      P16A
    1                                                                        P16B
    1    85.00000      0.0          0.0          0.0         70.00000       P16C
    2    70.00000      0.0          0.0          0.0         70.00000       P16C
    1     0.0         -1.00000      0.0                                     P17
    2     0.0          1.00000      0.0                                     P17
    3     1.00000      0.0          0.0                                     P17
    4    -1.00000      0.0          0.0                                     P17
    5     0.0          0.0          1.00000                                 P17
    6     0.0          0.0         -1.00000                                 P17
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
```

```
 9  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0                P18
11  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0                P18
20  0 0.100E 01 0.100E 01 0.100E 01 0.0       0.0       0.0                P18
15  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
  1   1   21002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
  2   2   51002   1   1   1   2   2   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
  3   5   31002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1    1    0   0   1                                                P21B
  4   3  211002   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2    1    0   0   1                                                P21B
  5  21   8  40   1   2   1   3   3   1   1   0   0   0   0  0.0           P21
   1 100    1    0   0   1                                                P21B
  6   8  22  40   1   2   1   3   3   1   1   0   0   0   0  0.0           P21
   1 100    1    0   0   1                                                P21B
  7  22   91001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1    1    0   0   1                                                P21B
  8   9  231001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0    1    0   0   1                                                P21B
  9  23  241001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0    1    0   0   1                                                P21B
 10  24  251001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   0    1    0   0   1                                                P21B
 11  25  10  41   1   2   1   3   3   1   1   0   0   0   0  0.0           P21
   1 100    1    0   0   1                                                P21B
 12  10  26  41   1   2   1   3   3   1   1   0   0   0   0  0.0           P21
   1 100    1    0   0   1                                                P21B
 13  26  111001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1    1    0   0   1                                                P21B
 14  11  121001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   2    1    0   0   1                                                P21B
 15  12  131001   1   1   1   4   4   1   1   0   0   0   0  0.0           P21
   1   1    1    0   0   1                                                P21B
 16  13  141001   1   1   1   4   4   1   1   0   0   0   0  0.0           P21
   1   2    1    0   0   1                                                P21B
 17  14  161001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 18  16  271001   1   1   1   5   5   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 19  27  171001   1   1   1   5   5   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 20  27  28  16   1   1   1   6   6   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 21  17  181001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 22  18  291001   1   1   1   5   5   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 23  29  191001   1   1   1   5   5   1   1   0   0   0   0  0.0           P21
   1   3    1    0   0   1                                                P21B
 24  19  201001   1   1   1   1   1   1   1   0   0   0   0  0.0           P21
   1   1    1    0   0   1                                                P21B
 25  13  151001   1   1   1   7   7   1   1   0   0   0   0  0.0           P21
   2   0    2    0   0   2                                                P21B
   0                                                                      P22
 1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0     P32
 7                                                                        P33
 1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0      P34
   7
  28     6                                                                P39
```

```
     1      00.0        0.5000E 010.0        0.0        0.0        0.0        P40
     2      00.0        0.5000E 010.0        0.0        0.0        0.0        P40
     3      00.5000E 010.0        0.0        0.0        0.0        0.0        P40
     4      00.5000E 010.0        0.0        0.0        0.0        0.0        P40
     5      00.0        0.0        0.5000E 010.0        0.0        0.0        P40
     6      00.0        0.0        0.5000E 010.0        0.0        0.0        P40
999999                                                                        P41
DESIGN                                                                        P41
VERTICAL +Y                                                                   P41
HORIZONTAL +X                                                                 P41
HORIZONTAL -X                                                                 P41
HORIZONTAL +Z                                                                 P41
HORIZONTAL -Z                                                                 P41
THERMAL                                                                       P41
    11     1     0     0     1                                               P 1
GROUP-6                                                                       P 2
    25    26    16     0     2     1    -4                                   P60
     3                                                                        P61
OBE + SRV XY                                                                  P62
  1   1.0000  2   1.0400  3   0.9400
     2                                                                        P61
OBE + SRV X-Y                                                                 P62
  1   2.0400  3   0.9400
     3                                                                        P61
OBE + SRV ZY                                                                  P62
  1   1.0000  2   1.0400  5   0.9400
     2                                                                        P61
OBE + SRV Z-Y                                                                 P62
  1   2.0400  5   0.9400
     3                                                                        P61
OBE + SRV -XY                                                                 P62
  1   1.0000  2   1.0400  4   0.9400
     2                                                                        P61
OBE + SRV -X-Y                                                                P62
  1   2.0400  4   0.9400
     3                                                                        P61
OBE + SRV -ZY                                                                 P62
  1   1.0000  2   1.0400  6   0.9400
     2                                                                        P61
OBE + SRV -Z-Y                                                                P62
  1   2.0400  6   0.9400
     3                                                                        P61
SSE + SRV + LOCA XY                                                           P62
  1   1.0000  2   1.9000  3   1.4000
     2                                                                        P61
SSE + SRV + LOCA X-Y                                                          P62
  1   2.9000  3   1.4000
     3                                                                        P61
SSE + SRV + LOCA ZY                                                           P62
  1   1.0000  2   1.9000  5   1.4000
     2                                                                        P61
SSE + SRV + LOCA Z-Y                                                          P62
  1   2.9000  5   1.4000
     3                                                                        P61
SSE + SRV + LOCA -XY                                                          P62
  1   1.0000  2   1.9000  4   1.4000
     2                                                                        P61
SSE + SRV + LOCA -X-Y                                                         P62
  1   2.9000  4   1.4000
     3                                                                        P61
```

```
SSE + SRV + LOCA -ZY                                                    P62
  1   1.6000  2   1.9000  6   1.4000
      2                                                                 P61
SSE + SRV + LOCA -Z-Y                                                   P62
  1   2.9000  6   1.4000
      0                                                                 P68
      0                                                                 PD1
      0                                                                  PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.20 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.20 *
* ELAPSED SECONDS                             0.8                      0.0                                  0.8 *
```

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	25
TOTAL NUMBER OF STRUCTURAL JOINTS	26
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	2
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	5
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	7
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	2
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	26
TOTAL FICTIOUS JOINTS READ IN	2
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	7.500000	0.0	0.0
3	25.500000	0.0	0.0
5	13.500000	0.0	0.0
8	37.248138	-0.439340	0.0
9	37.687500	-4.937500	0.0
10	37.687500	-61.498138	0.439340
11	37.687500	-61.937500	3.500000
12	37.687500	-61.937500	8.500000
13	37.687500	-61.937500	11.500000
14	37.687500	-61.937500	14.500000
15	37.687500	-32.937500	11.500000
16	37.687500	-61.937500	24.000000
17	37.687500	-61.937500	30.000000
18	37.687500	-61.937500	37.500000
19	37.687500	-61.937500	43.500000
20	37.687500	-61.937500	49.000000
21	36.187500	0.0	0.0
22	37.687500	-1.500000	0.0
23	37.687500	-23.437500	0.0
24	37.687500	-41.937500	0.0
25	37.687500	-60.437500	0.0
26	37.687500	-61.937500	1.500000
27	37.687500	-61.937500	27.000000
28	43.687500	-61.937500	27.000000
29	37.687500	-61.937500	40.500000
40	36.187500	-1.500000	0.0
41	37.687500	-60.437500	1.500000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
2	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
3	C	1.315	0.179	.6388E 00	.1056E 00	.1056E 00	.2112E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
4	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
5	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
6	S	1.315	0.179	.6388E 00	.1056E 00	.2112E 00	.1056E 00	2.0	2.0	0.66	0.0	0.0	0.66	-0.66	0.0	0.0	-0.66
7	S	3.500	0.300	.3016E 01	.3894E 01	.7789E 01	.3894E 01	2.0	2.0	1.75	0.0	0.0	1.75	-1.75	0.0	0.0	-1.75

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	27900000.00	0.300000	0.000006070	0.0
1-A	85.00	27900000.00	0.300000	0.000006070	0.0

PRESSURE DATA

TYPE	PRESSURE
1	150.30
2	0.0

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1						
	1	85.000	0.0	0.0	0.0	70.000
	2	70.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	-1.000000	0.0
2	0.0	1.000000	0.0
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	0.0	1.000000
6	0.0	0.0	-1.000000

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	9	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0
3	11	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
4	20	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	15	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.32 ** LAST STEP "BEGP" TIME IS    0.20 ** DELTA TIME IS    0.12 *
* ELAPSED SECONDS                             2.2                                 0.8                       1.3 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   26


 BAND-WIDTH =    18  BY D.O.F.          BAND-WIDTH =     3  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.46 ** LAST STEP "DA3D" TIME IS    0.32 ** DELTA TIME IS    0.14 *
* ELAPSED SECONDS                             5.5                                 2.2                       3.3 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

APPLIED CONCENTRATED JOINT LOADS

JOINT	LOAD NO	F1 (LB)	F2 (LB)	F3 (LB)	M1 (IN-LB)	M2 (IN-LB)	M3 (IN-LB)
28	1	0.0	0.50000E 01	0.0	0.0	0.0	0.0
	2	0.0	0.50000E 01	0.0	0.0	0.0	0.0
	3	0.50000E 01	0.0	0.0	0.0	0.0	0.0
	4	0.50000E 01	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.50000E 01	0.0	0.0	0.0
	6	0.0	0.0	0.50000E 01	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.48 ** LAST STEP "JCSO" TIME IS    0.46 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                             5.8                                 5.5                        0.3 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.19818E 08) OCCURS AT THE 75TH DOF
MINIMUM VALUE (0.10842E 05) OCCURS AT THE 57TH DOF
RATIO OF MAX/MIN= 0.18279E 04

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    1.54 ** LAST STEP "INPT" TIME IS    0.48 ** DELTA TIME IS    1.06 *
* ELAPSED SECONDS                            14.5                                 5.8                        8.6 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.19 ** LAST STEP "EQ3D" TIME IS    1.54 ** DELTA TIME IS    0.65 *
* ELAPSED SECONDS                            27.6                                14.5                       13.2 *
```

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	2	1002	1	1	1	1	3	1	1	1	7.50000	0.20700			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
2	2	5	1002	1	1	1	1	3	1	1	2	6.00000	5.00000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
3	5	3	1002	1	1	1	1	1	1	1	1	12.00000	0.20700			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
4	3	21	1002	1	1	1	1	2	1	1	1	10.68750	0.20700			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
5	21	8	40	1	2	1	1	100	1	1	3	0.78540	0.20700	RAD=	1.5000	0.0	-1.000000	0.0
														FLX=	1.9826	0.0	0.0	1.000000
														ECC=	0.0	-1.000000	0.0	0.0
6	8	22	40	1	2	1	1	100	1	1	3	0.78540	0.20700	RAD=	1.5000	-0.707100	-0.707114	0.0
														FLX=	1.9826	0.0	0.0	1.000000
														ECC=	0.0	-0.707114	0.707100	0.0
7	22	9	1001	1	1	1	1	1	1	1	1	3.43750	0.20700			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
8	9	23	1001	1	1	1	1	0	1	1	1	18.50000	0.20700			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
9	23	24	1001	1	1	1	1	0	1	1	1	18.50000	0.20700			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
10	24	25	1001	1	1	1	1	0	1	1	1	18.50000	0.20700			1.000000	0.0	0.0
																0.0	1.000000	0.0
																0.0	0.0	1.000000
11	25	10	41	1	2	1	1	100	1	1	3	0.78540	0.20700	RAD=	1.5000	0.0	0.0	1.000000
														FLX=	1.9826	1.000000	0.0	0.0
														ECC=	0.0	0.0	1.000000	0.0
12	10	26	41	1	2	1	1	100	1	1	3	0.78540	0.20700	RAD=	1.5000	0.0	0.707100	0.707114
														FLX=	1.9826	1.000000	0.0	0.0
														ECC=	0.0	0.0	0.707114	-0.707100
13	26	11	1001	1	1	1	1	1	1	1	1	2.00000	0.20700			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN	ORIENTATION MATRIX (I,J')
14	11	12	1001	1	1	1	1	2	1	1	1	5.00000	0.20700	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
15	12	13	1001	1	1	1	1	1	1	1	4	3.00000	25.00000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
16	13	14	1001	1	1	1	1	2	1	1	4	3.00000	25.00000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
17	14	16	1001	1	1	1	1	3	1	1	1	9.50000	0.20700	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
18	16	27	1001	1	1	1	1	3	1	1	5	3.00000	2.50000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
19	27	17	1001	1	1	1	1	3	1	1	5	3.00000	2.50000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
20	27	28	16	1	1	1	1	3	1	1	6	6.00000	0.83300	0.0 0.0 -1.000000 -1.000000 0.0 0.0 0.0 1.000000 0.0
21	17	18	1001	1	1	1	1	3	1	1	1	7.50000	0.20700	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
22	18	29	1001	1	1	1	1	3	1	1	5	3.00000	2.50000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
23	29	19	1001	1	1	1	1	3	1	1	5	3.00000	2.50000	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
24	19	20	1001	1	1	1	1	1	1	1	1	5.50000	0.20700	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
25	13	15	1001	1	1	1	2	0	2	2	7	29.00000	0.20700	1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000

```
MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  25 AND EQUALS 0.29000E 02 INCHES
MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  12 AND EQUALS 0.11781E 01 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  25 AND EQUALS 0.14004E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT   8 AND EQUALS 0.54209E 04

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    2.39 ** LAST STEP "SELT" TIME IS    2.19 ** DELTA TIME IS    0.20 *
* ELAPSED SECONDS                            34.5                                27.6                        6.8 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.15776231E 02	0.0	0.0	0.0	-0.14029661E 02
3	0.0	-0.23481550E 01	0.0	0.0	0.0	0.51368749E 00
5	0.0	-0.16242004E 02	0.0	0.0	0.0	0.12516097E 02
8	0.47329996E-01	-0.24386460E 00	0.0	0.0	0.0	0.69924332E-02
9	0.0	-0.22705297E 01	0.0	0.0	0.0	0.0
10	0.0	-0.24386239E 00	0.47328413E-01	0.69931634E-02	0.0	0.0
11	0.0	0.0	0.0	0.36224914E 00	0.0	0.0
12	0.0	-0.38017441E 02	0.0	0.18318710E 02	0.0	0.0
13	0.0	-0.78001495E 02	0.0	-0.14305115E-03	0.0	0.0
14	0.0	-0.38483292E 02	0.0	-0.17193298E 02	0.0	0.0
16	0.0	-0.47332458E 01	0.0	0.31817961E 00	0.0	0.0
17	0.0	-0.45262537E 01	0.0	-0.90470356E 00	0.0	0.0
18	0.0	-0.45262451E 01	0.0	0.90468490E 00	0.0	0.0
19	0.0	-0.43192530E 01	0.0	-0.13532009E 01	0.0	0.0
20	0.0	0.0	0.0	-0.52181387E 00	0.0	0.0
21	-0.45154367E-01	-0.12044258E 01	0.0	0.0	0.0	0.19521942E 01
22	-0.21756745E-02	-0.50137752E 00	0.0	0.0	0.0	0.49452856E-02
23	0.0	-0.38294983E 01	0.0	0.0	0.0	0.0
24	0.0	-0.38294983E 01	0.0	0.0	0.0	0.0
25	0.0	-0.20603504E 01	-0.21751772E-02	0.49446709E-02	0.0	0.0
26	0.0	-0.30526608E 00	-0.45153189E-01	0.50838497E-01	0.0	0.0
27	0.0	-0.99989958E 01	0.0	-0.14305115E-04	0.0	-0.24989824E 01
28	0.0	0.25009966E 01	0.0	0.0	0.0	0.24990015E 01
29	0.0	-0.75000000E 01	0.0	-0.14305115E-04	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.15776231E 02	0.0	0.0	0.0	0.14029661E 02
3	0.0	0.23481550E 01	0.0	0.0	0.0	-0.51368749E 00
5	0.0	0.16242004E 02	0.0	0.0	0.0	-0.12516097E 02
8	-0.47329996E-01	0.24386460E 00	0.0	0.0	0.0	-0.69924332E-02
9	0.0	0.22705297E 01	0.0	0.0	0.0	0.0
10	0.0	0.24386239E 00	-0.47328413E-01	-0.69931634E-02	0.0	0.0
11	0.0	0.0	0.0	-0.36224914E 00	0.0	0.0
12	0.0	0.38017441E 02	0.0	-0.18318710E 02	0.0	0.0
13	0.0	0.78001495E 02	0.0	0.14305115E-03	0.0	0.0
14	0.0	0.38483292E 02	0.0	0.17193298E 02	0.0	0.0
16	0.0	0.47332458E 01	0.0	-0.31817961E 00	0.0	0.0
17	0.0	0.45262537E 01	0.0	0.90470356E 00	0.0	0.0
18	0.0	0.45262451E 01	0.0	-0.90468490E 00	0.0	0.0
19	0.0	0.43192530E 01	0.0	0.13532009E 01	0.0	0.0
20	0.0	0.0	0.0	0.52181387E 00	0.0	0.0
21	0.45154367E-01	0.12044258E 01	0.0	0.0	0.0	-0.19521942E 01

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
22	0.21756745E-02	0.50137752E 00	0.0	0.0	0.0	-0.49452856E-02
23	0.0	0.38294983E 01	0.0	0.0	0.0	0.0
24	0.0	0.38294983E 01	0.0	0.0	0.0	0.0
25	0.0	0.20603504E 01	0.21751772E-02	-0.49446709E-02	0.0	0.0
26	0.0	0.30526608E 00	0.45153189E-01	-0.50838497E-01	0.0	0.0
27	0.0	0.99989958E 01	0.0	0.14305115E-04	0.0	0.24989824E 01
28	0.0	0.74990025E 01	0.0	0.0	0.0	-0.24990015E 01
29	0.0	0.75000000E 01	0.0	0.14305115E-04	0.0	0.0

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.15776240E 02	0.0	0.0	0.0	0.0	0.0
3	0.23481550E 01	0.0	0.0	0.0	0.0	0.0
5	0.16242004E 02	0.0	0.0	0.0	0.0	0.0
8	0.24386239E 00	-0.47328413E-01	0.0	0.0	0.0	0.69931634E-02
9	0.0	0.0	0.0	0.0	0.0	0.56999369E 01
10	0.24386430E 00	0.0	0.0	0.0	0.22460036E-03	-0.22540076E-03
11	0.0	0.0	0.0	0.0	0.36224997E 00	0.0
12	0.38017441E 02	0.0	0.0	0.0	0.18318817E 02	0.0
13	0.78001495E 02	0.0	0.0	0.0	-0.14305115E-03	-0.14507227E 02
14	0.38483292E 02	0.0	0.0	0.0	-0.17193405E 02	0.0
16	0.47332458E 01	0.0	0.0	0.0	0.31818682E 00	0.0
17	0.45262537E 01	0.0	0.0	0.0	-0.90470684E 00	0.0
18	0.45262451E 01	0.0	0.0	0.0	0.90468824E 00	0.0
19	0.43192530E 01	0.0	0.0	0.0	-0.13532095E 01	0.0
20	0.0	0.0	0.0	0.0	-0.52181607E 00	0.0
21	0.12517567E 01	0.21751772E-02	0.0	0.0	0.0	0.49446709E-02
22	0.45404714E 00	0.45153189E-01	0.0	0.0	0.0	0.18567187E 00
23	0.38294983E 01	0.0	0.0	0.0	0.0	-0.97915618E-04
24	0.38294983E 01	0.0	0.0	0.0	0.0	-0.97915618E-04
25	0.20366879E 01	0.0	0.0	0.0	0.15925121E-03	-0.58792944E 01
26	0.32893121E 00	0.0	0.0	0.0	0.44424813E-01	-0.15941562E-03
27	0.99989977E 01	0.0	0.0	0.0	-0.14305115E-04	0.0
28	0.74990005E 01	0.0	0.0	0.0	0.0	0.0
29	0.75000000E 01	0.0	0.0	0.0	-0.14305115E-04	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.15776240E 02	0.0	0.0	0.0	0.0	0.0
3	-0.23481550E 01	0.0	0.0	0.0	0.0	0.0
5	-0.16242004E 02	0.0	0.0	0.0	0.0	0.0
8	-0.24386239E 00	0.47328413E-01	0.0	0.0	0.0	-0.69931634E-02
9	0.0	0.0	0.0	0.0	0.0	-0.56999369E 01
10	-0.24386430E 00	0.0	0.0	0.0	-0.22460036E-03	0.22540076E-03
11	0.0	0.0	0.0	0.0	-0.36224997E 00	0.0
12	-0.38017441E 02	0.0	0.0	0.0	-0.18318817E 02	0.0
13	-0.78001495E 02	0.0	0.0	0.0	0.14305115E-03	0.14507227E 02
14	-0.38483292E 02	0.0	0.0	0.0	0.17193405E 02	0.0
16	-0.47332458E 01	0.0	0.0	0.0	-0.31818682E 00	0.0
17	-0.45262537E 01	0.0	0.0	0.0	0.90470684E 00	0.0
18	-0.45262451E 01	0.0	0.0	0.0	-0.90468824E 00	0.0
19	-0.43192530E 01	0.0	0.0	0.0	0.13532095E 01	0.0
20	0.0	0.0	0.0	0.0	0.52181607E 00	0.0
21	-0.12517567E 01	-0.21751772E-02	0.0	0.0	0.0	-0.49446709E-02
22	-0.45404714E 00	-0.45153189E-01	0.0	0.0	0.0	-0.18567187E 00
23	-0.38294983E 01	0.0	0.0	0.0	0.0	0.97915618E-04
24	-0.38294983E 01	0.0	0.0	0.0	0.0	0.97915618E-04
25	-0.20366879E 01	0.0	0.0	0.0	-0.15925121E-03	0.58792944E 01
26	-0.32893121E 00	0.0	0.0	0.0	-0.44424813E-01	0.15941562E-03
27	-0.99989977E 01	0.0	0.0	0.0	0.14305115E-04	0.0
28	0.25009985E 01	0.0	0.0	0.0	0.0	0.0
29	-0.75000000E 01	0.0	0.0	0.0	0.14305115E-04	0.0

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	0.15776231E 02	0.0	-0.14029588E 02	0.0
3	0.0	0.0	0.23481550E 01	0.0	0.51367444E 00	0.0
5	0.0	0.0	0.16242004E 02	0.0	0.12516029E 02	0.0
8	0.0	0.0	0.24386430E 00	-0.22460036E-03	0.22540076E-03	0.0
9	0.0	0.0	0.0	-0.56999063E 01	0.0	0.0
10	0.0	-0.47329996E-01	0.24386460E 00	0.69924332E-02	0.0	0.0
12	0.0	0.0	0.38017471E 02	0.0	0.0	0.0
13	0.0	0.0	0.78001495E 02	0.14507227E 02	0.0	0.0
14	0.0	0.0	0.38483261E 02	0.0	0.0	0.0
16	0.0	0.0	0.47332478E 01	0.0	0.0	0.0
17	0.0	0.0	0.45262518E 01	0.0	0.0	0.0
18	0.0	0.0	0.45262470E 01	0.0	0.0	0.0
19	0.0	0.0	0.43192520E 01	0.0	0.0	0.0
21	0.0	0.0	0.12280912E 01	-0.15925121E-03	0.19457808E 01	0.0
22	0.0	0.0	0.47771227E 00	-0.17925769E 00	0.15941562E-03	0.0
23	0.0	0.0	0.38294983E 01	0.97915618E-04	0.0	0.0
24	0.0	0.0	0.38294983E 01	0.97915618E-04	0.0	0.0
25	0.0	0.45154367E-01	0.20130224E 01	0.58856764E 01	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
26	0.0	0.21756745E-02	0.35259640E 00	0.49452856E-02	0.0	0.0
27	0.0	0.0	0.99989958E 01	0.0	-0.24989958E 01	0.0
28	0.0	0.0	0.74990025E 01	0.0	0.24990149E 01	0.0
29	0.0	0.0	0.75000000E 01	0.0	0.0	0.0

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	-0.15776231E 02	0.0	0.14029588E 02	0.0
3	0.0	0.0	-0.23481550E 01	0.0	-0.51367444E 00	0.0
5	0.0	0.0	-0.16242004E 02	0.0	-0.12516029E 02	0.0
8	0.0	0.0	-0.24386430E 00	0.22460036E-03	-0.22540076E-03	0.0
9	0.0	0.0	0.0	0.56999063E 01	0.0	0.0
10	0.0	0.47329996E-01	-0.24386460E 00	-0.69924332E-02	0.0	0.0
12	0.0	0.0	-0.38017471E 02	0.0	0.0	0.0
13	0.0	0.0	-0.78001495E 02	-0.14507227E 02	0.0	0.0
14	0.0	0.0	-0.38483261E 02	0.0	0.0	0.0
16	0.0	0.0	-0.47332478E 01	0.0	0.0	0.0
17	0.0	0.0	-0.45262518E 01	0.0	0.0	0.0
18	0.0	0.0	-0.45262470E 01	0.0	0.0	0.0
19	0.0	0.0	-0.43192520E 01	0.0	0.0	0.0
21	0.0	0.0	-0.12280912E 01	0.15925121E-03	-0.19457808E 01	0.0
22	0.0	0.0	-0.47771227E 00	0.17925769E 00	-0.15941562E-03	0.0
23	0.0	0.0	-0.38294983E 01	-0.97915618E-04	0.0	0.0
24	0.0	0.0	-0.38294983E 01	-0.97915618E-04	0.0	0.0
25	0.0	-0.45154367E-01	-0.20130224E 01	-0.58856764E 01	0.0	0.0
26	0.0	-0.21756745E-02	-0.35259640E 00	-0.49452856E-02	0.0	0.0
27	0.0	0.0	-0.99989958E 01	0.0	0.24989958E 01	0.0
28	0.0	0.0	0.25009966E 01	0.0	-0.24990149E 01	0.0
29	0.0	0.0	-0.75000000E 01	0.0	0.0	0.0

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.48828125E-03	0.0	0.0	0.0	0.0	0.0
3	-0.97656250E-03	0.0	0.0	0.0	0.0	0.0
5	0.97656250E-03	0.0	0.0	0.0	0.0	0.0
8	0.69963989E 03	0.69962720E 03	0.0	0.0	0.0	-0.40130615E-02
10	0.0	-0.69963989E 03	-0.69962720E 03	-0.40130615E-02	0.0	0.0
14	0.0	0.0	0.97656250E-03	0.0	0.0	0.0
16	0.0	0.0	-0.97656250E-03	0.0	0.0	0.0
17	0.0	0.0	0.97656250E-03	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
18	0.0	0.0	-0.97656250E-03	0.0	0.0	0.0
19	0.0	0.0	0.97656250E-03	0.0	0.0	0.0
21	0.42842578E 03	0.49472290E 03	0.0	0.0	0.0	0.98151535E 02
22	0.49473047E 03	0.42844702E 03	0.0	0.0	0.0	-0.98150558E 02
25	0.0	-0.42842578E 03	-0.49472290E 03	0.98151535E 02	0.0	0.0
26	0.0	-0.49473047E 03	-0.42844751E 03	-0.98150558E 02	0.0	0.0
27	-0.16227969E 04	0.0	0.0	0.0	0.0	0.0
28	0.16227969E 04	0.0	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    3.65 ** LAST STEP "EDIT" TIME IS    2.39 ** DELTA TIME IS    1.26 *
* ELAPSED SECONDS                            74.1                                34.5                          39.6 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    3.69 ** LAST STEP "SLVR" TIME IS    3.65 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            74.8                                74.1                           0.8 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000005556	-0.001226319	0.000007597	0.000004418	-0.000001910	-0.000224327
3	-0.000018890	-0.001819344	0.000066993	0.000015023	-0.000004110	0.000132045
5	-0.000010000	-0.002279816	0.000022623	0.000007953	-0.000003018	-0.000096718
8	0.000001170	-0.000269681	0.000104873	0.000022105	-0.000003513	0.000050959
9	0.0	-0.000251875	0.0	0.000024817	-0.000002794	-0.000012350
10	-0.000015888	-0.000174592	-0.000029668	-0.000064370	0.000004417	0.000004137
11	0.0	0.0	0.0	-0.000028085	0.000004701	0.000003694
12	0.000021946	-0.000043784	-0.000002709	0.000014720	0.000003304	0.000002981
13	0.000028870	-0.000054181	-0.000004334	0.000016860	0.000000889	0.000002553
14	0.000030948	-0.000478623	-0.000003987	0.000204210	0.000000508	0.000022415
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.000030746	-0.003368153	-0.000002889	0.000300791	-0.000000491	0.000085312
17	0.000026320	-0.004691206	-0.000002196	0.000114865	-0.000000957	0.000105174
18	0.000017479	-0.004435781	-0.000001329	-0.000188271	-0.000001361	0.000105174
19	0.000008690	-0.002578457	-0.000000636	-0.000412838	-0.000001541	0.000105174
20	0.0	0.0	0.0	-0.000490502	-0.000001595	0.000105174
21	-0.000026807	-0.000348835	0.000110532	0.000021319	-0.000003822	0.000093170
22	0.000029433	-0.000253619	0.000082366	0.000023144	-0.000003233	0.000011754
23	-0.000125053	-0.000240132	-0.000470269	0.000021774	-0.000000436	-0.000001993
24	-0.000102898	-0.000224414	-0.000655287	-0.000006022	0.000001923	0.000003565
25	-0.000022311	-0.000204721	-0.000097133	-0.000058569	0.000004282	0.000004324
26	-0.000009310	-0.000102595	0.000000024	-0.000057034	0.000004575	0.000003979
27	0.000028883	-0.004175268	-0.000002542	0.000222613	-0.000000740	0.000105174
28	0.000028883	-0.003463464	0.000001897	0.000222613	-0.000000740	0.000125542
29	0.000013220	-0.003681692	-0.000000982	-0.000311047	-0.000001467	0.000105174

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	28.	-13.	-0.	1.	1.	191.	1.57	276.	1877.	2153.
			2	-26.	13.	0.	-1.	-1.	13.	1.57	276.	130.	406.
2	TAN	1	2	26.	-13.	-0.	1.	1.	-13.	1.57	276.	130.	406.
			5	4.	13.	0.	-0.	-1.	82.	1.57	276.	806.	1082.
3	TAN	1	5	-4.	-13.	-0.	0.	1.	-82.	1.57	276.	806.	1082.
			3	6.	13.	0.	-0.	-1.	25.	1.00	276.	157.	433.
4	TAN	1	3	-6.	-13.	-0.	0.	1.	-25.	1.00	276.	157.	433.
			21	8.	13.	0.	0.	-1.	-51.	1.57	276.	496.	772.
5	BEND	1	21	8.	-0.	-13.	0.	51.	1.	1.57	276.	496.	772.
			8	3.	0.	15.	-1.	-54.	-1.	1.57	276.	526.	802.
6	BEND	1	8	-3.	-0.	-15.	1.	54.	1.	1.57	276.	526.	802.
			22	13.	0.	9.	-1.	-43.	0.	1.57	276.	425.	701.
7	TAN	1	22	13.	-9.	-0.	-1.	-0.	43.	1.57	276.	425.	701.
			9	-13.	9.	0.	1.	0.	2.	1.00	276.	16.	292.
8	TAN	1	9	-0.	-9.	0.	-1.	-0.	-2.	1.00	276.	16.	292.
			23	0.	13.	-0.	-2.	0.	1.	1.00	276.	17.	293.
9	TAN	1	23	-0.	-13.	0.	2.	-0.	-1.	1.00	276.	17.	293.
			24	0.	17.	-0.	-6.	0.	1.	1.00	276.	40.	316.
10	TAN	1	24	-0.	-17.	0.	6.	-0.	-1.	1.00	276.	40.	316.
			25	0.	21.	-0.	-10.	0.	-0.	1.00	276.	64.	340.
11	BEND	1	25	0.	-0.	-21.	0.	10.	-0.	1.57	276.	101.	378.
			10	15.	0.	15.	-0.	-1.	0.	1.57	276.	14.	290.
12	BEND	1	10	-15.	-0.	-15.	0.	1.	-0.	1.57	276.	14.	290.
			26	21.	0.	0.	0.	21.	0.	1.57	276.	207.	483.
13	TAN	1	26	-0.	-0.	-21.	-21.	-0.	-0.	1.57	276.	207.	483.
			11	0.	0.	22.	64.	0.	0.	1.00	276.	400.	676.
14	TAN	1	11	-0.	-10.	16.	-64.	-0.	-0.	1.00	276.	400.	676.
			12	0.	10.	-15.	-13.	0.	-2.	1.57	276.	129.	405.
15	TAN	1	12	-0.	-10.	15.	13.	-0.	2.	1.57	276.	129.	405.
			13	0.	10.	60.	55.	0.	-3.	1.00	276.	341.	617.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	0.	2.	94.	-288.	15.	0.	1.00	276.	1794.	2070.
			14	-0.	-2.	-19.	118.	-15.	-0.	1.57	276.	1164.	1440.
17	TAN	1	14	0.	2.	19.	-118.	15.	0.	1.57	276.	1164.	1440.
			16	-0.	-2.	-17.	-55.	-15.	-0.	1.57	276.	557.	833.
18	TAN	1	16	0.	2.	17.	55.	15.	0.	1.57	276.	557.	833.
			27	-0.	-2.	-10.	-95.	-15.	-0.	1.57	276.	944.	1220.
19	TAN	1	27	0.	2.	10.	95.	-0.	0.	1.57	276.	932.	1208.
			17	-0.	-2.	-2.	-113.	0.	-0.	1.57	276.	1107.	1383.
20	TAN	1	27	0.	0.	-0.	15.	0.	0.	1.57	276.	147.	423.
			28	-0.	-0.	5.	-0.	-0.	-0.	1.57	276.	0.	276.
21	TAN	1	17	0.	2.	2.	113.	0.	0.	1.57	276.	1107.	1383.
			18	0.	-2.	-1.	-123.	-0.	-0.	1.57	276.	1210.	1486.
22	TAN	1	18	0.	2.	1.	123.	-0.	0.	1.57	276.	1210.	1486.
			29	-0.	-2.	7.	-114.	0.	-0.	1.57	276.	1118.	1394.
23	TAN	1	29	0.	2.	-7.	114.	0.	0.	1.57	276.	1118.	1394.
			19	-0.	-2.	14.	-82.	-0.	-0.	1.57	276.	806.	1082.
24	TAN	1	19	0.	2.	-14.	82.	0.	0.	1.57	276.	806.	1082.
			20	-0.	-2.	16.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	-0.	154.	-12.	233.	-3.	-15.	1.00	0.	105.	105.
			15	0.	-160.	12.	107.	3.	4.	1.00	0.	48.	48.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	23	-0.000125053	-0.000240132	-0.000470269
2	17	0.000026320	-0.004691206	-0.000002196
3	24	-0.000102898	-0.000224414	-0.000655287

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	1877.	1	2153.
2	25	105.	25	105.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	13.	28.	-0.	-1.	1.	191.
9	-13.	-0.	0.	-0.	-0.	-0.
11	-0.	38.	9.	-0.	-0.	0.
15	0.	160.	-12.	107.	-3.	-4.
20	-0.	16.	2.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000005610	0.001226625	-0.000005699	-0.000004601	0.000001483	0.000224404
3	0.000019073	0.001822055	-0.000059346	-0.000015644	0.000004296	-0.000131878
5	0.000010097	0.002280729	-0.000017839	-0.000008282	0.000002538	0.000096840
8	-0.000000830	0.000274342	-0.000107761	-0.000022970	0.000005542	-0.000050825
9	0.0	0.000256595	0.0	-0.000025646	0.000005957	0.000011885
10	-0.000039648	0.000178794	0.000030228	0.000065601	0.000012517	0.000000111
11	0.0	0.0	0.0	0.000029554	0.000013178	0.000002199
12	0.000061827	0.000039205	0.000003477	-0.000015589	0.000009338	0.000005340
13	0.000081428	0.000057067	0.000005563	-0.000021642	0.000002518	0.000007225
14	0.000087316	0.000599026	0.000005118	-0.000269298	0.000001440	0.000066779
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.000086792	0.004481159	0.000003709	-0.000400549	-0.000001383	0.000255370
17	0.000074311	0.006168708	0.000002819	-0.000129384	-0.000002701	0.000314924
18	0.000049356	0.005663909	0.000001706	0.000260842	-0.000003843	0.000314924
19	0.000024539	0.003237018	0.000000816	0.000524244	-0.000004352	0.000314924
20	0.0	0.0	0.0	0.000613424	-0.000004503	0.000314924
21	0.000027067	0.000353326	-0.000111870	-0.000022200	0.000005466	-0.000093013
22	-0.000028962	0.000258339	-0.000085287	-0.000023988	0.000005568	-0.000011724
23	0.000089852	0.000244853	0.000482101	-0.000022185	0.000008054	-0.000000737
24	0.000023460	0.000229136	0.000669113	0.000006256	0.000010150	-0.000005006
25	-0.000044622	0.000209445	0.000098927	0.000059675	0.000012246	-0.000000920
26	-0.000026002	0.000105421	-0.000000024	0.000058392	0.000012882	0.000000942
27	0.000081540	0.005542647	0.000003264	-0.000283961	-0.000002087	0.000314924
28	0.000081540	0.007613301	0.000015784	-0.000283961	-0.000002087	0.000355647
29	0.000037329	0.004654158	0.000001261	0.000406463	-0.000004143	0.000314924

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-28.	13.	0.	-1.	-1.	-191.	1.57	276.	1877.	2153.
			2	26.	-13.	-0.	1.	1.	-13.	1.57	276.	130.	406.
2	TAN	1	2	-26.	13.	0.	-1.	-1.	13.	1.57	276.	130.	406.
			5	-4.	-13.	-0.	0.	1.	-82.	1.57	276.	806.	1082.
3	TAN	1	5	4.	13.	0.	-0.	-1.	82.	1.57	276.	806.	1082.
			3	-6.	-13.	-0.	0.	1.	-25.	1.00	276.	157.	433.
4	TAN	1	3	6.	13.	0.	-0.	-1.	25.	1.00	276.	157.	433.
			21	-8.	-13.	-0.	0.	1.	51.	1.57	276.	496.	772.
5	BEND	1	21	-8.	0.	13.	0.	-51.	-1.	1.57	276.	496.	772.
			8	-3.	-0.	-15.	1.	54.	1.	1.57	276.	525.	801.
6	BEND	1	8	3.	0.	15.	-1.	-54.	-1.	1.57	276.	525.	801.
			22	-13.	-0.	-9.	1.	43.	0.	1.57	276.	423.	699.
7	TAN	1	22	-13.	9.	0.	1.	-0.	-43.	1.57	276.	423.	699.
			9	13.	-9.	-0.	-1.	0.	-3.	1.00	276.	19.	295.
8	TAN	1	9	0.	9.	-0.	1.	-0.	3.	1.00	276.	19.	295.
			23	-0.	-13.	0.	3.	0.	-1.	1.00	276.	18.	294.
9	TAN	1	23	0.	13.	-0.	-3.	-0.	1.	1.00	276.	18.	294.
			24	-0.	-17.	0.	7.	0.	-0.	1.00	276.	41.	317.
10	TAN	1	24	0.	17.	-0.	-7.	-0.	0.	1.00	276.	41.	317.
			25	-0.	-21.	0.	10.	0.	1.	1.00	276.	66.	342.
11	BEND	1	25	-0.	0.	21.	-1.	-10.	-0.	1.57	276.	104.	380.
			10	-15.	-0.	-15.	1.	1.	-1.	1.57	276.	20.	296.
12	BEND	1	10	15.	0.	15.	-1.	-1.	1.	1.57	276.	20.	296.
			26	-21.	-0.	-0.	0.	-21.	-1.	1.57	276.	206.	482.
13	TAN	1	26	0.	0.	21.	21.	1.	-0.	1.57	276.	206.	482.
			11	-0.	-0.	-22.	-64.	-1.	1.	1.00	276.	399.	675.
14	TAN	1	11	-1.	12.	-15.	64.	1.	-1.	1.00	276.	399.	675.
			12	1.	-12.	14.	10.	-1.	-5.	1.57	276.	111.	387.
15	TAN	1	12	-1.	12.	-14.	-10.	1.	5.	1.57	276.	111.	387.
			13	1.	-12.	-61.	-59.	-1.	-8.	1.00	276.	374.	650.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	0.	-3.	-102.	359.	45.	1.	1.00	276.	2250.	2526.
			14	-0.	3.	27.	-165.	-45.	-1.	1.57	276.	1681.	1957.
17	TAN	1	14	0.	-3.	-27.	165.	45.	1.	1.57	276.	1681.	1957.
			16	-0.	3.	25.	81.	-45.	-1.	1.57	276.	907.	1183.
18	TAN	1	16	0.	-3.	-25.	-81.	45.	1.	1.57	276.	907.	1183.
			27	-0.	3.	17.	144.	-45.	-1.	1.57	276.	1483.	1759.
19	TAN	1	27	0.	-3.	-7.	-144.	-0.	1.	1.57	276.	1416.	1692.
			17	-0.	3.	-0.	155.	0.	-1.	1.57	276.	1525.	1801.
20	TAN	1	27	0.	0.	-10.	45.	0.	0.	1.57	276.	441.	717.
			28	-0.	-0.	5.	0.	0.	-0.	1.57	276.	0.	276.
21	TAN	1	17	0.	-3.	0.	-155.	-0.	1.	1.57	276.	1525.	1801.
			18	-0.	3.	-2.	149.	0.	-0.	1.57	276.	1463.	1739.
22	TAN	1	18	0.	-3.	2.	-149.	0.	0.	1.57	276.	1463.	1739.
			29	-0.	3.	-9.	133.	-0.	-0.	1.57	276.	1305.	1581.
23	TAN	1	29	0.	-3.	9.	-133.	0.	0.	1.57	276.	1305.	1581.
			19	-0.	3.	-17.	95.	-0.	-0.	1.57	276.	927.	1203.
24	TAN	1	19	0.	-3.	17.	-95.	0.	0.	1.57	276.	927.	1203.
			20	-0.	3.	-18.	-0.	-0.	-0.	1.00	276.	0.	276.
25	TAN	2	13	-1.	-163.	15.	-299.	-7.	-44.	1.00	0.	136.	136.
			15	1.	169.	-15.	-137.	7.	11.	1.00	0.	62.	62.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	23	0.000089852	0.000244853	0.000482101
2	28	0.000081540	0.007613301	0.000015784
3	24	0.000023460	0.000229136	0.000669113

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	2250.	16	2526.
2	25	136.	25	136.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-13.	-28.	0.	1.	-1.	-191.
9	13.	0.	-0.	0.	-0.	0.
11	-1.	-37.	-12.	0.	-0.	-0.
15	1.	-169.	15.	-137.	-7.	-11.
20	-0.	-18.	-3.	-0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000011827	0.000012234	0.000116194	-0.000005991	-0.000026342	0.000002803
3	0.000013345	0.000058506	0.000504786	-0.000020370	0.000006484	0.000000032
5	0.000015978	0.000031710	0.000296311	-0.000010784	-0.000030466	0.000003369
8	0.000004716	0.000010733	-0.000059443	-0.000027175	0.000112528	-0.000009387
9	0.0	0.000006219	0.0	-0.000022410	0.000178053	0.000020013
10	-0.003088014	0.000005114	0.000001146	0.000002985	0.000973483	-0.000021961
11	0.0	0.0	0.0	0.000000925	0.001039939	0.000081279
12	0.004938520	-0.000000768	0.000000005	-0.000000203	0.000760216	0.000234227
13	0.006572064	-0.000000072	0.000000009	-0.000000034	0.000274495	0.000325996
14	0.007721040	0.000000019	0.000000008	-0.000000027	0.000424046	0.000325996
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.011781484	0.000000175	0.000000006	-0.000000007	0.000298566	0.000325996
17	0.012476377	0.000000190	0.000000004	0.000000002	-0.000092507	0.000325996
18	0.009879984	0.000000145	0.000000003	0.000000010	-0.000586631	0.000325996
19	0.005338337	0.000000076	0.000000001	0.000000013	-0.000896361	0.000325996
20	0.0	0.0	0.0	0.000000014	-0.000999282	0.000325996
21	0.000009591	0.000020744	0.000034913	-0.000028908	0.000090132	-0.000007958
22	-0.000006247	0.000006196	-0.000084017	-0.000024929	0.000130279	-0.000006101
23	0.000954801	0.000006346	0.000202578	-0.000001550	0.000435168	0.000015148
24	-0.000496390	0.000006472	0.000130245	0.000007310	0.000692283	-0.000163723
25	-0.003458114	0.000006599	0.000004999	0.000004170	0.000949397	-0.000071782
26	-0.002041750	0.000002637	0.000000012	0.000001811	0.001007362	0.000020100
27	0.012436576	0.000000189	0.000000005	-0.000000002	0.000117937	0.000325996
28	0.012439098	0.001956165	-0.000707614	-0.000000002	0.000117937	0.000325996
29	0.007847603	0.000000113	0.000000002	0.000000012	-0.000759504	0.000325996

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	29.	-1.	15.	-2.	-2.	1.57	276.	149.	425.
			2	0.	-27.	1.	-6.	2.	1.	1.57	276.	59.	335.
2	TAN	1	2	-0.	27.	-1.	6.	-2.	-1.	1.57	276.	59.	335.
			5	0.	3.	1.	2.	2.	-0.	1.57	276.	24.	300.
3	TAN	1	5	-0.	-3.	-1.	-2.	-2.	0.	1.57	276.	24.	300.
			3	0.	5.	1.	16.	2.	-2.	1.00	276.	104.	380.
4	TAN	1	3	-0.	-5.	-1.	-16.	-2.	2.	1.00	276.	104.	380.
			21	0.	7.	1.	30.	2.	-3.	1.57	276.	293.	569.
5	BEND	1	21	0.	-1.	-7.	30.	3.	-2.	1.57	276.	293.	569.
			8	5.	1.	5.	-21.	0.	23.	1.57	276.	304.	580.
6	BEND	1	8	-5.	-1.	-5.	21.	-0.	-23.	1.57	276.	304.	580.
			22	8.	1.	0.	-0.	8.	32.	1.57	276.	320.	596.
7	TAN	1	22	8.	-0.	-1.	-0.	-32.	-8.	1.57	276.	320.	596.
			9	-9.	0.	1.	4.	32.	37.	1.00	276.	302.	578.
8	TAN	1	9	-5.	-0.	0.	-4.	-32.	-37.	1.00	276.	302.	578.
			23	1.	0.	-0.	2.	32.	-26.	1.00	276.	256.	533.
9	TAN	1	23	-1.	-0.	0.	-2.	-32.	26.	1.00	276.	256.	533.
			24	-2.	0.	-0.	0.	32.	-19.	1.00	276.	228.	504.
10	TAN	1	24	2.	-0.	0.	-0.	-32.	19.	1.00	276.	228.	504.
			25	-6.	0.	-0.	-1.	32.	60.	1.00	276.	421.	697.
11	BEND	1	25	0.	6.	-0.	-60.	1.	-32.	1.57	276.	663.	939.
			10	0.	-6.	0.	71.	-2.	-23.	1.57	276.	734.	1010.
12	BEND	1	10	-0.	6.	-0.	-71.	2.	23.	1.57	276.	734.	1010.
			26	0.	-7.	0.	41.	-1.	-69.	1.57	276.	791.	1067.
13	TAN	1	26	7.	-0.	-0.	1.	69.	-41.	1.57	276.	791.	1067.
			11	-7.	0.	0.	-1.	-69.	55.	1.00	276.	551.	827.
14	TAN	1	11	-88.	0.	-0.	1.	69.	-55.	1.00	276.	551.	827.
			12	87.	-0.	0.	-0.	-69.	-384.	1.57	276.	3824.	4100.
15	TAN	1	12	-87.	0.	-0.	0.	69.	384.	1.57	276.	3824.	4100.
			13	12.	-0.	0.	0.	-69.	-533.	1.00	276.	3346.	3622.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	-99.	-0.	0.	-0.	0.	-258.	1.00	276.	1608.	1884.
			14	24.	0.	-0.	0.	-0.	73.	1.57	276.	716.	992.
17	TAN	1	14	-24.	-0.	0.	-0.	-0.	-73.	1.57	276.	716.	992.
			16	22.	0.	-0.	0.	0.	-148.	1.57	276.	1449.	1725.
18	TAN	1	16	-22.	-0.	0.	-0.	0.	148.	1.57	276.	1449.	1725.
			27	15.	0.	-0.	0.	-0.	-203.	1.57	276.	1993.	2269.
19	TAN	1	27	-5.	-0.	0.	-0.	-0.	203.	1.57	276.	1993.	2269.
			17	-3.	0.	-0.	0.	0.	-206.	1.57	276.	2023.	2299.
20	TAN	1	27	-0.	10.	-0.	0.	-0.	-0.	1.57	276.	0.	276.
			28	0.	-5.	0.	0.	0.	-0.	1.57	276.	0.	276.
21	TAN	1	17	3.	-0.	0.	-0.	-0.	206.	1.57	276.	2023.	2299.
			18	-4.	0.	-0.	0.	0.	-180.	1.57	276.	1765.	2041.
22	TAN	1	18	4.	-0.	0.	-0.	0.	180.	1.57	276.	1765.	2041.
			29	-12.	0.	-0.	0.	-0.	-156.	1.57	276.	1528.	1804.
23	TAN	1	29	12.	-0.	0.	-0.	0.	156.	1.57	276.	1528.	1804.
			19	-19.	0.	-0.	0.	-0.	-109.	1.57	276.	1071.	1347.
24	TAN	1	19	19.	-0.	0.	-0.	0.	109.	1.57	276.	1071.	1347.
			20	-20.	0.	-0.	0.	-0.	-0.	1.00	276.	0.	276.
25	TAN	2	13	87.	0.	0.	-0.	-791.	69.	1.00	0.	357.	357.
			15	-93.	-0.	-0.	-0.	791.	2541.	1.00	0.	1196.	1196.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	17	0.012476377	0.000000190	0.000000004
2	28	0.012439098	0.001956165	-0.000707614
3	28	0.012439098	0.001956165	-0.000707614

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	3824.	14	4100.
2	25	1196.	25	1196.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-29.	-0.	-1.	2.	15.	-2.
9	-14.	-0.	1.	-0.	-0.	-0.
11	-95.	-0.	-0.	0.	-0.	-0.
15	-93.	0.	0.	-0.	-791.	-2541.
20	-20.	-0.	-0.	0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000011699	-0.000012480	-0.000110265	0.000005683	0.000024998	-0.000002859
3	-0.000012908	-0.000059523	-0.000479044	0.000019322	-0.000006151	-0.000000012
5	-0.000015747	-0.000032332	-0.000281192	0.000010229	0.000028912	-0.000003432
8	-0.000003961	-0.000010383	0.000056353	0.000025776	-0.000106780	0.000009609
9	0.0	-0.000005762	0.0	0.000021253	-0.000168960	-0.000021029
10	0.002928054	-0.000004756	-0.000001072	-0.000002799	-0.000923895	0.000029161
11	0.0	0.0	0.0	-0.000000858	-0.000987718	-0.000070716
12	-0.004684445	0.000000712	-0.000000005	0.000000188	-0.000716078	-0.000218765
13	-0.006204642	0.000000066	-0.000000008	0.000000032	-0.000245952	-0.000307594
14	-0.007176708	-0.000000018	-0.000000007	0.000000025	-0.000342896	-0.000307594
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.010193359	-0.000000162	-0.000000005	0.000000007	-0.000202897	-0.000307594
17	-0.010578178	-0.000000176	-0.000000004	-0.000000002	0.000093526	-0.000307594
18	-0.008365963	-0.000000134	-0.000000002	-0.000000009	0.000492404	-0.000307594
19	-0.004536375	-0.000000070	-0.000000001	-0.000000012	0.000759664	-0.000307594
20	0.0	0.0	0.0	-0.000000013	0.000849988	-0.000307594
21	-0.000008971	-0.000020655	-0.000033188	0.000027420	-0.000085527	0.000008163
22	0.000007252	-0.000005738	0.000079684	0.000023644	-0.000123625	0.000006150
23	-0.001034448	-0.000005891	-0.000191989	0.000001460	-0.000412946	-0.000021463
24	0.000308034	-0.000006021	-0.000123254	-0.000006933	-0.000656933	0.000159566
25	0.003269915	-0.000006150	-0.000004693	-0.000003927	-0.000900919	0.000077236
26	0.001938560	-0.000002444	-0.000000011	-0.000001687	-0.000956341	-0.000011497
27	-0.010614231	-0.000000175	-0.000000005	0.000000002	-0.000065704	-0.000307594
28	-0.010613389	-0.001845742	0.000394219	0.000000002	-0.000065704	-0.000307594
29	-0.006657761	-0.000000105	-0.000000002	-0.000000011	0.000640294	-0.000307594

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-29.	1.	-14.	2.	2.	1.57	276.	141.	417.
			2	-0.	27.	-1.	5.	-2.	-1.	1.57	276.	56.	332.
2	TAN	1	2	0.	-27.	1.	-5.	2.	1.	1.57	276.	56.	332.
			5	-0.	-3.	-1.	-2.	-2.	0.	1.57	276.	23.	299.
3	TAN	1	5	0.	3.	1.	2.	2.	-0.	1.57	276.	23.	299.
			3	-0.	-5.	-1.	-16.	-2.	2.	1.00	276.	98.	374.
4	TAN	1	3	0.	5.	1.	16.	2.	-2.	1.00	276.	98.	374.
			21	-0.	-8.	-1.	-28.	-2.	3.	1.57	276.	278.	554.
5	BEND	1	21	-0.	1.	8.	-28.	-3.	2.	1.57	276.	278.	554.
			8	-6.	-1.	-6.	20.	-0.	-22.	1.57	276.	288.	564.
6	BEND	1	8	6.	1.	6.	-20.	0.	22.	1.57	276.	288.	564.
			22	-8.	-1.	-0.	0.	-9.	-30.	1.57	276.	306.	582.
7	TAN	1	22	-8.	0.	1.	0.	30.	9.	1.57	276.	306.	582.
			9	9.	-0.	-1.	-4.	-30.	-38.	1.00	276.	303.	579.
8	TAN	1	9	5.	0.	-0.	4.	30.	38.	1.00	276.	303.	579.
			23	-2.	-0.	0.	-2.	-30.	26.	1.00	276.	248.	524.
9	TAN	1	23	2.	0.	-0.	2.	30.	-26.	1.00	276.	248.	524.
			24	2.	-0.	0.	-0.	-30.	20.	1.00	276.	223.	499.
10	TAN	1	24	-2.	0.	-0.	0.	30.	-20.	1.00	276.	223.	499.
			25	6.	-0.	0.	1.	-30.	-58.	1.00	276.	405.	681.
11	BEND	1	25	-0.	-6.	0.	58.	-1.	30.	1.57	276.	637.	913.
			10	-0.	6.	-0.	-69.	1.	22.	1.57	276.	707.	983.
12	BEND	1	10	0.	-6.	0.	69.	-1.	-22.	1.57	276.	707.	983.
			26	-0.	7.	-0.	-40.	1.	67.	1.57	276.	764.	1040.
13	TAN	1	26	-7.	0.	0.	-1.	-67.	40.	1.57	276.	764.	1040.
			11	7.	-0.	-0.	1.	67.	-53.	1.00	276.	533.	809.
14	TAN	1	11	86.	-0.	0.	-1.	-67.	53.	1.00	276.	533.	809.
			12	-85.	0.	-0.	0.	67.	372.	1.57	276.	3710.	3986.
15	TAN	1	12	85.	-0.	0.	-0.	-67.	-372.	1.57	276.	3710.	3986.
			13	-10.	0.	-0.	-0.	67.	514.	1.00	276.	3225.	3501.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	92.	0.	-0.	0.	0.	195.	1.00	276.	1216.	1492.
			14	-17.	-0.	0.	-0.	0.	-33.	1.57	276.	321.	597.
17	TAN	1	14	17.	0.	-0.	0.	0.	33.	1.57	276.	321.	597.
			16	-15.	-0.	0.	-0.	-0.	116.	1.57	276.	1142.	1418.
18	TAN	1	16	15.	0.	-0.	0.	-0.	-116.	1.57	276.	1142.	1418.
			27	-7.	-0.	0.	-0.	0.	149.	1.57	276.	1464.	1740.
19	TAN	1	27	7.	0.	-0.	0.	0.	-149.	1.57	276.	1464.	1740.
			17	0.	-0.	0.	-0.	0.	160.	1.57	276.	1566.	1842.
20	TAN	1	27	-0.	0.	0.	-0.	0.	-0.	1.57	276.	0.	276.
			28	0.	-5.	-0.	0.	-0.	0.	1.57	276.	0.	276.
21	TAN	1	17	-0.	0.	-0.	0.	0.	-160.	1.57	276.	1566.	1842.
			18	2.	-0.	0.	-0.	-0.	152.	1.57	276.	1488.	1764.
22	TAN	1	18	-2.	0.	-0.	0.	-0.	-152.	1.57	276.	1488.	1764.
			29	9.	-0.	0.	-0.	0.	135.	1.57	276.	1324.	1600.
23	TAN	1	29	-9.	0.	-0.	0.	-0.	-135.	1.57	276.	1324.	1600.
			19	17.	-0.	0.	-0.	0.	96.	1.57	276.	939.	1215.
24	TAN	1	19	-17.	0.	-0.	0.	-0.	-96.	1.57	276.	939.	1215.
			20	18.	-0.	0.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	-82.	-0.	-0.	0.	709.	-67.	1.00	0.	320.	320.
			15	88.	0.	0.	0.	-709.	-2401.	1.00	0.	1125.	1125.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	27	-0.010614231	-0.000000175	-0.000000005
2	28	-0.010613389	-0.001845742	0.000394219
3	3	-0.000012908	-0.000059523	-0.000479044

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	14	3710.	14	3986.
2	25	1125.	25	1125.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S . (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	29.	0.	1.	-2.	-14.	2.
9	14.	0.	-1.	0.	0.	0.
11	93.	0.	0.	-0.	0.	0.
15	88.	-0.	-0.	0.	709.	2401.
20	18.	0.	0.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS 00-4-1371 GROUP 6
GROUP 6 LINE 108

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000000145	0.000022622	0.001394984	-0.000018987	-0.000261629	0.000005539
3	-0.000000494	0.000172409	0.002383096	-0.000064556	0.000163999	0.000008626
5	-0.000000262	0.000064777	0.002693780	-0.000034177	-0.000135842	0.000008169
8	0.000000387	0.000245921	-0.000387637	-0.000095756	0.000269834	0.000001978
9	0.0	0.000246563	0.0	-0.000137043	0.000251489	-0.000000902
10	-0.000086874	0.000195681	0.000041858	0.000104152	0.000035371	0.000001353
11	0.0	0.0	0.0	0.000036730	0.000023237	0.000001846
12	0.000080884	-0.000032302	0.000040052	-0.000008115	0.000009449	0.000003734
13	0.000097568	-0.000002714	0.000057684	-0.000003027	0.000001855	0.000004867
14	0.000099541	0.000005316	0.000062300	-0.000002347	-0.000001797	0.000004867
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000051478	0.000018669	0.000056405	-0.000000569	-0.000036540	0.000004867
17	-0.000313243	0.000019448	0.000048144	0.000000261	-0.000030823	0.000004867
18	-0.000360745	0.000014529	0.000032230	0.000000981	0.000013825	0.000004867
19	-0.000209029	0.000007537	0.000016714	0.000001302	0.000033734	0.000004867
20	0.0	0.0	0.0	0.000001397	0.000039638	0.000004867
21	-0.000000702	0.000242886	-0.000138687	-0.000091612	0.000272307	0.000003640
22	0.000001518	0.000246538	-0.000401312	-0.000105217	0.000264575	0.000000451
23	-0.000040715	0.000246699	0.003125286	-0.000123798	0.000181062	-0.000003003
24	-0.000093510	0.000246835	0.003206423	0.000115683	0.000110636	-0.000002207
25	-0.000104800	0.000246971	0.000172604	0.000136583	0.000040209	0.000001484
26	-0.000052267	0.000104712	0.000000719	0.000068088	0.000029051	0.000001091
27	-0.000186648	0.000019681	0.000053747	-0.000000126	-0.000054830	0.000004867
28	-0.000186648	0.000048886	0.000563836	-0.000000126	-0.000095553	0.000004867
29	-0.000299819	0.000011274	0.000025103	0.000001169	0.000025536	0.000004867

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	-0.	-30.	214.	-6.	-3.	1.57	276.	2096.	2372.
			2	0.	0.	29.	6.	6.	2.	1.57	276.	84.	360.
2	TAN	1	2	-0.	-0.	-29.	-6.	-6.	-2.	1.57	276.	84.	360.
			5	0.	0.	-1.	87.	6.	1.	1.57	276.	859.	1135.
3	TAN	1	5	-0.	-0.	1.	-87.	-6.	-1.	1.57	276.	859.	1135.
			3	0.	0.	-4.	55.	6.	-1.	1.00	276.	344.	620.
4	TAN	1	3	-0.	-0.	4.	-55.	-6.	1.	1.00	276.	344.	620.
			21	0.	0.	-6.	1.	6.	-2.	1.57	276.	60.	336.
5	BEND	1	21	0.	6.	-0.	1.	2.	-6.	1.57	276.	60.	336.
			8	0.	-6.	0.	10.	-2.	2.	1.57	276.	103.	379.
6	BEND	1	8	-0.	6.	-0.	-10.	2.	-2.	1.57	276.	103.	379.
			22	0.	-7.	0.	15.	-2.	-9.	1.57	276.	174.	450.
7	TAN	1	22	0.	-0.	7.	15.	9.	2.	1.57	276.	174.	450.
			9	-0.	0.	-7.	-40.	-9.	-1.	1.00	276.	252.	528.
8	TAN	1	9	0.	-0.	-6.	40.	9.	1.	1.00	276.	252.	528.
			23	-0.	0.	2.	32.	-9.	-0.	1.00	276.	206.	482.
9	TAN	1	23	0.	-0.	-2.	-32.	9.	0.	1.00	276.	206.	482.
			24	-0.	0.	-2.	33.	-9.	0.	1.00	276.	210.	486.
10	TAN	1	24	0.	-0.	2.	-33.	9.	-0.	1.00	276.	210.	486.
			25	-0.	0.	-6.	-38.	-9.	1.	1.00	276.	241.	517.
11	BEND	1	25	6.	0.	-0.	-1.	38.	9.	1.57	276.	379.	655.
			10	-4.	-0.	4.	-5.	-44.	-7.	1.57	276.	438.	714.
12	BEND	1	10	4.	0.	-4.	5.	44.	7.	1.57	276.	438.	714.
			26	0.	-0.	6.	-9.	-46.	-1.	1.57	276.	462.	738.
13	TAN	1	26	0.	-6.	-0.	46.	1.	9.	1.57	276.	462.	738.
			11	-0.	7.	0.	-46.	-1.	-9.	1.00	276.	292.	568.
14	TAN	1	11	0.	143.	-8.	46.	1.	9.	1.00	276.	292.	568.
			12	-0.	-142.	8.	-7.	-1.	-8.	1.57	276.	101.	377.
15	TAN	1	12	0.	142.	-8.	7.	1.	8.	1.57	276.	101.	377.
			13	-0.	-67.	8.	17.	-1.	-7.	1.00	276.	114.	390.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	-1.	65.	0.	-1.	-0.	2.	1.00	276.	12.	288.
			14	1.	10.	-0.	1.	0.	-5.	1.57	276.	52.	329.
17	TAN	1	14	-1.	-10.	0.	-1.	0.	5.	1.57	276.	52.	329.
			16	1.	12.	-0.	0.	0.	-16.	1.57	276.	159.	435.
18	TAN	1	16	-1.	-12.	0.	-0.	0.	16.	1.57	276.	159.	435.
			27	1.	20.	-0.	0.	-0.	-20.	1.57	276.	193.	469.
19	TAN	1	27	-1.	-30.	0.	-0.	-0.	-25.	1.57	276.	248.	524.
			17	1.	37.	-0.	0.	0.	22.	1.57	276.	214.	490.
20	TAN	1	27	10.	0.	-0.	0.	-0.	45.	1.57	276.	441.	717.
			28	-5.	0.	0.	0.	0.	-0.	1.57	276.	0.	276.
21	TAN	1	17	-1.	-37.	0.	-0.	-0.	-22.	1.57	276.	214.	490.
			18	1.	39.	-0.	0.	0.	13.	1.57	276.	130.	406.
22	TAN	1	18	-1.	-39.	0.	-0.	0.	-13.	1.57	276.	130.	406.
			29	1.	46.	-0.	0.	0.	10.	1.57	276.	96.	372.
23	TAN	1	29	-1.	-46.	0.	-0.	0.	-10.	1.57	276.	96.	372.
			19	1.	54.	-0.	0.	0.	6.	1.57	276.	62.	338.
24	TAN	1	19	-1.	-54.	0.	-0.	0.	-6.	1.57	276.	62.	338.
			20	1.	55.	-0.	0.	-0.	0.	1.00	276.	0.	276.
25	TAN	2	13	1.	8.	2.	-16.	-5.	1.	1.00	0.	8.	8.
			15	-1.	-8.	4.	36.	5.	37.	1.00	0.	23.	23.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	18	-0.000360745	0.000014529	0.000032230
2	25	-0.000104800	0.000246971	0.000172604
3	24	-0.000093510	0.000246835	0.003206423

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2096.	1	2372.
2	25	23.	25	23.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	-0.	-30.	6.	214.	-3.
9	-0.	-0.	-13.	0.	0.	0.
11	0.	-8.	-150.	0.	0.	-0.
15	-1.	8.	-4.	36.	-5.	-37.
20	1.	-0.	-55.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000000166	-0.000022651	-0.001393934	0.000018930	0.000261390	-0.000005545
3	0.000000566	-0.000172485	-0.002378550	0.000064362	-0.000163937	-0.000008618
5	0.000000299	-0.000064845	-0.002691102	0.000034074	0.000135567	-0.000008175
8	-0.000000263	-0.000245735	0.000387039	0.000095497	-0.000268810	-0.000001941
9	0.0	-0.000246359	0.0	0.000136825	-0.000249870	0.000000735
10	0.000058563	-0.000195507	-0.000041830	-0.000104087	-0.000026559	-0.000000301
11	0.0	0.0	0.0	-0.000036679	-0.000013962	-0.000000259
12	-0.000037624	0.000032153	-0.000038703	0.000008101	-0.000003014	-0.000001373
13	-0.000041123	0.000002718	-0.000055526	0.000002927	-0.000000372	-0.000002041
14	-0.000042389	-0.000035048	-0.000059328	0.000002270	-0.000000911	-0.000002041
15	0.0	0.0	0.0	0.0	0.0	0.0
16	-0.000086764	-0.000017972	-0.000050852	0.000000553	-0.000010719	-0.000002041
17	-0.000162624	-0.000018740	-0.000042644	-0.000000250	-0.000007982	-0.000002041
18	-0.000158270	-0.000014007	-0.000028902	-0.000000945	0.000007629	-0.000002041
19	-0.000088456	-0.000007267	-0.000015122	-0.000001255	0.000014589	-0.000002041
20	0.0	0.0	0.0	-0.000001347	0.000016654	-0.000002041
21	0.000000803	-0.000242744	0.000138942	0.000091338	-0.000271486	-0.000003604
22	-0.000001353	-0.000246333	0.000400503	0.000104978	-0.000263390	-0.000000442
23	0.000027565	-0.000246495	-0.003123182	0.000123771	-0.000177110	0.000001953
24	0.000061949	-0.000246631	-0.003204872	-0.000115614	-0.000104350	0.000001472
25	0.000071693	-0.000246768	-0.000172505	-0.000136512	-0.000031590	-0.000000710
26	0.000033939	-0.000104603	-0.000000719	-0.000068031	-0.000019988	0.000000186
27	-0.000126747	-0.000018958	-0.000047379	0.000000124	-0.000016376	-0.000002041
28	-0.000126747	-0.000031205	0.000131633	0.000000124	-0.000036743	-0.000002041
29	-0.000128584	-0.000010870	-0.000022643	-0.000001127	0.000011723	-0.000002041

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	0.	30.	-214.	6.	3.	1.57	276.	2095.	2371.
			2	-0.	-0.	-29.	-6.	-6.	-2.	1.57	276.	84.	361.
2	TAN	1	2	0.	0.	29.	6.	6.	2.	1.57	276.	84.	361.
			5	-0.	-0.	1.	-87.	-6.	-1.	1.57	276.	859.	1135.
3	TAN	1	5	0.	0.	-1.	87.	6.	1.	1.57	276.	859.	1135.
			3	-0.	-0.	4.	-55.	-6.	1.	1.00	276.	343.	619.
4	TAN	1	3	0.	0.	-4.	55.	6.	-1.	1.00	276.	343.	619.
			21	-0.	-0.	6.	-1.	-6.	2.	1.57	276.	60.	336.
5	BEND	1	21	-0.	-6.	0.	-1.	-2.	6.	1.57	276.	60.	336.
			8	-0.	6.	-0.	-10.	2.	-2.	1.57	276.	104.	380.
6	BEND	1	8	0.	-6.	0.	10.	-2.	2.	1.57	276.	104.	380.
			22	-0.	7.	-0.	-15.	2.	9.	1.57	276.	176.	452.
7	TAN	1	22	-0.	0.	-7.	-15.	-9.	-2.	1.57	276.	176.	452.
			9	0.	-0.	7.	40.	9.	0.	1.00	276.	252.	529.
8	TAN	1	9	-0.	0.	6.	-40.	-9.	-0.	1.00	276.	252.	529.
			23	0.	-0.	-2.	-32.	9.	0.	1.00	276.	206.	482.
9	TAN	1	23	-0.	0.	2.	32.	-9.	-0.	1.00	276.	206.	482.
			24	0.	-0.	2.	-33.	9.	-0.	1.00	276.	210.	486.
10	TAN	1	24	-0.	0.	-2.	33.	-9.	0.	1.00	276.	210.	486.
			25	0.	-0.	6.	38.	9.	-0.	1.00	276.	241.	517.
11	BEND	1	25	-6.	-0.	0.	0.	-38.	-9.	1.57	276.	380.	656.
			10	4.	0.	-4.	6.	44.	7.	1.57	276.	438.	714.
12	BEND	1	10	-4.	-0.	4.	-6.	-44.	-7.	1.57	276.	438.	714.
			26	-0.	0.	-6.	9.	46.	1.	1.57	276.	463.	739.
13	TAN	1	26	-0.	6.	0.	-46.	-1.	-9.	1.57	276.	463.	739.
			11	0.	-7.	-0.	46.	1.	9.	1.00	276.	292.	568.
14	TAN	1	11	-1.	-138.	8.	-46.	-1.	-9.	1.00	276.	292.	568.
			12	1.	137.	-8.	7.	1.	4.	1.57	276.	77.	353.
15	TAN	1	12	-1.	-137.	8.	-7.	-1.	-4.	1.57	276.	77.	353.
			13	1.	62.	-8.	-17.	1.	1.	1.00	276.	105.	381.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	-0.	-60.	-0.	1.	0.	-0.	1.00	276.	4.	280.
			14	0.	-15.	0.	-1.	-0.	-1.	1.57	276.	13.	289.
17	TAN	1	14	-0.	15.	-0.	1.	0.	1.	1.57	276.	13.	289.
			16	0.	-17.	0.	-0.	-0.	-5.	1.57	276.	49.	325.
18	TAN	1	16	-0.	17.	-0.	0.	0.	5.	1.57	276.	49.	325.
			27	0.	-24.	0.	-0.	-0.	-6.	1.57	276.	61.	337.
19	TAN	1	27	-0.	24.	-0.	0.	0.	-9.	1.57	276.	87.	363.
			17	0.	-32.	0.	-0.	-0.	8.	1.57	276.	75.	351.
20	TAN	1	27	0.	-0.	0.	-0.	0.	15.	1.57	276.	147.	423.
			28	-5.	0.	-0.	-0.	-0.	-0.	1.57	276.	0.	276.
21	TAN	1	17	-0.	32.	-0.	0.	0.	-8.	1.57	276.	75.	351.
			18	0.	-33.	0.	-0.	-0.	5.	1.57	276.	45.	321.
22	TAN	1	18	-0.	33.	-0.	0.	0.	-5.	1.57	276.	45.	321.
			29	0.	-41.	0.	-0.	0.	3.	1.57	276.	34.	310.
23	TAN	1	29	-0.	41.	-0.	0.	-0.	-3.	1.57	276.	34.	310.
			19	0.	-48.	0.	-0.	0.	2.	1.57	276.	22.	298.
24	TAN	1	19	-0.	48.	-0.	0.	-0.	-2.	1.57	276.	22.	298.
			20	0.	-50.	0.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	-1.	-8.	-2.	16.	1.	-1.	1.00	0.	7.	7.
			15	1.	8.	-4.	-35.	-1.	-16.	1.00	0.	17.	17.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	17	-0.000162624	-0.000018740	-0.000042644
2	25	0.000071693	-0.000246768	-0.000172505
3	24	0.000061949	-0.000246631	-0.003204872

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	2095.	1	2371.
2	25	17.	25	17.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-0.	0.	30.	-6.	-214.	3.
9	0.	0.	13.	-0.	-0.	-0.
11	-1.	8.	145.	-0.	-0.	0.
15	1.	-8.	4.	-35.	1.	16.
20	0.	0.	50.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000654086	0.001167112	0.000009846	0.000003320	-0.000002382	0.000274826
3	0.002223892	0.006918162	0.000069824	0.000011289	-0.000003059	0.000181347
5	0.001177354	0.003152960	0.000027695	0.000005977	-0.000003398	0.000361794
8	0.003032929	0.005711183	0.000081517	0.000016703	0.000000885	-0.000536374
9	0.0	0.005042627	0.0	0.000019017	0.000003599	-0.000658664
10	-0.000159015	-0.000061224	-0.000294780	-0.000034738	0.000032361	0.000165836
11	0.0	0.0	0.0	-0.000021119	0.000025132	0.000119939
12	0.000091537	0.000017526	-0.000000125	0.000004636	0.000011283	0.000049944
13	0.000112477	0.000001636	-0.000000199	0.000000776	0.000002568	0.000007947
14	0.000118202	-0.000000433	-0.000000183	0.000000608	0.000001287	0.000007947
15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.000113574	-0.000003989	-0.000000133	0.000000167	-0.000002063	0.000007947
17	0.000096226	-0.000004336	-0.000000101	-0.000000039	-0.000003628	0.000007947
18	0.000063440	-0.000003308	-0.000000061	-0.000000218	-0.000004984	0.000007947
19	0.000031449	-0.000001728	-0.000000029	-0.000000297	-0.000005588	0.000007947
20	0.0	0.0	0.0	-0.000000321	-0.000005768	0.000007947
21	0.003155965	0.006235644	0.000089107	0.000016021	-0.000000094	-0.000377177
22	0.002411478	0.005353749	0.000062802	0.000017603	0.000001688	-0.000658730
23	-0.006277289	0.003368241	-0.000378348	0.000019042	0.000013885	-0.000072223
24	-0.004521027	0.001693852	-0.000603954	0.000002504	0.000024171	0.000209828
25	-0.000362446	0.000019464	-0.000370412	-0.000030596	0.000034457	0.000187488
26	-0.000055978	-0.000061854	-0.000182084	-0.000032906	0.000028724	0.000147937
27	0.000106074	-0.000004317	-0.000000117	0.000000057	-0.000002899	0.000007947
28	0.000652373	0.000043368	0.000017276	0.000000057	-0.000002899	0.000007947
29	0.000047898	-0.000002578	-0.000000045	-0.000000264	-0.000005339	0.000007947

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-10.	-68.	-0.	1.	1.	-144.	2.10	276.	1886.	2162.
			2	10.	68.	0.	-1.	-1.	72.	2.10	276.	938.	1214.
2	TAN	1	2	-10.	-68.	-0.	1.	1.	-72.	2.10	276.	938.	1214.
			5	10.	68.	0.	-0.	-1.	14.	2.10	276.	180.	456.
3	TAN	1	5	-10.	-68.	-0.	0.	1.	-14.	2.10	276.	180.	456.
			3	10.	68.	0.	0.	-1.	-102.	1.00	276.	637.	913.
4	TAN	1	3	-10.	-68.	-0.	-0.	1.	102.	1.00	276.	637.	913.
			21	10.	68.	0.	1.	-1.	-206.	2.10	276.	2689.	2965.
5	BEND	1	21	10.	-0.	-68.	1.	206.	1.	2.10	276.	2689.	2965.
			8	42.	0.	55.	-2.	-186.	0.	2.10	276.	2430.	2706.
6	BEND	1	8	-42.	-0.	-55.	2.	186.	-0.	2.10	276.	2430.	2706.
			22	68.	0.	10.	-1.	-118.	1.	2.10	276.	1537.	1813.
7	TAN	1	22	68.	-10.	-0.	-1.	-1.	118.	2.10	276.	1537.	1813.
			9	-68.	10.	0.	1.	1.	118.	1.00	276.	733.	1009.
8	TAN	1	9	-3.	-10.	0.	-1.	-1.	-118.	1.00	276.	733.	1009.
			23	3.	10.	-0.	-1.	1.	69.	1.00	276.	431.	707.
9	TAN	1	23	-3.	-10.	0.	1.	-1.	-69.	1.00	276.	431.	707.
			24	3.	10.	-0.	-4.	1.	21.	1.00	276.	131.	407.
10	TAN	1	24	-3.	-10.	0.	4.	-1.	-21.	1.00	276.	131.	407.
			25	3.	10.	-0.	-7.	1.	-28.	1.00	276.	178.	454.
11	BEND	1	25	0.	-3.	-10.	28.	7.	-1.	2.10	276.	374.	650.
			10	7.	3.	7.	-22.	-2.	22.	2.10	276.	401.	677.
12	BEND	1	10	-7.	-3.	-7.	22.	2.	-22.	2.10	276.	401.	677.
			26	10.	3.	0.	-3.	8.	32.	2.10	276.	428.	704.
13	TAN	1	26	-3.	-0.	-10.	-8.	-32.	3.	2.10	276.	428.	704.
			11	3.	0.	10.	27.	32.	-8.	1.00	276.	264.	540.
14	TAN	1	11	-0.	-1623.	5.	-27.	-32.	8.	1.00	276.	264.	540.
			12	0.	1623.	-5.	3.	32.	-8.	2.10	276.	431.	707.
15	TAN	1	12	-0.	-1623.	5.	-3.	-32.	8.	2.10	276.	431.	707.
			13	0.	1623.	-5.	-11.	32.	-9.	1.00	276.	216.	492.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	0.	-1623.	-0.	0.	0.	1.	1.00	276.	8.	284.
			14	-0.	1623.	0.	-0.	-0.	-1.	2.10	276.	16.	292.
17	TAN	1	14	0.	-1623.	-0.	0.	0.	1.	2.10	276.	16.	292.
			16	-0.	1623.	0.	-0.	-0.	-1.	2.10	276.	12.	288.
18	TAN	1	16	0.	-1623.	-0.	0.	0.	1.	2.10	276.	12.	288.
			27	-0.	1623.	0.	-0.	-0.	-1.	2.10	276.	10.	286.
19	TAN	1	27	0.	-1623.	-0.	0.	-0.	1.	2.10	276.	10.	286.
			17	-0.	1623.	0.	-0.	0.	-1.	2.10	276.	9.	285.
20	TAN	1	27	0.	-0.	0.	0.	0.	0.	2.10	276.	0.	276.
			28	-0.	0.	-0.	-0.	-0.	-0.	2.10	276.	0.	276.
21	TAN	1	17	0.	-1623.	-0.	0.	-0.	1.	2.10	276.	9.	285.
			18	-0.	1623.	0.	-0.	0.	-0.	2.10	276.	5.	281.
22	TAN	1	18	0.	-1623.	-0.	0.	-0.	0.	2.10	276.	5.	281.
			29	-0.	1623.	0.	-0.	0.	-0.	2.10	276.	4.	280.
23	TAN	1	29	0.	-1623.	-0.	0.	0.	0.	2.10	276.	4.	280.
			19	-0.	1623.	0.	-0.	0.	-0.	2.10	276.	3.	279.
24	TAN	1	19	0.	-1623.	-0.	0.	0.	0.	2.10	276.	3.	279.
			20	-0.	1623.	0.	0.	-0.	-0.	1.00	276.	0.	276.
25	TAN	2	13	-0.	-5.	-1.	11.	-7.	-32.	1.00	0.	15.	15.
			15	0.	5.	1.	5.	7.	28.	1.00	0.	13.	13.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	23	-0.006277289	0.003368241	-0.000378348
2	3	0.002223892	0.006918162	0.000069824
3	24	-0.004521027	0.001693852	-0.000603954

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	4	2689.	4	2965.
2	25	15.	25	15.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	68.	-10.	-0.	-1.	1.	-144.
9	-71.	-0.	0.	-0.	-0.	-0.
11	3.	14.	1623.	-0.	0.	0.
15	0.	-5.	-1.	5.	-7.	-28.
20	-0.	0.	-1623.	0.	-0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

```
* CPU SECONDS ** THIS STEP "ST3D" TIME IS    5.67 ** LAST STEP "UPDT" TIME IS    3.69 ** DELTA TIME IS    1.98 *
* ELAPSED SECONDS                          119.9                                74.8                      45.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    5.69 ** LAST STEP "ST3D" TIME IS    5.67 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                          120.0                               119.9                       0.1 *
```

SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 25
NUMBER OF JOINTS 26
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	1.0400	3	0.9400				
2	1	2.0400	3	0.9400						
3	1	1.0000	2	1.0400	5	0.9400				
4	1	2.0400	5	0.9400						
5	1	1.0000	2	1.0400	4	0.9400				
6	1	2.0400	4	0.9400						
7	1	1.0000	2	1.0400	6	0.9400				
8	1	2.0400	6	0.9400						
9	1	1.0000	2	1.9000	3	1.4000				
10	1	2.9000	3	1.4000						
11	1	1.0000	2	1.9000	5	1.4000				
12	1	2.9000	5	1.4000						
13	1	1.0000	2	1.9000	4	1.4000				
14	1	2.9000	4	1.4000						
15	1	1.0000	2	1.9000	6	1.4000				
16	1	2.9000	6	1.4000						

```
* CPU SECONDS ** THIS STEP "COMB" TIME IS    5.85 ** LAST STEP "BEGP" TIME IS    5.69 ** DELTA TIME IS    0.16 *
* ELAPSED SECONDS                          124.1                                120.0                       4.1 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	54.	1.	16.	4.	392.	1.57	276.	3846.	4122.
			2	54.	53.	1.	7.	4.	27.	1.57	276.	280.	556.
2	TAN	1	2	54.	53.	1.	7.	4.	27.	1.57	276.	280.	556.
			5	7.	30.	1.	3.	4.	168.	1.57	276.	1645.	1921.
3	TAN	1	5	7.	30.	1.	3.	4.	168.	1.57	276.	1645.	1921.
			3	12.	32.	1.	16.	4.	53.	1.00	276.	345.	621.
4	TAN	1	3	12.	32.	1.	16.	4.	53.	1.00	276.	345.	621.
			21	17.	34.	1.	28.	4.	106.	1.57	276.	1076.	1352.
5	BEND	1	21	17.	1.	34.	28.	106.	4.	1.57	276.	1076.	1352.
			8	12.	1.	36.	22.	110.	23.	1.57	276.	1119.	1395.
6	BEND	1	8	12.	1.	36.	22.	110.	23.	1.57	276.	1119.	1395.
			22	34.	1.	18.	3.	96.	30.	1.57	276.	989.	1265.
7	TAN	1	22	34.	18.	1.	3.	30.	96.	1.57	276.	989.	1265.
			9	35.	19.	1.	7.	30.	39.	1.00	276.	312.	588.
8	TAN	1	9	5.	19.	1.	7.	30.	39.	1.00	276.	312.	588.
			23	2.	27.	1.	7.	30.	28.	1.00	276.	258.	534.
9	TAN	1	23	2.	27.	1.	7.	30.	28.	1.00	276.	258.	534.
			24	2.	35.	1.	14.	30.	18.	1.00	276.	235.	511.
10	TAN	1	24	2.	35.	1.	14.	30.	18.	1.00	276.	235.	511.
			25	6.	43.	1.	23.	30.	58.	1.00	276.	430.	706.
11	BEND	1	25	1.	6.	43.	58.	23.	30.	1.57	276.	677.	953.
			10	30.	6.	31.	68.	4.	23.	1.57	276.	706.	982.
12	BEND	1	10	30.	6.	31.	68.	4.	23.	1.57	276.	706.	982.
			26	44.	6.	1.	39.	44.	67.	1.57	276.	877.	1153.
13	TAN	1	26	6.	1.	44.	44.	67.	39.	1.57	276.	877.	1153.
			11	7.	1.	45.	132.	67.	52.	1.00	276.	978.	1254.
14	TAN	1	11	84.	23.	32.	132.	67.	52.	1.00	276.	978.	1254.
			12	84.	23.	30.	24.	67.	368.	1.57	276.	3673.	3949.
15	TAN	1	12	84.	23.	30.	24.	67.	368.	1.57	276.	3673.	3949.
			13	13.	23.	123.	117.	67.	513.	1.00	276.	3300.	3576.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	93.	5.	200.	661.	62.	244.	1.00	276.	4402.	4678.
			14	23.	5.	47.	290.	62.	70.	1.57	276.	2986.	3262.
17	TAN	1	14	23.	5.	47.	290.	62.	70.	1.57	276.	2986.	3262.
			16	21.	5.	43.	139.	62.	140.	1.57	276.	2026.	2302.
18	TAN	1	16	21.	5.	43.	139.	62.	140.	1.57	276.	2026.	2302.
			27	14.	5.	28.	245.	62.	192.	1.57	276.	3114.	3390.
19	TAN	1	27	5.	5.	17.	245.	0.	192.	1.57	276.	3054.	3330.
			17	3.	5.	2.	275.	0.	195.	1.57	276.	3301.	3577.
20	TAN	1	27	0.	9.	10.	62.	0.	0.	1.57	276.	606.	882.
			28	0.	5.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	3.	5.	2.	275.	0.	195.	1.57	276.	3301.	3577.
			18	4.	5.	2.	279.	0.	170.	1.57	276.	3198.	3474.
22	TAN	1	18	4.	5.	2.	279.	0.	170.	1.57	276.	3198.	3474.
			29	11.	5.	16.	252.	0.	147.	1.57	276.	2864.	3140.
23	TAN	1	29	11.	5.	16.	252.	0.	147.	1.57	276.	2864.	3140.
			19	18.	5.	32.	180.	0.	103.	1.57	276.	2037.	2313.
24	TAN	1	19	18.	5.	32.	180.	0.	103.	1.57	276.	2037.	2313.
			20	19.	5.	34.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	83.	323.	27.	545.	754.	126.	1.00	0.	422.	422.
			15	89.	336.	27.	249.	754.	2403.	1.00	0.	1137.	1137.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	4402.	16	4678.
2	25	1137.	25	1137.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-54.	57.	1.	-4.	16.	392.
9	40.	39.	2.	14.	60.	79.
11	91.	77.	-23.	264.	105.	-134.
15	89.	-336.	-27.	249.	-754.	-2403.
20	19.	34.	-5.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	54.	1.	16.	4.	392.	1.57	276.	3846.	4122.
			2	54.	53.	1.	7.	4.	27.	1.57	276.	281.	557.
2	TAN	1	2	54.	53.	1.	7.	4.	27.	1.57	276.	281.	557.
			5	7.	29.	1.	2.	4.	168.	1.57	276.	1645.	1921.
3	TAN	1	5	7.	29.	1.	2.	4.	168.	1.57	276.	1645.	1921.
			3	12.	32.	1.	16.	4.	53.	1.00	276.	345.	621.
4	TAN	1	3	12.	32.	1.	16.	4.	53.	1.00	276.	345.	621.
			21	17.	34.	1.	28.	4.	106.	1.57	276.	1076.	1352.
5	BEND	1	21	17.	1.	34.	28.	106.	4.	1.57	276.	1076.	1352.
			8	12.	1.	36.	22.	110.	23.	1.57	276.	1120.	1396.
6	BEND	1	8	12.	1.	36.	22.	110.	23.	1.57	276.	1120.	1396.
			22	34.	1.	18.	3.	96.	30.	1.57	276.	991.	1267.
7	TAN	1	22	34.	18.	1.	3.	30.	96.	1.57	276.	991.	1267.
			9	35.	19.	1.	7.	30.	39.	1.00	276.	308.	585.
8	TAN	1	9	5.	19.	1.	7.	30.	39.	1.00	276.	308.	585.
			23	1.	27.	1.	7.	30.	27.	1.00	276.	258.	534.
9	TAN	1	23	1.	27.	1.	7.	30.	27.	1.00	276.	258.	534.
			24	2.	35.	1.	13.	30.	19.	1.00	276.	236.	512.
10	TAN	1	24	2.	35.	1.	13.	30.	19.	1.00	276.	236.	512.
			25	6.	43.	1.	22.	30.	57.	1.00	276.	424.	700.
11	BEND	1	25	1.	6.	43.	57.	22.	30.	1.57	276.	668.	944.
			10	30.	6.	31.	67.	4.	22.	1.57	276.	694.	970.
12	BEND	1	10	30.	6.	31.	67.	4.	22.	1.57	276.	694.	970.
			26	44.	6.	1.	39.	44.	66.	1.57	276.	869.	1145.
13	TAN	1	26	6.	1.	44.	44.	66.	39.	1.57	276.	869.	1145.
			11	7.	1.	45.	132.	66.	52.	1.00	276.	975.	1251.
14	TAN	1	11	84.	20.	33.	132.	66.	52.	1.00	276.	975.	1251.
			12	83.	20.	31.	27.	66.	364.	1.57	276.	3640.	3916.
15	TAN	1	12	83.	20.	31.	27.	66.	364.	1.57	276.	3640.	3916.
			13	12.	20.	123.	112.	66.	507.	1.00	276.	3258.	3534.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	93.	4.	192.	587.	31.	244.	1.00	276.	3961.	4237.
			14	23.	4.	39.	240.	31.	69.	1.57	276.	2471.	2747.
17	TAN	1	14	23.	4.	39.	240.	31.	69.	1.57	276.	2471.	2747.
			16	21.	4.	35.	112.	31.	139.	1.57	276.	1778.	2054.
18	TAN	1	16	21.	4.	35.	112.	31.	139.	1.57	276.	1778.	2054.
			27	14.	4.	20.	194.	31.	192.	1.57	276.	2690.	2966.
19	TAN	1	27	4.	4.	20.	194.	0.	192.	1.57	276.	2673.	2949.
			17	3.	4.	4.	230.	0.	194.	1.57	276.	2954.	3230.
20	TAN	1	27	0.	9.	0.	31.	0.	0.	1.57	276.	300.	576.
			28	0.	5.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	3.	4.	4.	230.	0.	194.	1.57	276.	2954.	3230.
			18	4.	4.	1.	252.	0.	169.	1.57	276.	2975.	3251.
22	TAN	1	18	4.	4.	1.	252.	0.	169.	1.57	276.	2975.	3251.
			29	11.	4.	14.	233.	0.	147.	1.57	276.	2697.	2973.
23	TAN	1	29	11.	4.	14.	233.	0.	147.	1.57	276.	2697.	2973.
			19	18.	4.	29.	168.	0.	103.	1.57	276.	1928.	2204.
24	TAN	1	19	18.	4.	29.	168.	0.	103.	1.57	276.	1928.	2204.
			20	19.	4.	32.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	83.	315.	24.	476.	749.	96.	1.00	0.	401.	401.
			15	88.	327.	24.	218.	749.	2396.	1.00	0.	1132.	1132.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	3961.	16	4237.
2	25	1132.	25	1132.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-54.	57.	1.	-4.	16.	392.
9	40.	39.	2.	14.	60.	77.
11	90.	77.	-20.	265.	104.	-132.
15	88.	-327.	-24.	218.	-749.	-2396.
20	19.	32.	-4.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	27.	28.	202.	8.	393.	1.57	276.	4335.	4611.
			2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	574.
2	TAN	1	2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	574.
			5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
3	TAN	1	5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
			3	12.	27.	4.	52.	8.	52.	1.00	276.	461.	737.
4	TAN	1	3	12.	27.	4.	52.	8.	52.	1.00	276.	461.	737.
			21	17.	27.	6.	1.	8.	105.	1.57	276.	1034.	1310.
5	BEND	1	21	17.	6.	27.	1.	105.	8.	1.57	276.	1034.	1310.
			8	7.	6.	32.	11.	111.	4.	1.57	276.	1097.	1373.
6	BEND	1	8	7.	6.	32.	11.	111.	4.	1.57	276.	1097.	1373.
			22	27.	6.	18.	17.	90.	9.	1.57	276.	902.	1178.
7	TAN	1	22	27.	18.	6.	17.	9.	90.	1.57	276.	902.	1178.
			9	27.	19.	7.	40.	9.	5.	1.00	276.	258.	534.
8	TAN	1	9	0.	19.	6.	40.	9.	5.	1.00	276.	258.	534.
			23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
9	TAN	1	23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
			24	0.	35.	2.	44.	9.	1.	1.00	276.	278.	554.
10	TAN	1	24	0.	35.	2.	44.	9.	1.	1.00	276.	278.	554.
			25	0.	43.	6.	57.	9.	2.	1.00	276.	357.	633.
11	BEND	1	25	6.	0.	43.	2.	57.	9.	1.57	276.	563.	839.
			10	34.	0.	35.	6.	44.	8.	1.57	276.	443.	719.
12	BEND	1	10	34.	0.	35.	6.	44.	8.	1.57	276.	443.	719.
			26	44.	0.	6.	9.	86.	3.	1.57	276.	853.	1129.
13	TAN	1	26	0.	6.	44.	86.	3.	9.	1.57	276.	853.	1129.
			11	0.	7.	45.	174.	3.	9.	1.00	276.	1087.	1363.
14	TAN	1	11	2.	157.	39.	174.	3.	9.	1.00	276.	1087.	1363.
			12	2.	156.	37.	30.	3.	14.	1.57	276.	325.	601.
15	TAN	1	12	2.	156.	37.	30.	3.	14.	1.57	276.	325.	601.
			13	2.	86.	131.	132.	3.	18.	1.00	276.	832.	1108.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	1.	66.	200.	661.	62.	3.	1.00	276.	4135.	4411.
			14	1.	14.	47.	290.	62.	6.	1.57	276.	2912.	3188.
17	TAN	1	14	1.	14.	47.	290.	62.	6.	1.57	276.	2912.	3188.
			16	1.	16.	43.	139.	62.	16.	1.57	276.	1503.	1779.
18	TAN	1	16	1.	16.	43.	139.	62.	16.	1.57	276.	1503.	1779.
			27	1.	23.	28.	246.	62.	19.	1.57	276.	2491.	2767.
19	TAN	1	27	1.	33.	17.	246.	0.	25.	1.57	276.	2421.	2697.
			17	1.	40.	2.	275.	0.	21.	1.57	276.	2703.	2979.
20	TAN	1	27	9.	0.	10.	62.	0.	42.	1.57	276.	734.	1010.
			28	5.	0.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	1.	40.	2.	275.	0.	21.	1.57	276.	2703.	2979.
			18	1.	41.	2.	279.	0.	13.	1.57	276.	2736.	3012.
22	TAN	1	18	1.	41.	2.	279.	0.	13.	1.57	276.	2736.	3012.
			29	1.	48.	16.	253.	0.	10.	1.57	276.	2479.	2755.
23	TAN	1	29	1.	48.	16.	253.	0.	10.	1.57	276.	2479.	2755.
			19	1.	55.	32.	181.	0.	6.	1.57	276.	1771.	2048.
24	TAN	1	19	1.	55.	32.	181.	0.	6.	1.57	276.	1771.	2048.
			20	1.	56.	34.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	3.	331.	30.	559.	15.	61.	1.00	0.	253.	253.
			15	3.	343.	31.	283.	15.	50.	1.00	0.	129.	129.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	4335.	1	4611.
2	25	253.	25	253.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-27.	57.	28.	-8.	202.	393.
9	28.	39.	13.	80.	17.	11.
11	2.	84.	-164.	349.	17.	-5.
15	3.	-343.	-31.	283.	-15.	-50.
20	1.	34.	-56.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	27.	28.	203.	8.	393.	1.57	276.	4336.	4612.
			2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	574.
2	TAN	1	2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	574.
			5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
3	TAN	1	5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
			3	12.	27.	4.	52.	8.	52.	1.00	276.	460.	736.
4	TAN	1	3	12.	27.	4.	52.	8.	52.	1.00	276.	460.	736.
			21	17.	27.	6.	1.	8.	105.	1.57	276.	1034.	1310.
5	BEND	1	21	17.	6.	27.	1.	105.	8.	1.57	276.	1034.	1310.
			8	7.	6.	32.	12.	111.	3.	1.57	276.	1098.	1374.
6	BEND	1	8	7.	6.	32.	12.	111.	3.	1.57	276.	1098.	1374.
			22	27.	6.	18.	17.	90.	9.	1.57	276.	904.	1180.
7	TAN	1	22	27.	18.	6.	17.	9.	90.	1.57	276.	904.	1180.
			9	27.	19.	7.	40.	9.	5.	1.00	276.	258.	534.
8	TAN	1	9	0.	19.	6.	40.	9.	5.	1.00	276.	258.	534.
			23	0.	27.	2.	35.	9.	3.	1.00	276.	225.	501.
9	TAN	1	23	0.	27.	2.	35.	9.	3.	1.00	276.	225.	501.
			24	0.	35.	2.	44.	9.	1.	1.00	276.	277.	553.
10	TAN	1	24	0.	35.	2.	44.	9.	1.	1.00	276.	277.	553.
			25	0.	43.	6.	57.	9.	1.	1.00	276.	356.	632.
11	BEND	1	25	6.	0.	43.	1.	57.	9.	1.57	276.	561.	837.
			10	34.	0.	35.	5.	44.	7.	1.57	276.	439.	715.
12	BEND	1	10	34.	0.	35.	5.	44.	7.	1.57	276.	439.	715.
			26	44.	0.	6.	9.	87.	1.	1.57	276.	854.	1130.
13	TAN	1	26	0.	6.	44.	87.	1.	9.	1.57	276.	854.	1130.
			11	0.	7.	45.	174.	1.	8.	1.00	276.	1088.	1364.
14	TAN	1	11	1.	154.	40.	174.	1.	8.	1.00	276.	1088.	1364.
			12	1.	153.	38.	33.	1.	11.	1.57	276.	340.	616.
15	TAN	1	12	1.	153.	38.	33.	1.	11.	1.57	276.	340.	616.
			13	1.	83.	130.	127.	1.	13.	1.00	276.	797.	1073.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	1.	65.	192.	588.	31.	3.	1.00	276.	3663.	3939.
			14	1.	14.	39.	241.	31.	6.	1.57	276.	2382.	2658.
17	TAN	1	14	1.	14.	39.	241.	31.	6.	1.57	276.	2382.	2658.
			16	1.	16.	35.	112.	31.	16.	1.57	276.	1150.	1426.
18	TAN	1	16	1.	16.	35.	112.	31.	16.	1.57	276.	1150.	1426.
			27	1.	23.	20.	194.	31.	19.	1.57	276.	1938.	2214.
19	TAN	1	27	1.	32.	20.	194.	0.	24.	1.57	276.	1920.	2196.
			17	1.	39.	4.	231.	0.	21.	1.57	276.	2270.	2546.
20	TAN	1	27	9.	0.	0.	31.	0.	42.	1.57	276.	512.	788.
			28	5.	0.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	1.	39.	4.	231.	0.	21.	1.57	276.	2270.	2546.
			18	1.	40.	1.	252.	0.	13.	1.57	276.	2473.	2749.
22	TAN	1	18	1.	40.	1.	252.	0.	13.	1.57	276.	2473.	2749.
			29	1.	48.	14.	233.	0.	9.	1.57	276.	2284.	2560.
23	TAN	1	29	1.	48.	14.	233.	0.	9.	1.57	276.	2284.	2560.
			19	1.	55.	29.	168.	0.	6.	1.57	276.	1646.	1922.
24	TAN	1	19	1.	55.	29.	168.	0.	6.	1.57	276.	1646.	1922.
			20	1.	56.	32.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	2.	322.	26.	491.	10.	32.	1.00	0.	221.	221.
			15	2.	334.	27.	251.	10.	43.	1.00	0.	115.	115.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	4336.	1	4612.
2	25	221.	25	221.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-27.	57.	28.	-8.	203.	393.
9	27.	39.	13.	80.	17.	9.
11	1.	85.	-161.	349.	17.	-3.
15	2.	-334.	-27.	251.	-10.	-43.
20	1.	32.	-56.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	54.	1.	15.	4.	392.	1.57	276.	3846.	4122.
			2	54.	52.	1.	6.	4.	27.	1.57	276.	280.	556.
2	TAN	1	2	54.	52.	1.	6.	4.	27.	1.57	276.	280.	556.
			5	7.	30.	1.	2.	4.	168.	1.57	276.	1645.	1921.
3	TAN	1	5	7.	30.	1.	2.	4.	168.	1.57	276.	1645.	1921.
			3	12.	32.	1.	15.	4.	53.	1.00	276.	344.	620.
4	TAN	1	3	12.	32.	1.	15.	4.	53.	1.00	276.	344.	620.
			21	17.	34.	1.	27.	4.	106.	1.57	276.	1073.	1349.
5	BEND	1	21	17.	1.	34.	27.	106.	4.	1.57	276.	1073.	1349.
			8	12.	1.	37.	21.	110.	22.	1.57	276.	1116.	1392.
6	BEND	1	8	12.	1.	37.	21.	110.	22.	1.57	276.	1116.	1392.
			22	35.	1.	18.	3.	97.	29.	1.57	276.	988.	1264.
7	TAN	1	22	35.	18.	1.	3.	29.	97.	1.57	276.	988.	1264.
			9	35.	19.	1.	7.	29.	41.	1.00	276.	313.	589.
8	TAN	1	9	5.	19.	1.	7.	29.	41.	1.00	276.	313.	589.
			23	2.	27.	1.	7.	29.	27.	1.00	276.	250.	526.
9	TAN	1	23	2.	27.	1.	7.	29.	27.	1.00	276.	250.	526.
			24	2.	35.	1.	14.	29.	19.	1.00	276.	230.	506.
10	TAN	1	24	2.	35.	1.	14.	29.	19.	1.00	276.	230.	506.
			25	6.	43.	1.	23.	29.	56.	1.00	276.	415.	691.
11	BEND	1	25	1.	6.	43.	56.	23.	29.	1.57	276.	654.	930.
			10	30.	6.	31.	66.	4.	22.	1.57	276.	681.	957.
12	BEND	1	10	30.	6.	31.	66.	4.	22.	1.57	276.	681.	957.
			26	44.	6.	1.	38.	44.	65.	1.57	276.	854.	1130.
13	TAN	1	26	6.	1.	44.	44.	65.	38.	1.57	276.	854.	1130.
			11	7.	1.	45.	132.	65.	51.	1.00	276.	969.	1245.
14	TAN	1	11	82.	23.	32.	132.	65.	51.	1.00	276.	969.	1245.
			12	81.	23.	30.	24.	65.	357.	1.57	276.	3566.	3842.
15	TAN	1	12	81.	23.	30.	24.	65.	357.	1.57	276.	3566.	3842.
			13	11.	23.	123.	117.	65.	494.	1.00	276.	3189.	3465.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	86.	5.	200.	661.	62.	185.	1.00	276.	4289.	4565.
			14	16.	5.	47.	290.	62.	32.	1.57	276.	2923.	3199.
17	TAN	1	14	16.	5.	47.	290.	62.	32.	1.57	276.	2923.	3199.
			16	14.	5.	43.	139.	62.	110.	1.57	276.	1842.	2118.
18	TAN	1	16	14.	5.	43.	139.	62.	110.	1.57	276.	1842.	2118.
			27	7.	5.	28.	245.	62.	141.	1.57	276.	2841.	3117.
19	TAN	1	27	7.	5.	17.	245.	0.	141.	1.57	276.	2775.	3051.
			17	0.	5.	2.	275.	0.	151.	1.57	276.	3072.	3348.
20	TAN	1	27	0.	0.	10.	62.	0.	0.	1.57	276.	606.	882.
			28	0.	5.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	0.	5.	2.	275.	0.	151.	1.57	276.	3072.	3348.
			18	2.	5.	2.	279.	0.	143.	1.57	276.	3071.	3347.
22	TAN	1	18	2.	5.	2.	279.	0.	143.	1.57	276.	3071.	3347.
			29	9.	5.	16.	252.	0.	127.	1.57	276.	2772.	3048.
23	TAN	1	29	9.	5.	16.	252.	0.	127.	1.57	276.	2772.	3048.
			19	16.	5.	32.	180.	0.	90.	1.57	276.	1978.	2254.
24	TAN	1	19	16.	5.	32.	180.	0.	90.	1.57	276.	1978.	2254.
			20	17.	5.	34.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	79.	323.	27.	545.	676.	124.	1.00	0.	394.	394.
			15	84.	336.	27.	249.	676.	2272.	1.00	0.	1071.	1071.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	4289.	16	4565.
2	25	1071.	25	1071.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-54.	57.	1.	-4.	15.	392.
9	41.	39.	2.	14.	57.	81.
11	89.	77.	-23.	264.	101.	-130.
15	84.	-336.	-27.	249.	-676.	-2272.
20	17.	34.	-5.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	54.	1.	15.	4.	392.	1.57	276.	3846.	4122.
			2	54.	52.	1.	6.	4.	27.	1.57	276.	280.	556.
2	TAN	1	2	54.	52.	1.	6.	4.	27.	1.57	276.	280.	556.
			5	7.	30.	1.	2.	4.	168.	1.57	276.	1645.	1921.
3	TAN	1	5	7.	30.	1.	2.	4.	168.	1.57	276.	1645.	1921.
			3	12.	32.	1.	15.	4.	53.	1.00	276.	343.	619.
4	TAN	1	3	12.	32.	1.	15.	4.	53.	1.00	276.	343.	619.
			21	17.	34.	1.	27.	4.	106.	1.57	276.	1073.	1349.
5	BEND	1	21	17.	1.	34.	27.	106.	4.	1.57	276.	1073.	1349.
			8	12.	1.	37.	21.	110.	22.	1.57	276.	1116.	1392.
6	BEND	1	8	12.	1.	37.	21.	110.	22.	1.57	276.	1116.	1392.
			22	35.	1.	18.	3.	97.	29.	1.57	276.	990.	1266.
7	TAN	1	22	35.	18.	1.	3.	29.	97.	1.57	276.	990.	1266.
			9	35.	19.	1.	7.	29.	40.	1.00	276.	309.	585.
8	TAN	1	9	5.	19.	1.	7.	29.	40.	1.00	276.	309.	585.
			23	2.	27.	1.	7.	29.	27.	1.00	276.	250.	526.
9	TAN	1	23	2.	27.	1.	7.	29.	27.	1.00	276.	250.	526.
			24	2.	35.	1.	13.	29.	20.	1.00	276.	232.	508.
10	TAN	1	24	2.	35.	1.	13.	29.	20.	1.00	276.	232.	508.
			25	6.	43.	1.	22.	29.	55.	1.00	276.	409.	685.
11	BEND	1	25	1.	6.	43.	55.	22.	29.	1.57	276.	645.	921.
			10	30.	6.	31.	64.	4.	22.	1.57	276.	669.	945.
12	BEND	1	10	30.	6.	31.	64.	4.	22.	1.57	276.	669.	945.
			26	44.	6.	1.	38.	44.	64.	1.57	276.	846.	1122.
13	TAN	1	26	6.	1.	44.	44.	64.	38.	1.57	276.	846.	1122.
			11	7.	1.	45.	132.	64.	50.	1.00	276.	966.	1242.
14	TAN	1	11	81.	20.	33.	132.	64.	50.	1.00	276.	966.	1242.
			12	80.	20.	31.	27.	64.	354.	1.57	276.	3534.	3810.
15	TAN	1	12	80.	20.	31.	27.	64.	354.	1.57	276.	3534.	3810.
			13	10.	20.	123.	112.	64.	489.	1.00	276.	3147.	3423.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	86.	4.	192.	587.	31.	184.	1.00	276.	3835.	4111.
			14	16.	4.	39.	240.	31.	31.	1.57	276.	2395.	2671.
17	TAN	1	14	16.	4.	39.	240.	31.	31.	1.57	276.	2395.	2671.
			16	14.	4.	35.	112.	31.	110.	1.57	276.	1566.	1842.
18	TAN	1	16	14.	4.	35.	112.	31.	110.	1.57	276.	1566.	1842.
			27	7.	4.	20.	194.	31.	141.	1.57	276.	2369.	2645.
19	TAN	1	27	7.	4.	20.	194.	0.	141.	1.57	276.	2350.	2626.
			17	0.	4.	4.	230.	0.	151.	1.57	276.	2697.	2973.
20	TAN	1	27	0.	0.	0.	31.	0.	0.	1.57	276.	300.	576.
			28	0.	5.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	0.	4.	4.	230.	0.	151.	1.57	276.	2697.	2973.
			18	2.	4.	1.	252.	0.	143.	1.57	276.	2838.	3114.
22	TAN	1	18	2.	4.	1.	252.	0.	143.	1.57	276.	2838.	3114.
			29	9.	4.	14.	233.	0.	127.	1.57	276.	2599.	2875.
23	TAN	1	29	9.	4.	14.	233.	0.	127.	1.57	276.	2599.	2875.
			19	16.	4.	29.	168.	0.	90.	1.57	276.	1866.	2142.
24	TAN	1	19	16.	4.	29.	168.	0.	90.	1.57	276.	1866.	2142.
			20	17.	4.	32.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	78.	315.	24.	476.	672.	94.	1.00	0.	372.	372.
			15	84.	327.	24.	218.	672.	2265.	1.00	0.	1066.	1066.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	3846.	1	4122.
2	25	1066.	25	1066.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-54.	57.	1.	-4.	15.	392.
9	40.	39.	2.	14.	57.	80.
11	88.	77.	-20.	264.	100.	-127.
15	84.	-327.	-24.	218.	-672.	-2265.
20	17.	32.	-4.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	27.	28.	202.	8.	393.	2.10	276.	5779.	6055.
			2	54.	27.	27.	7.	8.	28.	2.10	276.	398.	674.
2	TAN	1	2	54.	27.	27.	7.	8.	28.	2.10	276.	398.	674.
			5	7.	27.	1.	83.	8.	168.	2.10	276.	2458.	2734.
3	TAN	1	5	7.	27.	1.	83.	8.	168.	2.10	276.	2458.	2734.
			3	12.	27.	4.	52.	8.	52.	1.00	276.	461.	737.
4	TAN	1	3	12.	27.	4.	52.	8.	52.	1.00	276.	461.	737.
			21	17.	27.	6.	1.	8.	105.	2.10	276.	1379.	1655.
5	BEND	1	21	17.	6.	27.	1.	105.	8.	2.10	276.	1379.	1655.
			8	7.	6.	32.	12.	111.	4.	2.10	276.	1463.	1739.
6	BEND	1	8	7.	6.	32.	12.	111.	4.	2.10	276.	1463.	1739.
			22	27.	6.	18.	17.	90.	9.	2.10	276.	1202.	1478.
7	TAN	1	22	27.	18.	6.	17.	9.	90.	2.10	276.	1202.	1478.
			9	27.	19.	7.	40.	9.	5.	1.00	276.	258.	534.
8	TAN	1	9	0.	19.	6.	40.	9.	5.	1.00	276.	258.	534.
			23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
9	TAN	1	23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
			24	0.	35.	2.	44.	9.	1.	1.00	276.	278.	554.
10	TAN	1	24	0.	35.	2.	44.	9.	1.	1.00	276.	278.	554.
			25	0.	43.	6.	57.	9.	2.	1.00	276.	357.	634.
11	BEND	1	25	6.	0.	43.	2.	57.	9.	2.10	276.	751.	1027.
			10	34.	0.	35.	7.	44.	7.	2.10	276.	591.	867.
12	BEND	1	10	34.	0.	35.	7.	44.	7.	2.10	276.	591.	867.
			26	44.	0.	6.	9.	86.	2.	2.10	276.	1137.	1413.
13	TAN	1	26	0.	6.	44.	86.	2.	9.	2.10	276.	1137.	1413.
			11	0.	7.	45.	174.	2.	9.	1.00	276.	1087.	1363.
14	TAN	1	11	2.	153.	39.	174.	2.	9.	1.00	276.	1087.	1363.
			12	2.	152.	37.	30.	2.	11.	2.10	276.	415.	691.
15	TAN	1	12	2.	152.	37.	30.	2.	11.	2.10	276.	415.	691.
			13	2.	81.	131.	132.	2.	13.	1.00	276.	828.	1104.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	0.	61.	200.	661.	62.	2.	1.00	276.	4135.	4411.
			14	0.	19.	47.	290.	62.	2.	2.10	276.	3881.	4158.
17	TAN	1	14	0.	19.	47.	290.	62.	2.	2.10	276.	3881.	4158.
			16	0.	21.	43.	139.	62.	6.	2.10	276.	1993.	2270.
18	TAN	1	16	0.	21.	43.	139.	62.	6.	2.10	276.	1993.	2270.
			27	0.	28.	28.	246.	62.	7.	2.10	276.	3312.	3588.
19	TAN	1	27	0.	28.	17.	246.	0.	9.	2.10	276.	3213.	3489.
			17	0.	35.	2.	275.	0.	8.	2.10	276.	3595.	3871.
20	TAN	1	27	0.	0.	10.	62.	0.	14.	2.10	276.	829.	1105.
			28	5.	0.	10.	0.	0.	0.	2.10	276.	0.	276.
21	TAN	1	17	0.	35.	2.	275.	0.	8.	2.10	276.	3595.	3871.
			18	0.	36.	2.	279.	0.	5.	2.10	276.	3645.	3921.
22	TAN	1	18	0.	36.	2.	279.	0.	5.	2.10	276.	3645.	3921.
			29	0.	43.	16.	253.	0.	4.	2.10	276.	3303.	3579.
23	TAN	1	29	0.	43.	16.	253.	0.	4.	2.10	276.	3303.	3579.
			19	0.	50.	32.	181.	0.	2.	2.10	276.	2361.	2637.
24	TAN	1	19	0.	50.	32.	181.	0.	2.	2.10	276.	2361.	2637.
			20	0.	51.	34.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	2.	331.	30.	559.	11.	61.	1.00	0.	253.	253.
			15	2.	343.	31.	282.	11.	30.	1.00	0.	127.	127.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	5779.	1	6055.
2	25	253.	25	253.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-27.	57.	28.	-8.	202.	393.
9	28.	39.	13.	80.	18.	10.
11	3.	84.	-159.	349.	18.	-5.
15	2.	-343.	-31.	282.	-11.	-30.
20	0.	34.	-51.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	57.	27.	28.	202.	8.	393.	1.57	276.	4335.	4611.
			2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	575.
2	TAN	1	2	54.	27.	27.	7.	8.	28.	1.57	276.	298.	575.
			5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
3	TAN	1	5	7.	27.	1.	83.	8.	168.	1.57	276.	1843.	2119.
			3	12.	27.	4.	52.	8.	52.	1.00	276.	459.	735.
4	TAN	1	3	12.	27.	4.	52.	8.	52.	1.00	276.	459.	735.
			21	17.	27.	6.	1.	8.	105.	1.57	276.	1034.	1310.
5	BEND	1	21	17.	6.	27.	1.	105.	8.	1.57	276.	1034.	1310.
			8	7.	6.	32.	12.	111.	3.	1.57	276.	1098.	1374.
6	BEND	1	8	7.	6.	32.	12.	111.	3.	1.57	276.	1098.	1374.
			22	27.	6.	18.	17.	90.	9.	1.57	276.	903.	1179.
7	TAN	1	22	27.	18.	6.	17.	9.	90.	1.57	276.	903.	1179.
			9	27.	19.	7.	40.	9.	4.	1.00	276.	258.	534.
8	TAN	1	9	0.	19.	6.	40.	9.	4.	1.00	276.	258.	534.
			23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
9	TAN	1	23	0.	27.	2.	35.	9.	3.	1.00	276.	226.	502.
			24	0.	35.	2.	44.	9.	1.	1.00	276.	277.	553.
10	TAN	1	24	0.	35.	2.	44.	9.	1.	1.00	276.	277.	553.
			25	0.	43.	6.	57.	9.	1.	1.00	276.	356.	632.
11	BEND	1	25	6.	0.	43.	1.	57.	9.	1.57	276.	561.	837.
			10	34.	0.	35.	6.	44.	7.	1.57	276.	439.	715.
12	BEND	1	10	34.	0.	35.	6.	44.	7.	1.57	276.	439.	715.
			26	44.	0.	6.	9.	87.	1.	1.57	276.	854.	1130.
13	TAN	1	26	0.	6.	44.	87.	1.	9.	1.57	276.	854.	1130.
			11	0.	7.	45.	174.	1.	9.	1.00	276.	1088.	1364.
14	TAN	1	11	2.	150.	40.	174.	1.	9.	1.00	276.	1088.	1364.
			12	2.	149.	38.	33.	1.	7.	1.57	276.	330.	606.
15	TAN	1	12	2.	149.	38.	33.	1.	7.	1.57	276.	330.	606.
			13	2.	78.	130.	127.	1.	7.	1.00	276.	795.	1071.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	0.	61.	192.	588.	31.	1.	1.00	276.	3663.	3939.
			14	0.	18.	39.	241.	31.	2.	1.57	276.	2381.	2657.
17	TAN	1	14	0.	18.	39.	241.	31.	2.	1.57	276.	2381.	2657.
			16	0.	20.	35.	112.	31.	5.	1.57	276.	1141.	1417.
18	TAN	1	16	0.	20.	35.	112.	31.	5.	1.57	276.	1141.	1417.
			27	0.	27.	20.	194.	31.	6.	1.57	276.	1930.	2206.
19	TAN	1	27	0.	27.	20.	194.	0.	9.	1.57	276.	1907.	2183.
			17	0.	34.	4.	231.	0.	8.	1.57	276.	2262.	2538.
20	TAN	1	27	0.	0.	0.	31.	0.	14.	1.57	276.	331.	607.
			28	5.	0.	10.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	0.	34.	4.	231.	0.	8.	1.57	276.	2262.	2538.
			18	0.	36.	1.	252.	0.	5.	1.57	276.	2471.	2747.
22	TAN	1	18	0.	36.	1.	252.	0.	5.	1.57	276.	2471.	2747.
			29	0.	43.	14.	233.	0.	3.	1.57	276.	2283.	2559.
23	TAN	1	29	0.	43.	14.	233.	0.	3.	1.57	276.	2283.	2559.
			19	0.	50.	29.	168.	0.	2.	1.57	276.	1645.	1921.
24	TAN	1	19	0.	50.	29.	168.	0.	2.	1.57	276.	1645.	1921.
			20	0.	51.	32.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	1.	322.	26.	491.	6.	32.	1.00	0.	221.	221.
			15	1.	334.	27.	250.	6.	23.	1.00	0.	113.	113.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	4335.	1	4611.
2	25	221.	25	221.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-27.	57.	28.	-8.	202.	393.
9	27.	39.	13.	80.	18.	9.
11	2.	85.	-157.	349.	17.	-2.
15	1.	-334.	-27.	250.	-6.	-23.
20	0.	32.	-51.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	79.	2.	23.	7.	557.	1.57	276.	5469.	5745.
			2	77.	77.	2.	10.	7.	39.	1.57	276.	400.	676.
2	TAN	1	2	77.	77.	2.	10.	7.	39.	1.57	276.	400.	676.
			5	10.	42.	2.	4.	7.	238.	1.57	276.	2338.	2614.
3	TAN	1	5	10.	42.	2.	4.	7.	238.	1.57	276.	2338.	2614.
			3	18.	46.	2.	24.	7.	75.	1.00	276.	493.	769.
4	TAN	1	3	18.	46.	2.	24.	7.	75.	1.00	276.	493.	769.
			21	24.	49.	2.	42.	7.	151.	1.57	276.	1536.	1812.
5	BEND	1	21	24.	2.	49.	42.	151.	7.	1.57	276.	1536.	1812.
			8	17.	2.	52.	32.	156.	35.	1.57	276.	1597.	1873.
6	BEND	1	8	17.	2.	52.	32.	156.	35.	1.57	276.	1597.	1873.
			22	50.	2.	25.	4.	137.	45.	1.57	276.	1416.	1692.
7	TAN	1	22	50.	25.	2.	4.	45.	137.	1.57	276.	1416.	1692.
			9	51.	27.	2.	10.	45.	58.	1.00	276.	463.	739.
8	TAN	1	9	8.	27.	1.	10.	45.	58.	1.00	276.	463.	739.
			23	2.	39.	1.	11.	45.	41.	1.00	276.	383.	660.
9	TAN	1	23	2.	39.	1.	11.	45.	41.	1.00	276.	383.	660.
			24	3.	50.	1.	19.	45.	27.	1.00	276.	347.	623.
10	TAN	1	24	3.	50.	1.	19.	45.	27.	1.00	276.	347.	623.
			25	9.	61.	1.	32.	45.	87.	1.00	276.	639.	915.
11	BEND	1	25	1.	9.	61.	87.	32.	45.	1.57	276.	1007.	1283.
			10	43.	9.	44.	102.	6.	34.	1.57	276.	1056.	1332.
12	BEND	1	10	43.	9.	44.	102.	6.	34.	1.57	276.	1056.	1332.
			26	62.	9.	1.	59.	63.	100.	1.57	276.	1294.	1570.
13	TAN	1	26	9.	1.	62.	63.	100.	59.	1.57	276.	1294.	1570.
			11	10.	1.	63.	188.	100.	78.	1.00	276.	1411.	1687.
14	TAN	1	11	126.	33.	45.	188.	100.	78.	1.00	276.	1411.	1687.
			12	125.	33.	42.	32.	100.	549.	1.57	276.	5477.	5753.
15	TAN	1	12	125.	33.	42.	32.	100.	549.	1.57	276.	5477.	5753.
			13	20.	33.	176.	168.	100.	765.	1.00	276.	4916.	5192.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	139.	7.	288.	969.	100.	364.	1.00	276.	6475.	6751.
			14	34.	7.	70.	432.	100.	105.	1.57	276.	4469.	4745.
17	TAN	1	14	34.	7.	70.	432.	100.	105.	1.57	276.	4469.	4745.
			16	31.	7.	65.	208.	100.	209.	1.57	276.	3054.	3330.
18	TAN	1	16	31.	7.	65.	208.	100.	209.	1.57	276.	3054.	3330.
			27	21.	7.	43.	369.	100.	286.	1.57	276.	4687.	4963.
19	TAN	1	27	7.	7.	24.	369.	0.	286.	1.57	276.	4582.	4858.
			17	4.	7.	2.	408.	0.	290.	1.57	276.	4911.	5187.
20	TAN	1	27	0.	14.	19.	100.	0.	0.	1.57	276.	985.	1261.
			28	0.	7.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	4.	7.	2.	408.	0.	290.	1.57	276.	4911.	5187.
			18	6.	7.	4.	407.	0.	253.	1.57	276.	4697.	4973.
22	TAN	1	18	6.	7.	4.	407.	0.	253.	1.57	276.	4697.	4973.
			29	17.	7.	24.	367.	0.	219.	1.57	276.	4189.	4465.
23	TAN	1	29	17.	7.	24.	367.	0.	219.	1.57	276.	4189.	4465.
			19	27.	7.	46.	262.	0.	153.	1.57	276.	2974.	3250.
24	TAN	1	19	27.	7.	46.	262.	0.	153.	1.57	276.	2974.	3250.
			20	29.	7.	49.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	124.	463.	40.	802.	1124.	195.	1.00	0.	627.	627.
			15	133.	481.	40.	367.	1124.	3581.	1.00	0.	1695.	1695.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	6475.	16	6751.
2	25	1695.	25	1695.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	-79.	82.	2.	-7.	23.	557.
9	58.	55.	3.	20.	90.	117.
11	136.	109.	-34.	376.	156.	-200.
15	133.	-481.	-40.	367.	-1124.	-3581.
20	29.	49.	-7.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	79.	2.	23.	6.	557.	1.57	276.	5469.	5745.
			2	77.	77.	2.	10.	6.	39.	1.57	276.	400.	676.
2	TAN	1	2	77.	77.	2.	10.	6.	39.	1.57	276.	400.	676.
			5	10.	42.	2.	4.	6.	238.	1.57	276.	2339.	2615.
3	TAN	1	5	10.	42.	2.	4.	6.	238.	1.57	276.	2339.	2615.
			3	18.	46.	2.	23.	6.	75.	1.00	276.	492.	768.
4	TAN	1	3	18.	46.	2.	23.	6.	75.	1.00	276.	492.	768.
			21	24.	49.	2.	42.	6.	151.	1.57	276.	1536.	1812.
5	BEND	1	21	24.	2.	49.	42.	151.	6.	1.57	276.	1536.	1812.
			8	17.	2.	52.	33.	156.	34.	1.57	276.	1598.	1874.
6	BEND	1	8	17.	2.	52.	33.	156.	34.	1.57	276.	1598.	1874.
			22	49.	2.	25.	4.	138.	45.	1.57	276.	1420.	1696.
7	TAN	1	22	49.	25.	2.	4.	45.	138.	1.57	276.	1420.	1696.
			9	50.	27.	2.	10.	45.	57.	1.00	276.	458.	734.
8	TAN	1	9	8.	27.	1.	10.	45.	57.	1.00	276.	458.	734.
			23	2.	39.	1.	10.	45.	41.	1.00	276.	383.	659.
9	TAN	1	23	2.	39.	1.	10.	45.	41.	1.00	276.	383.	659.
			24	3.	50.	1.	19.	45.	28.	1.00	276.	350.	626.
10	TAN	1	24	3.	50.	1.	19.	45.	28.	1.00	276.	350.	626.
			25	9.	61.	1.	32.	45.	85.	1.00	276.	628.	904.
11	BEND	1	25	1.	9.	61.	85.	32.	45.	1.57	276.	990.	1266.
			10	43.	9.	44.	100.	6.	33.	1.57	276.	1033.	1309.
12	BEND	1	10	43.	9.	44.	100.	6.	33.	1.57	276.	1033.	1309.
			26	62.	9.	1.	58.	63.	98.	1.57	276.	1279.	1555.
13	TAN	1	26	9.	1.	62.	63.	98.	58.	1.57	276.	1279.	1555.
			11	10.	1.	63.	188.	98.	77.	1.00	276.	1406.	1682.
14	TAN	1	11	125.	28.	47.	188.	98.	77.	1.00	276.	1406.	1682.
			12	123.	28.	44.	38.	98.	542.	1.57	276.	5418.	5694.
15	TAN	1	12	123.	28.	44.	38.	98.	542.	1.57	276.	5418.	5694.
			13	18.	28.	174.	159.	98.	755.	1.00	276.	4840.	5116.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	139.	6.	273.	834.	44.	363.	1.00	276.	5671.	5947.
			14	34.	6.	56.	342.	44.	103.	1.57	276.	3525.	3801.
17	TAN	1	14	34.	6.	56.	342.	44.	103.	1.57	276.	3525.	3801.
			16	31.	6.	50.	159.	44.	208.	1.57	276.	2599.	2875.
18	TAN	1	16	31.	6.	50.	159.	44.	208.	1.57	276.	2599.	2875.
			27	21.	6.	28.	276.	44.	285.	1.57	276.	3913.	4189.
19	TAN	1	27	7.	6.	28.	276.	0.	285.	1.57	276.	3890.	4166.
			17	4.	6.	6.	327.	0.	289.	1.57	276.	4284.	4560.
20	TAN	1	27	0.	14.	0.	44.	0.	0.	1.57	276.	427.	703.
			28	0.	7.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	4.	6.	6.	327.	0.	289.	1.57	276.	4284.	4560.
			18	6.	6.	2.	358.	0.	252.	1.57	276.	4293.	4569.
22	TAN	1	18	6.	6.	2.	358.	0.	252.	1.57	276.	4293.	4569.
			29	17.	6.	20.	331.	0.	218.	1.57	276.	3886.	4162.
23	TAN	1	29	17.	6.	20.	331.	0.	218.	1.57	276.	3886.	4162.
			19	27.	6.	42.	238.	0.	153.	1.57	276.	2777.	3053.
24	TAN	1	19	27.	6.	42.	238.	0.	153.	1.57	276.	2777.	3053.
			20	29.	6.	45.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	123.	447.	34.	676.	1115.	142.	1.00	0.	589.	589.
			15	131.	465.	34.	310.	1115.	3569.	1.00	0.	1686.	1686.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	567[illegible].	16	5947.
2	25	1686.	25	1686.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	-79.	82.	2.	-6.	23.	557.
9	58.	55.	3.	21.	90.	115.
11	135.	110.	-29.	376.	155.	-196.
15	131.	-465.	-34.	310.	-1115.	-3569.
20	29.	45.	-6.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	39.	42.	301.	12.	559.	1.57	276.	6226.	6502.
			2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
2	TAN	1	2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
			5	10.	39.	2.	124.	12.	239.	1.57	276.	2646.	2922.
3	TAN	1	5	10.	39.	2.	124.	12.	239.	1.57	276.	2646.	2922.
			3	18.	39.	6.	78.	12.	74.	1.00	276.	672.	948.
4	TAN	1	3	18.	39.	6.	78.	12.	74.	1.00	276.	672.	948.
			21	24.	39.	9.	2.	12.	150.	1.57	276.	1472.	1748.
5	BEND	1	21	24.	9.	39.	2.	150.	12.	1.57	276.	1472.	1748.
			8	10.	9.	45.	17.	158.	6.	1.57	276.	1561.	1837.
6	BEND	1	8	10.	9.	45.	17.	158.	6.	1.57	276.	1561.	1837.
			22	39.	9.	25.	26.	128.	13.	1.57	276.	1284.	1560.
7	TAN	1	22	39.	25.	9.	26.	13.	128.	1.57	276.	1284.	1560.
			9	39.	27.	10.	60.	13.	8.	1.00	276.	382.	659.
8	TAN	1	9	0.	27.	9.	60.	13.	8.	1.00	276.	382.	659.
			23	0.	39.	3.	52.	13.	4.	1.00	276.	334.	610.
9	TAN	1	23	0.	39.	3.	52.	13.	4.	1.00	276.	334.	610.
			24	0.	50.	3.	64.	13.	1.	1.00	276.	409.	685.
10	TAN	1	24	0.	50.	3.	64.	13.	1.	1.00	276.	409.	685.
			25	0.	61.	9.	83.	13.	4.	1.00	276.	524.	800.
11	BEND	1	25	9.	0.	61.	4.	83.	13.	1.57	276.	825.	1101.
			10	49.	0.	50.	10.	65.	11.	1.57	276.	659.	935.
12	BEND	1	10	49.	0.	50.	10.	65.	11.	1.57	276.	659.	935.
			26	62.	0.	9.	13.	126.	4.	1.57	276.	1241.	1517.
13	TAN	1	26	0.	9.	62.	126.	4.	13.	1.57	276.	1241.	1517.
			11	0.	10.	63.	251.	4.	13.	1.00	276.	1563.	1839.
14	TAN	1	11	3.	234.	56.	251.	4.	13.	1.00	276.	1563.	1839.
			12	3.	232.	53.	42.	4.	22.	1.57	276.	464.	740.
15	TAN	1	12	3.	232.	53.	42.	4.	22.	1.57	276.	464.	740.
			13	3.	127.	186.	191.	4.	29.	1.00	276.	1204.	1480.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	2.	98.	288.	970.	100.	5.	1.00	276.	6072.	6348.
			14	2.	21.	70.	433.	100.	10.	1.57	276.	4359.	4635.
17	TAN	1	14	2.	21.	70.	433.	100.	10.	1.57	276.	4359.	4635.
			16	2.	24.	65.	209.	100.	24.	1.57	276.	2287.	2563.
18	TAN	1	16	2.	24.	65.	209.	100.	24.	1.57	276.	2287.	2563.
			27	2.	34.	43.	370.	100.	29.	1.57	276.	3770.	4046.
19	TAN	1	27	2.	48.	24.	370.	0.	37.	1.57	276.	3646.	3922.
			17	2.	59.	2.	409.	0.	32.	1.57	276.	4020.	4296.
20	TAN	1	27	14.	0.	19.	100.	0.	63.	1.57	276.	1163.	1439.
			28	7.	0.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	2.	59.	2.	409.	0.	32.	1.57	276.	4020.	4296.
			18	2.	61.	4.	407.	0.	19.	1.57	276.	3997.	4273.
22	TAN	1	18	2.	61.	4.	407.	0.	19.	1.57	276.	3997.	4273.
			29	2.	72.	24.	367.	0.	14.	1.57	276.	3603.	3879.
23	TAN	1	29	2.	72.	24.	367.	0.	14.	1.57	276.	3603.	3879.
			19	2.	82.	46.	262.	0.	9.	1.57	276.	2569.	2846.
24	TAN	1	19	2.	82.	46.	262.	0.	9.	1.57	276.	2569.	2846.
			20	2.	84.	49.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	4.	474.	44.	824.	24.	99.	1.00	0.	373.	373.
			15	4.	492.	45.	417.	24.	76.	1.00	0.	191.	191.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	6226.	1	6502.
2	25	373.	25	373.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-39.	82.	42.	-12.	301.	559.
9	39.	55.	19.	119.	26.	16.
11	3.	120.	-244.	501.	26.	-8.
15	4.	-492.	-45.	417.	-24.	-76.
20	2.	49.	-84.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	39.	42.	302.	12.	559.	1.57	276.	6227.	6503.
			2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
2	TAN	1	2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
			5	10.	39.	2.	124.	12.	240.	1.57	276.	2646.	2922.
3	TAN	1	5	10.	39.	2.	124.	12.	240.	1.57	276.	2646.	2922.
			3	18.	39.	6.	77.	12.	74.	1.00	276.	670.	946.
4	TAN	1	3	18.	39.	6.	77.	12.	74.	1.00	276.	670.	946.
			21	24.	39.	9.	2.	12.	150.	1.57	276.	1472.	1748.
5	BEND	1	21	24.	9.	39.	2.	150.	12.	1.57	276.	1472.	1748.
			8	10.	9.	45.	17.	158.	5.	1.57	276.	1563.	1839.
6	BEND	1	8	10.	9.	45.	17.	158.	5.	1.57	276.	1563.	1839.
			22	39.	9.	25.	26.	128.	13.	1.57	276.	1288.	1564.
7	TAN	1	22	39.	25.	9.	26.	13.	128.	1.57	276.	1288.	1564.
			9	39.	27.	10.	60.	13.	7.	1.00	276.	382.	658.
8	TAN	1	9	0.	27.	9.	60.	13.	7.	1.00	276.	382.	658.
			23	0.	39.	3.	52.	13.	4.	1.00	276.	333.	609.
9	TAN	1	23	0.	39.	3.	52.	13.	4.	1.00	276.	333.	609.
			24	0.	50.	3.	64.	13.	2.	1.00	276.	407.	683.
10	TAN	1	24	0.	50.	3.	64.	13.	2.	1.00	276.	407.	683.
			25	0.	61.	9.	83.	13.	2.	1.00	276.	522.	798.
11	BEND	1	25	9.	0.	61.	2.	83.	13.	1.57	276.	822.	1098.
			10	49.	0.	50.	8.	65.	11.	1.57	276.	652.	928.
12	BEND	1	10	49.	0.	50.	8.	65.	11.	1.57	276.	652.	928.
			26	62.	0.	9.	13.	126.	2.	1.57	276.	1243.	1519.
13	TAN	1	26	0.	9.	62.	126.	2.	13.	1.57	276.	1243.	1519.
			11	0.	10.	63.	251.	2.	12.	1.00	276.	1564.	1840.
14	TAN	1	11	1.	229.	57.	251.	2.	12.	1.00	276.	1564.	1840.
			12	1.	227.	54.	47.	2.	16.	1.57	276.	489.	765.
15	TAN	1	12	1.	227.	54.	47.	2.	16.	1.57	276.	489.	765.
			13	1.	122.	185.	182.	2.	19.	1.00	276.	1140.	1416.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3606

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	2.	97.	273.	835.	44.	4.	1.00	276.	5208.	5484.
			14	2.	20.	56.	342.	44.	8.	1.57	276.	3386.	3662.
17	TAN	1	14	2.	20.	56.	342.	44.	8.	1.57	276.	3386.	3662.
			16	2.	23.	50.	159.	44.	23.	1.57	276.	1637.	1913.
18	TAN	1	16	2.	23.	50.	159.	44.	23.	1.57	276.	1637.	1913.
			27	2.	33.	28.	276.	44.	28.	1.57	276.	2756.	3032.
19	TAN	1	27	2.	47.	28.	276.	0.	36.	1.57	276.	2732.	3008.
			17	2.	58.	6.	328.	0.	31.	1.57	276.	3228.	3504.
20	TAN	1	27	14.	0.	0.	44.	0.	63.	1.57	276.	751.	1027.
			28	7.	0.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	2.	58.	6.	328.	0.	31.	1.57	276.	3228.	3504.
			18	2.	60.	2.	358.	0.	19.	1.57	276.	3517.	3793.
22	TAN	1	18	2.	60.	2.	358.	0.	19.	1.57	276.	3517.	3793.
			29	2.	71.	20.	331.	0.	14.	1.57	276.	3248.	3524.
23	TAN	1	29	2.	71.	20.	331.	0.	14.	1.57	276.	3248.	3524.
			19	2.	81.	42.	238.	0.	9.	1.57	276.	2340.	2616.
24	TAN	1	19	2.	81.	42.	238.	0.	9.	1.57	276.	2340.	2616.
			20	2.	83.	45.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	3.	458.	37.	698.	15.	46.	1.00	0.	315.	315.
			15	3.	476.	39.	359.	15.	63.	1.00	0.	164.	164.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Z-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	6227.	1	6503.
2	25	315.	25	315.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-39.	82.	42.	-12.	302.	559.
9	39.	55.	19.	119.	26.	13.
11	2.	121.	-238.	502.	25.	-4.
15	3.	-476.	-39.	359.	-15.	-63.
20	2.	45.	-83.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	79.	2.	22.	6.	557.	1.57	276.	5469.	5745.
			2	77.	76.	2.	9.	6.	39.	1.57	276.	399.	675.
2	TAN	1	2	77.	76.	2.	9.	6.	39.	1.57	276.	399.	675.
			5	10.	43.	2.	4.	6.	238.	1.57	276.	2338.	2614.
3	TAN	1	5	10.	43.	2.	4.	6.	238.	1.57	276.	2338.	2614.
			3	18.	46.	2.	23.	6.	75.	1.00	276.	491.	768.
4	TAN	1	3	18.	46.	2.	23.	6.	75.	1.00	276.	491.	768.
			21	24.	49.	2.	40.	6.	151.	1.57	276.	1531.	1807.
5	BEND	1	21	24.	2.	49.	40.	151.	6.	1.57	276.	1531.	1807.
			8	18.	2.	53.	31.	156.	33.	1.57	276.	1591.	1868.
6	BEND	1	8	18.	2.	53.	31.	156.	33.	1.57	276.	1591.	1868.
			22	50.	2.	25.	4.	138.	43.	1.57	276.	1414.	1691.
7	TAN	1	22	50.	25.	2.	4.	43.	138.	1.57	276.	1414.	1691.
			9	51.	27.	2.	10.	43.	61.	1.00	276.	465.	741.
8	TAN	1	9	8.	27.	1.	10.	43.	61.	1.00	276.	465.	741.
			23	2.	39.	1.	10.	43.	40.	1.00	276.	372.	648.
9	TAN	1	23	2.	39.	1.	10.	43.	40.	1.00	276.	372.	648.
			24	3.	50.	1.	19.	43.	28.	1.00	276.	340.	616.
10	TAN	1	24	3.	50.	1.	19.	43.	28.	1.00	276.	340.	616.
			25	9.	61.	1.	32.	43.	84.	1.00	276.	617.	893.
11	BEND	1	25	1.	9.	61.	84.	32.	43.	1.57	276.	972.	1248.
			10	43.	9.	44.	98.	6.	33.	1.57	276.	1019.	1295.
12	BEND	1	10	43.	9.	44.	98.	6.	33.	1.57	276.	1019.	1295.
			26	62.	9.	1.	56.	63.	97.	1.57	276.	1260.	1536.
13	TAN	1	26	9.	1.	62.	63.	97.	56.	1.57	276.	1260.	1536.
			11	10.	1.	63.	188.	97.	75.	1.00	276.	1397.	1673.
14	TAN	1	11	122.	33.	45.	188.	97.	75.	1.00	276.	1397.	1673.
			12	121.	33.	42.	32.	97.	533.	1.57	276.	5319.	5595.
15	TAN	1	12	121.	33.	42.	32.	97.	533.	1.57	276.	5319.	5595.
			13	16.	33.	176.	168.	97.	738.	1.00	276.	4750.	5026.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	128.	7.	288.	969.	100.	276.	1.00	276.	6304.	6580.
			14	23.	7.	70.	432.	100.	48.	1.57	276.	4375.	4651.
17	TAN	1	14	23.	7.	70.	432.	100.	48.	1.57	276.	4375.	4651.
			16	21.	7.	65.	208.	100.	165.	1.57	276.	2784.	3061.
18	TAN	1	16	21.	7.	65.	208.	100.	165.	1.57	276.	2784.	3061.
			27	10.	7.	43.	369.	100.	210.	1.57	276.	4284.	4560.
19	TAN	1	27	10.	7.	24.	369.	0.	210.	1.57	276.	4169.	4445.
			17	0.	7.	2.	408.	0.	225.	1.57	276.	4570.	4846.
20	TAN	1	27	0.	0.	19.	100.	0.	0.	1.57	276.	985.	1261.
			28	0.	7.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	0.	7.	2.	408.	0.	225.	1.57	276.	4570.	4846.
			18	3.	7.	4.	407.	0.	213.	1.57	276.	4504.	4780.
22	TAN	1	18	3.	7.	4.	407.	0.	213.	1.57	276.	4504.	4780.
			29	13.	7.	24.	367.	0.	190.	1.57	276.	4050.	4326.
23	TAN	1	29	13.	7.	24.	367.	0.	190.	1.57	276.	4050.	4326.
			19	24.	7.	46.	262.	0.	134.	1.57	276.	2885.	3161.
24	TAN	1	19	24.	7.	46.	262.	0.	134.	1.57	276.	2885.	3161.
			20	25.	7.	49.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	118.	463.	40.	802.	1009.	192.	1.00	0.	585.	585.
			15	126.	481.	40.	367.	1009.	3385.	1.00	0.	1596.	1596.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	6304.	16	6580.
2	25	1596.	25	1596.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	-79.	82.	2.	-6.	22.	557.
9	59.	55.	2.	20.	85.	121.
11	132.	109.	-34.	375.	151.	-194.
15	126.	-481.	-40.	367.	-1009.	-3385.
20	25.	49.	-7.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	78.	2.	22.	6.	557.	1.57	276.	5469.	5745.
			2	77.	76.	2.	9.	6.	39.	1.57	276.	399.	675.
2	TAN	1	2	77.	76.	2.	9.	6.	39.	1.57	276.	399.	675.
			5	10.	42.	2.	4.	6.	238.	1.57	276.	2339.	2615.
3	TAN	1	5	10.	42.	2.	4.	6.	238.	1.57	276.	2339.	2615.
			3	18.	46.	2.	22.	6.	75.	1.00	276.	490.	767.
4	TAN	1	3	18.	46.	2.	22.	6.	75.	1.00	276.	490.	767.
			21	24.	49.	2.	40.	6.	151.	1.57	276.	1531.	1807.
5	BEND	1	21	24.	2.	49.	40.	151.	6.	1.57	276.	1531.	1807.
			8	17.	2.	52.	31.	156.	32.	1.57	276.	1592.	1868.
6	BEND	1	8	17.	2.	52.	31.	156.	32.	1.57	276.	1592.	1868.
			22	50.	2.	25.	4.	138.	43.	1.57	276.	1418.	1694.
7	TAN	1	22	50.	25.	2.	4.	43.	138.	1.57	276.	1418.	1694.
			9	51.	27.	2.	10.	43.	59.	1.00	276.	459.	735.
8	TAN	1	9	8.	27.	1.	10.	43.	59.	1.00	276.	459.	735.
			23	2.	39.	1.	10.	43.	40.	1.00	276.	371.	647.
9	TAN	1	23	2.	39.	1.	10.	43.	40.	1.00	276.	371.	647.
			24	3.	50.	1.	19.	43.	29.	1.00	276.	343.	619.
10	TAN	1	24	3.	50.	1.	19.	43.	29.	1.00	276.	343.	619.
			25	9.	61.	1.	32.	43.	82.	1.00	276.	606.	883.
11	BEND	1	25	1.	9.	61.	82.	32.	43.	1.57	276.	955.	1231.
			10	43.	9.	44.	96.	6.	33.	1.57	276.	996.	1272.
12	BEND	1	10	43.	9.	44.	96.	6.	33.	1.57	276.	996.	1272.
			26	62.	9.	1.	56.	63.	95.	1.57	276.	1245.	1521.
13	TAN	1	26	9.	1.	62.	63.	95.	56.	1.57	276.	1245.	1521.
			11	10.	1.	63.	188.	95.	75.	1.00	276.	1391.	1667.
14	TAN	1	11	121.	28.	47.	188.	95.	75.	1.00	276.	1391.	1667.
			12	120.	28.	44.	38.	95.	527.	1.57	276.	5259.	5535.
15	TAN	1	12	120.	28.	44.	38.	95.	527.	1.57	276.	5259.	5535.
			13	15.	28.	174.	159.	95.	728.	1.00	276.	4675.	4951.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	128.	6.	273.	834.	44.	274.	1.00	276.	5475.	5751.
			14	23.	6.	56.	342.	44.	47.	1.57	276.	3408.	3684.
17	TAN	1	14	23.	6.	56.	342.	44.	47.	1.57	276.	3408.	3684.
			16	21.	6.	50.	159.	44.	164.	1.57	276.	2277.	2553.
18	TAN	1	16	21.	6.	50.	159.	44.	164.	1.57	276.	2277.	2553.
			27	10.	6.	28.	276.	44.	210.	1.57	276.	3423.	3699.
19	TAN	1	27	10.	6.	28.	276.	0.	210.	1.57	276.	3396.	3672.
			17	0.	6.	6.	327.	0.	224.	1.57	276.	3890.	4166.
20	TAN	1	27	0.	0.	0.	44.	0.	0.	1.57	276.	427.	703.
			28	0.	7.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	0.	6.	6.	327.	0.	224.	1.57	276.	3890.	4166.
			18	3.	6.	2.	358.	0.	213.	1.57	276.	4082.	4358.
22	TAN	1	18	3.	6.	2.	358.	0.	213.	1.57	276.	4082.	4358.
			29	13.	6.	20.	331.	0.	189.	1.57	276.	3736.	4012.
23	TAN	1	29	13.	6.	20.	331.	0.	189.	1.57	276.	3736.	4012.
			19	24.	6.	42.	238.	0.	134.	1.57	276.	2682.	2958.
24	TAN	1	19	24.	6.	42.	238.	0.	134.	1.57	276.	2682.	2958.
			20	25.	6.	45.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	116.	447.	34.	676.	1000.	138.	1.00	0.	546.	546.
			15	125.	465.	34.	310.	1000.	3372.	1.00	0.	1587.	1587.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Y

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	5475.	16	5751.
2	25	1587.	25	1587.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-78.	82.	2.	-6.	22.	557.
9	58.	55.	2.	20.	85.	119.
11	131.	110.	-29.	376.	149.	-190.
15	125.	-465.	-34.	310.	-1000.	-3372.
20	25.	45.	-6.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	39.	42.	301.	12.	559.	1.57	276.	6225.	6501.
			2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
2	TAN	1	2	77.	39.	40.	10.	12.	41.	1.57	276.	427.	703.
			5	10.	39.	2.	124.	12.	239.	1.57	276.	2646.	2922.
3	TAN	1	5	10.	39.	2.	124.	12.	239.	1.57	276.	2646.	2922.
			3	18.	39.	6.	77.	12.	74.	1.00	276.	671.	947.
4	TAN	1	3	18.	39.	6.	77.	12.	74.	1.00	276.	671.	947.
			21	24.	39.	9.	2.	12.	150.	1.57	276.	1472.	1748.
5	BEND	1	21	24.	9.	39.	2.	150.	12.	1.57	276.	1472.	1748.
			8	10.	9.	45.	17.	158.	5.	1.57	276.	1561.	1837.
6	BEND	1	8	10.	9.	45.	17.	158.	5.	1.57	276.	1561.	1837.
			22	39.	9.	25.	26.	128.	13.	1.57	276.	1284.	1560.
7	TAN	1	22	39.	25.	9.	26.	13.	128.	1.57	276.	1284.	1560.
			9	39.	27.	10.	60.	13.	8.	1.00	276.	383.	659.
8	TAN	1	9	0.	27.	9.	60.	13.	8.	1.00	276.	383.	659.
			23	0.	39.	3.	52.	13.	4.	1.00	276.	335.	611.
9	TAN	1	23	0.	39.	3.	52.	13.	4.	1.00	276.	335.	611.
			24	0.	50.	3.	64.	13.	1.	1.00	276.	409.	685.
10	TAN	1	24	0.	50.	3.	64.	13.	1.	1.00	276.	409.	685.
			25	0.	61.	9.	83.	13.	3.	1.00	276.	524.	800.
11	BEND	1	25	9.	0.	61.	3.	83.	13.	1.57	276.	825.	1101.
			10	49.	0.	50.	11.	65.	11.	1.57	276.	659.	935.
12	BEND	1	10	49.	0.	50.	11.	65.	11.	1.57	276.	659.	935.
			26	62.	0.	9.	13.	126.	4.	1.57	276.	1241.	1517.
13	TAN	1	26	0.	9.	62.	126.	4.	13.	1.57	276.	1241.	1517.
			11	0.	10.	63.	251.	4.	14.	1.00	276.	1563.	1839.
14	TAN	1	11	4.	227.	56.	251.	4.	14.	1.00	276.	1563.	1839.
			12	4.	226.	53.	42.	4.	17.	1.57	276.	442.	718.
15	TAN	1	12	4.	226.	53.	42.	4.	17.	1.57	276.	442.	718.
			13	4.	121.	186.	191.	4.	20.	1.00	276.	1198.	1474.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	1.	91.	288.	970.	100.	3.	1.00	276.	6071.	6347.
			14	1.	28.	70.	433.	100.	4.	1.57	276.	4358.	4634.
17	TAN	1	14	1.	28.	70.	433.	100.	4.	1.57	276.	4358.	4634.
			16	1.	31.	65.	209.	100.	9.	1.57	276.	2276.	2552.
18	TAN	1	16	1.	31.	65.	209.	100.	9.	1.57	276.	2276.	2552.
			27	1.	41.	43.	370.	100.	10.	1.57	276.	3761.	4037.
19	TAN	1	27	1.	41.	24.	370.	0.	14.	1.57	276.	3631.	3907.
			17	1.	52.	2.	409.	0.	12.	1.57	276.	4010.	4286.
20	TAN	1	27	0.	0.	19.	100.	0.	21.	1.57	276.	1007.	1283.
			28	7.	0.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	1.	52.	2.	409.	0.	12.	1.57	276.	4010.	4286.
			18	1.	54.	4.	407.	0.	7.	1.57	276.	3993.	4269.
22	TAN	1	18	1.	54.	4.	407.	0.	7.	1.57	276.	3993.	4269.
			29	1.	64.	24.	367.	0.	5.	1.57	276.	3600.	3876.
23	TAN	1	29	1.	64.	24.	367.	0.	5.	1.57	276.	3600.	3876.
			19	1.	75.	46.	262.	0.	3.	1.57	276.	2568.	2844.
24	TAN	1	19	1.	75.	46.	262.	0.	3.	1.57	276.	2568.	2844.
			20	1.	76.	49.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	3.	474.	44.	824.	18.	99.	1.00	0.	373.	373.
			15	3.	492.	45.	416.	18.	46.	1.00	0.	188.	188.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -ZY

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	6225.	1	6501.
2	25	373.	25	373.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-39.	82.	42.	-12.	301.	559.
9	39.	55.	19.	119.	27.	15.
11	4.	120.	-237.	501.	27.	-7.
15	3.	-492.	-45.	416.	-18.	-46.
20	1.	49.	-76.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	82.	39.	42.	301.	12.	559.	1.57	276.	6226.	6502.
			2	77.	39.	40.	11.	12.	41.	1.57	276.	427.	703.
2	TAN	1	2	77.	39.	40.	11.	12.	41.	1.57	276.	427.	703.
			5	10.	39.	2.	124.	12.	240.	1.57	276.	2645.	2922.
3	TAN	1	5	10.	39.	2.	124.	12.	240.	1.57	276.	2645.	2922.
			3	18.	39.	6.	77.	12.	74.	1.00	276.	669.	945.
4	TAN.	1	3	18.	39.	6.	77.	12.	74.	1.00	276.	669.	945.
			21	24.	39.	9.	2.	12.	150.	1.57	276.	1472.	1748.
5	BEND	1	21	24.	9.	39.	2.	150.	12.	1.57	276.	1472.	1748.
			8	10.	9.	45.	18.	158.	5.	1.57	276.	1563.	1839.
6	BEND	1	8	10.	9.	45.	18.	158.	5.	1.57	276.	1563.	1839.
			22	39.	9.	25.	26.	128.	13.	1.57	276.	1288.	1564.
7	TAN	1	22	39.	25.	9.	26.	13.	128.	1.57	276.	1288.	1564.
			9	39.	27.	10.	60.	13.	6.	1.00	276.	383.	659.
8	TAN	1	9	0.	27.	9.	60.	13.	6.	1.00	276.	383.	659.
			23	0.	39.	3.	52.	13.	4.	1.00	276.	334.	610.
9	TAN	1	23	0.	39.	3.	52.	13.	4.	1.00	276.	334.	610.
			24	0.	50.	3.	64.	13.	2.	1.00	276.	408.	684.
10	TAN	1	24	0.	50.	3.	64.	13.	2.	1.00	276.	408.	684.
			25	0.	61.	9.	83.	13.	1.	1.00	276.	522.	798.
11	BEND	1	25	9.	0.	61.	1.	83.	13.	1.57	276.	822.	1098.
			10	49.	0.	50.	8.	65.	10.	1.57	276.	652.	928.
12	BEND	1	10	49.	0.	50.	8.	65.	10.	1.57	276.	652.	928.
			26	62.	0.	9.	13.	126.	2.	1.57	276.	1244.	1520.
13	TAN	1	26	0.	9.	62.	126.	2.	13.	1.57	276.	1244.	1520.
			11	0.	10.	63.	251.	2.	13.	1.00	276.	1564.	1840.
14	TAN	1	11	2.	222.	57.	251.	2.	13.	1.00	276.	1564.	1840.
			12	2.	220.	54.	47.	2.	11.	1.57	276.	474.	750.
15	TAN	1	12	2.	220.	54.	47.	2.	11.	1.57	276.	474.	750.
			13	2.	115.	185.	182.	2.	10.	1.00	276.	1136.	1412.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	13	1.	90.	273.	835.	44.	1.	1.00	276.	5208.	5484.
			14	1.	27.	56.	342.	44.	3.	1.57	276.	3385.	3661.
17	TAN	1	14	1.	27.	56.	342.	44.	3.	1.57	276.	3385.	3661.
			16	1.	30.	50.	159.	44.	8.	1.57	276.	1622.	1898.
18	TAN	1	16	1.	30.	50.	159.	44.	8.	1.57	276.	1622.	1898.
			27	1.	40.	28.	276.	44.	9.	1.57	276.	2743.	3019.
19	TAN	1	27	1.	40.	28.	276.	0.	13.	1.57	276.	2711.	2987.
			17	1.	51.	6.	328.	0.	11.	1.57	276.	3216.	3492.
20	TAN	1	27	0.	0.	0.	44.	0.	21.	1.57	276.	474.	750.
			28	7.	0.	14.	0.	0.	0.	1.57	276.	0.	276.
21	TAN	1	17	1.	51.	6.	328.	0.	11.	1.57	276.	3216.	3492.
			18	1.	53.	2.	358.	0.	7.	1.57	276.	3512.	3788.
22	TAN	1	18	1.	53.	2.	358.	0.	7.	1.57	276.	3512.	3788.
			29	1.	63.	20.	331.	0.	5.	1.57	276.	3245.	3521.
23	TAN	1	29	1.	63.	20.	331.	0.	5.	1.57	276.	3245.	3521.
			19	1.	74.	42.	238.	0.	3.	1.57	276.	2338.	2614.
24	TAN	1	19	1.	74.	42.	238.	0.	3.	1.57	276.	2338.	2614.
			20	1.	75.	45.	0.	0.	0.	1.00	276.	0.	276.
25	TAN	2	13	2.	458.	37.	698.	9.	45.	1.00	0.	315.	315.
			15	2.	476.	39.	358.	9.	33.	1.00	0.	162.	162.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Z-Y

·LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	1	6226.	1	6502.
2	25	315.	25	315.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-39.	82.	42.	-12.	301.	559.
9	39.	55.	19.	119.	27.	13.
11	3.	121.	-232.	502.	26.	-3.
15	2.	-476.	-39.	358.	-9.	-33.
20	1.	45.	-75.	0.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 23

```
* CPU SECONDS ** THIS STEP "STRE" TIME IS   10.17 ** LAST STEP "COMB" TIME IS    5.85 ** DELTA TIME IS    4.32 *
* ELAPSED SECONDS                           221.5                               124.1                     97.4 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   10.17 ** LAST STEP "STRE" TIME IS   10.17 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           221.5                               221.5                      0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   10.20 ** LAST STEP "SUPR" TIME IS   10.17 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           221.5                               221.5                      0.0 *
```

3/4"-PC-121-SS.5N-SP
11/2"-PC-119-SS.5N-SP
11/2"-PC-120-SS.5N-SP

GROUP 7A

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS SEAL LOOP
GEOMETRY
WPPSS SEAL LOOP
COORDINATE INCHES
1 0 0 0
2 0 0 -27
3 0 0 -54
4 0 0 -83
5 0 0 -112
7 0 0 -115.38
9 2.69 0 -115.38
10 4.69 0 -113.38
11 4.69 0 -117.38
13 4.69 0 -120
16 2.34 2.94 -120
18 2.34 2.94 -112
19 2.34 2.94 -83
20 2.34 2.94 -54
21 2.34 2.94 -27
22 2.34 2.94 0
23 4.69 0 -112
24 4.69 0 -83
25 4.69 0 -54
26 4.69 0 -27
27 4.69 0 0
BOUNDARY
1 ANCHOR
22 ANCHOR
27 ANCHOR
3 XYSTOP
5 XYSTOP
20 XYSTOP
18 XYSTOP
25 XYSTOP
23 XYSTOP
MATERIAL 15
70 28300000 .3 .0000091
150 27900000 .3 .00000925
175 27775000 .3 .0000093
MATERIAL 75
70 28300000 .3 .0000091
150 27900000 .3 .00000925
175 27775000 .3 .0000093
SIF
100 2.1 2.1 1
BRANCH 1 15 25 1
RUN 1 2 1.9 .145 .30 1
RUN 2 3 1.9 .145 .30 0
RUN 3 4
RUN 4 5
RUN 5 0 1.9 .145 .30 2
ELBOW 7 1.5 2.5 .25 .6 0 100
RUN 0 9 1.9 .145 .30 3
TEE RUN 50 9 WELDED 1
FULL 2.5 .25 1
TEE RUN 50 10 WELDED 2
FULL 2.5 .25 1
TEE BRANCH 50 11 WELDED 2
```

```
REDUCED 2.5 .25 1 1.05 .113 .113
RUN 10 23 1.9 .145 .3 1
RUN 23 24 1.9 .145 .3 0
RUN 24 25
RUN 25 26
RUN 26 27 1.9 .145 .3 2
BRANCH 2 75 25 1
RUN 11 0 1.05 .113 .113 2
ELBOW 13 .75 1.5 .25 .7 0 100
RUN 0 0 1.05 .113 .113 3
ELBOW 16 .75 1.5 .25 .7 0 100
RUN 0 18 1.05 .113 .113 1
RUN 18 19 1.05 .113 .113 0
RUN 19 20
RUN 20 21
RUN 21 22 1.05 .113 .113 2
LOAD 1
DESIGN
DEADWEIGHT -Z 1.0
LOAD 2
VERTICAL +Z
DEADWEIGHT +Z 1.0
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
LOAD 5
HORIZONTAL +Y
DEADWEIGHT +Y 1.0
LOAD 6
HORIZONTAL -Y
DEADWEIGHT -Y 1.0
LOAD 7
THERMAL
THERMAL 1 175 0 0 0 70
THERMAL 2 175 0 0 0 70
SUPERPOSITION
SEALLOOP
16 2 1 -4
OBE + SRV XZ
3
1 1.0 2  1.04 3 .8
OBE + SRV X-Z
2
1 2.04 3 .8
OBE + SRV YZ
3
1 1.0 2 1.04 5 .8
OBE + SRV Y-Z
2
1 2.04 5 .8
OBE + SRV -XZ
3
1 1.0 2 1.04 4 .8
OBE + SRV -X-Z
2
1 2.04 4 .8
OBE + SRV -YZ
```

```
3
1 1.0 2 1.04 6 .8
OBE + SRV -Y-Z
2
1 2.04 6 .8
SSE + SRV + LOCA XZ
3
1 1.0 2 1.9 3 1.3
SSE + SRV + LOCA X-Z
2
1 2.9 3 1.3
SSE + SRV + LOCA YZ
3
1 1.0 2 1.9 5 1.3
SSE + SRV + LOCA Y-Z
2
1 2.9 5 1.3
SSE + SRV + LOCA -XZ
3
1 1.0 2 1.9 4 1.3
SSE + SRV + LOCA -X-Z
2
1 2.9 4 1.3
SSE + SRV + LOCA -YZ
3
1 1.0 2 1.9 6 1.3
SSE + SRV + LOCA -Y-Z
2
1 2.9 6 1.3
END OF JOB
```

```
     1    31     0     0                                                    PD1
WPPSS SEAL LOOP
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                              P 1
WPPSS SEAL LOOP                                                             P 2
    27    28     7     0     9     5     3     2     0     2     0     0    P 3
     6     1     1     1     1     0     0                                  P 4
     1    28     3     0     0    30     1                                  P 5
     1     0.0          0.0          0.0          0                        P 7
     2     0.0          0.0        -27.00000      0                        P 7
     3     0.0          0.0        -54.00000      0                        P 7
     4     0.0          0.0        -83.00000      0                        P 7
     5     0.0          0.0       -112.00000      0                        P 7
     7     0.43934      0.0       -114.94064      0                        P 7
     9     2.69000      0.0       -115.37999      0                        P 7
    10     4.69000      0.0       -113.37999      0                        P 7
    11     4.69000      0.0       -117.37999      0                        P 7
    13     4.55284      0.17159   -119.78032      0                        P 7
    16     2.47715      2.76841   -119.78032      0                        P 7
    18     2.34000      2.94000   -112.00000      0                        P 7
    19     2.34000      2.94000    -83.00000      0                        P 7
    20     2.34000      2.94000    -54.00000      0                        P 7
    21     2.34000      2.94000    -27.00000      0                        P 7
    22     2.34000      2.94000      0.0          0                        P 7
    23     4.69000      0.0       -112.00000      0                        P 7
    24     4.69000      0.0        -83.00000      0                        P 7
    25     4.69000      0.0        -54.00000      0                        P 7
    26     4.69000      0.0        -27.00000      0                        P 7
    27     4.69000      0.0          0.0          0                        P 7
    28     0.0          0.0       -113.87999      0                        P 7
    29     1.50000      0.0       -115.37999      0                        P 7
    30     3.69000      0.0       -114.37999      0                        P 7
    31     4.69000      0.0       -119.25000      0                        P 7
    32     4.22172      0.58585   -120.00000      0                        P 7
    33     2.80828      2.35415   -120.00000      0                        P 7
    34     2.34000      2.94000   -119.25000      0                        P 7
    50     1.50000      0.0       -113.87999      0                        P 7
    51     4.22172      0.58585   -119.25000      0                        P 7
    52     2.80828      2.35415   -119.25000      0                        P 7
  1  3     1.9000      0.1450      2.0000      0.0       0.0        0.0     P11D
  2  4     2.5000      0.2500      2.0000      0.0       0.0        0.0     P11D
  3  3     2.5000      0.2500      2.0000      0.0       0.0        0.0     P11D
  4  3     1.0500      0.1130      2.0000      0.0       0.0        0.0     P11D
  5  4     1.5000      0.2500      2.0000      0.0       0.0        0.0     P11D
  1  5     2.5000      0.2500      2.5000      0.2500    0.0        0.0     P12
   100    2.099999    2.099999    1.000000                                 P 12.1
   0.300     0.600     1.000     0.113     0.700
  1  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0   P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05     0.0  0.0  0.0   P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05     0.0  0.0  0.0   P14A
  2  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0   P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05     0.0  0.0  0.0   P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05     0.0  0.0  0.0   P14A
   25.00000     0.0          0.0          0.0          0.0          0.0    P15
    0.0                                                                    P16A
    1                                                                      P16B
    1   175.00000     0.0          0.0          0.0         70.00000      P16C
    2   175.00000     0.0          0.0          0.0         70.00000      P16C
    1     0.0          0.0        -1.00000                                 P17
```

```
     2      0.0          0.0          1.00000                                  P17
     3      1.00000      0.0          0.0                                      P17
     4     -1.00000      0.0          0.0                                      P17
     5      0.0          1.00000      0.0                                      P17
     6      0.0         -1.00000      0.0                                      P17
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E J1 0.100E 01 0.100E 01             P18
 22  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01             P18
 27  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01             P18
  3  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
  5  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
 20  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
 18  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
 25  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
 23  0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0               P18
   1   1   21001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   1   1   0   0   1                                                     P21B
   2   2   31001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
   3   3   41001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
   4   4   51001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
   5   5  281001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   2   1   0   0   1                                                     P21B
   6  28   7  50   1   2   1   2   2   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   1                                                     P21B
   7   7  29  50   1   2   1   2   2   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   1                                                     P21B
   8  29   91002   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   3   1   0   0   1                                                     P21B
   9   9  30  11   1   1   1   3   3   2   1   0   0   0   0  0.0             P21
    1   1   1   1   1   1                                                     P21B
  10  10  30  11   1   1   1   3   3   2   1   0   0   0   0  0.0             P21
    1   2   1   1   1   1                                                     P21B
  11  11  30   9   1   3   2   3   4   2   1   0   0   0   0  0.0             P21
    1   2   1   2   1   1                                                     P21B
  12  10  231001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   1   1   0   0   1                                                     P21B
  13  23  241001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
  14  24  251001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
  15  25  261001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   0   1   0   0   1                                                     P21B
  16  26  271001   1   1   1   1   1   1   1   0   0   0   0  0.0             P21
    1   2   1   0   0   1                                                     P21B
  17  11  311001   2   1   1   4   4   1   1   0   0   0   0  0.0             P21
    1   2   1   0   0   2                                                     P21B
  18  31  13  51   2   2   1   5   5   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   2                                                     P21B
  19  13  32  51   2   2   1   5   5   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   2                                                     P21B
  20  32  331001   2   1   1   4   4   1   1   0   0   0   0  0.0             P21
    1   3   1   0   0   2                                                     P21B
  21  33  16  52   2   2   1   5   5   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   2                                                     P21B
  22  16  34  52   2   2   1   5   5   1   1   0   0   0   0  0.0             P21
    1 100   1   0   0   2                                                     P21B
  23  34  181001   2   1   1   4   4   1   1   0   0   0   0  0.0             P21
    1   1   1   0   0   2                                                     P21B
```

```
  24  18  191001   2   1   1   4   4   1   1   0   0   0   0  0.0          P21
    1    0    1    0    0    2                                            P21B
  25  19  201001   2   1   1   4   4   1   1   0   0   0   0  0.0          P21
    1    0    1    0    0    2                                            P21B
  26  20  211001   2   1   1   4   4   1   1   0   0   0   0  0.0          P21
    1    0    1    0    0    2                                            P21B
  27  21  221001   2   1   1   4   4   1   1   0   0   0   0  0.0          P21
    1    2    1    0    0    2                                            P21B
    0                                                                     P22
  1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0 P32
  7                                                                       P33
  1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0     P34
    7
999999                                                                    P41
DESIGN                                                                    P41
VERTICAL +Z                                                               P41
HORIZONTAL +X                                                             P41
HORIZONTAL -X                                                             P41
HORIZONTAL +Y                                                             P41
HORIZONTAL -Y                                                             P41
THERMAL                                                                   P41
    11     1     0     0     1                                           P 1
SEALLOOP                                                                  P 2
    27    28    16     0     2     1    -4                               P60
     3                                                                    P61
OBE + SRV XZ                                                              P62
  1   1.0000  2   1.0400  3   0.8000
     2                                                                    P61
OBE + SRV X-Z                                                             P62
  1   2.0400  3   0.8000
     3                                                                    P61
OBE + SRV YZ                                                              P62
  1   1.0000  2   1.0400  5   0.8000
     2                                                                    P61
OBE + SRV Y-Z                                                             P62
  1   2.0400  5   0.8000
     3                                                                    P61
OBE + SRV -XZ                                                             P62
  1   1.0000  2   1.0400  4   0.8000
     2                                                                    P61
OBE + SRV -X-Z                                                            P62
  1   2.0400  4   0.8000
     3                                                                    P61
OBE + SRV -YZ                                                             P62
  1   1.0000  2   1.0400  6   0.8000
     2                                                                    P61
OBE + SRV -Y-Z                                                            P62
  1   2.0400  6   0.8000
     3                                                                    P61
SSE + SRV + LOCA XZ                                                       P62
  1   1.0000  2   1.9000  3   1.3000
     2                                                                    P61
SSE + SRV + LOCA X-Z                                                      P62
  1   2.9000  3   1.3000
     3                                                                    P61
SSE + SRV + LOCA YZ                                                       P62
  1   1.0000  2   1.9000  5   1.3000
     2                                                                    P61
SSE + SRV + LOCA Y-Z                                                      P62
  1   2.9000  5   1.3000
```

```
     3                                                                    P61
SSE + SRV + LOCA -XZ                                                      P62
  1   1.0000  2   1.9000  4   1.3000
     2                                                                    P61
SSE + SRV + LOCA -X-Z                                                     P62
  1   2.9000  4   1.3000
     3                                                                    P61
SSE + SRV + LOCA -YZ                                                      P62
  1   1.0000  2   1.9000  6   1.3000
     2                                                                    P61
SSE + SRV + LOCA -Y-Z                                                     P62
  1   2.9000  6   1.3000
     0                                                                    P68
     0                                                                    PD1
     0                                                                     PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.30 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.30 *
* ELAPSED SECONDS                             1.6                                 0.0                          1.6 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS SEAL LOOP
WPPSS SEAL LOOP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	27
TOTAL NUMBER OF STRUCTURAL JOINTS	28
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	3
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	9
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	5
TOTAL NUMBER OF MATERIALS	2
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	28
TOTAL FICTIOUS JOINTS READ IN	3
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	0.0	-27.000000
3	0.0	0.0	-54.000000
4	0.0	0.0	-83.000000
5	0.0	0.0	-112.000000
7	0.439340	0.0	-114.940628
9	2.690000	0.0	-115.379990
10	4.690000	0.0	-113.379990
11	4.690000	0.0	-117.379990
13	4.552839	0.171590	-119.780319
16	2.477150	2.768410	-119.780319
18	2.339999	2.940000	-112.000000
19	2.339999	2.940000	-83.000000
20	2.339999	2.940000	-54.000000
21	2.339999	2.940000	-27.000000
22	2.339999	2.940000	0.0
23	4.690000	0.0	-112.000000
24	4.690000	0.0	-83.000000
25	4.690000	0.0	-54.000000
26	4.690000	0.0	-27.000000
27	4.690000	0.0	0.0
28	0.0	0.0	-113.879990
29	1.500000	0.0	-115.379990
30	3.690000	0.0	-114.379990
31	4.690000	0.0	-119.250000
32	4.221720	0.585850	-120.000000
33	2.808280	2.354150	-120.000000
34	2.339999	2.940000	-119.250000
50	1.500000	0.0	-113.879990
51	4.221720	0.585850	-119.250000
52	2.808280	2.354150	-119.250000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	C	2.500	0.250	.1767E 01	.1132E 01	.1132E 01	.2264E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
3	S	2.500	0.250	.1767E 01	.1132E 01	.2264E 01	.1132E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
4	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
5	C	1.500	0.250	.9817E 00	.1994E 00	.1994E 00	.3988E 00	2.0	2.0	0.75	0.0	0.0	0.75	-0.75	0.0	0.0	-0.75

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2500000E 01	.2500000E 00	.2500000E 01	.2500000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	0.0
1-A	150.00	27900000.00	0.300000	0.000009250	0.0
1-B	175.00	27774992.00	0.300000	0.000009300	0.0
2	70.00	28300000.00	0.300000	0.000009100	0.0
2-A	150.00	27900000.00	0.300000	0.000009250	0.0
2-B	175.00	27774992.00	0.300000	0.000009300	0.0

PRESSURE DATA

TYPE	PRESSURE
1	25.00

THERMAL DATA

THERMAL LOAD 1	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
	1	175.000	0.0	0.0	0.0	70.000
	2	175.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	0.0	-1.000000
2	0.0	0.0	1.000000
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	1.000000	0.0
6	0.0	-1.000000	0.0

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	22	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	27	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	3	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
5	5	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
6	20	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
7	18	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
8	25	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
9	23	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.42 ** LAST STEP "BEGP" TIME IS    0.30 ** DELTA TIME IS    0.12 *
* ELAPSED SECONDS                             2.9                                 1.6                       1.3 *

***** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   28


 BAND-WIDTH =    24  BY D.O.F.          BAND-WIDTH =     4  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.59 ** LAST STEP "DA3D" TIME IS    0.42 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                             8.9                                 2.9                       6.0 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.59 ** LAST STEP "JCSO" TIME IS    0.59 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                             9.0                                 8.9                       0.1 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.59092E 08) OCCURS AT THE 47TH DOF
MINIMUM VALUE (0.62123E 03) OCCURS AT THE 164TH DOF
RATIO OF MAX/MIN= 0.95121E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    1.87 ** LAST STEP "INPT" TIME IS    0.59 ** DELTA TIME IS    1.28 *
* ELAPSED SECONDS                            15.5                                 9.0                       6.5 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.61 ** LAST STEP "EQ3D" TIME IS    1.87 ** DELTA TIME IS    0.74 *
* ELAPSED SECONDS                            22.3                                15.5                       6.8 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	2	1001	1	1	1	1	1	1	1	1	27.00000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	2	3	1001	1	1	1	1	0	1	1	1	27.00000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
3	3	4	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
4	4	5	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
5	5	28	1001	1	1	1	1	2	1	1	1	1.87999	0.30000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
6	28	7	50	1	2	1	1	100	1	1	2	0.78540	0.60000	RAD=	1.5000	1.000000	0.0	0.0
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
7	7	29	50	1	2	1	1	100	1	1	2	0.78540	0.60000	RAD=	1.5000	0.707114	0.0	0.707100
														FLX=	1.0000	0.0	1.000000	0.0
														ECC=	0.0	-0.707100	0.0	0.707114
8	29	9	1002	1	1	1	1	3	1	1	1	1.19000	0.30000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
9	9	30	11	1	1	2	1	1	1	1	3	1.41421	1.00000			0.707107	0.0	-0.707107
																-0.707107	0.0	-0.707107
																0.0	1.000000	0.0
10	10	30	11	1	1	2	1	2	1	1	3	1.41421	1.00000			0.707107	0.0	-0.707107
																0.707107	0.0	0.707107
																0.0	-1.000000	0.0
11	11	30	9	1	3	2	1	2	1	1	3	0.0	0.55650			-0.948683	0.0	-0.316228
											4	3.16228				0.316228	0.0	-0.948683
																0.0	-1.000000	0.0
12	10	23	1001	1	1	1	1	1	1	1	1	1.37999	0.30000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0
13	23	24	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000	0.0	0.0
																0.0	0.0	-1.000000
																0.0	1.000000	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	24	25	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
15	25	26	1001	1	1	1	1	0	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
16	26	27	1001	1	1	1	1	2	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
17	11	31	1001	2	1	1	1	2	1	2	4	1.87001	0.11300			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
18	31	13	51	2	2	1	1	100	1	2	5	0.78540	0.70000	RAD= FLX= ECC=	0.7500 1.0000 0.0	-0.624370 0.781129 0.0 -0.781129-0.624370 0.000008 0.000006 0.000005 1.000000
19	13	32	51	2	2	1	1	100	1	2	5	0.78540	0.70000	RAD= FLX= ECC=	0.7500 1.0000 0.0	-0.441497 0.552352 0.707099 -0.781134-0.624363 0.0 0.441486-0.552339 0.707115
20	32	33	1001	2	1	1	1	3	1	2	4	2.26378	0.11300			0.781127 0.624372 0.0 0.624372-0.781127 0.0 0.0 0.0 -1.000000
21	33	16	52	2	2	1	1	100	1	2	5	0.78542	0.70000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.0 0.0 1.000000 -0.781124-0.624375 0.0 0.624375-0.781124 0.0
22	16	34	52	2	2	1	1	100	1	2	5	0.78537	0.70000	RAD= FLX= ECC=	0.7500 1.0000 0.0	0.441508-0.552348 0.707094 -0.781128-0.624371 0.000006 0.441485-0.552334-0.707119
23	34	18	1001	2	1	1	1	1	1	2	4	7.25000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
24	18	19	1001	2	1	1	1	0	1	2	4	29.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
25	19	20	1001	2	1	1	1	0	1	2	4	29.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
26	20	21	1001	2	1	1	1	0	1	2	4	27.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

ELM NO.	*** JOINTS END 1	END 2	*** MAT. REF	ELM. CODE	PIPE TYPE	PRES CODE	SIF TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN	ORIENTATION MATRIX (I,J')
27	21	22	1001	2	1	1	1	2	1	2	4	27.00000	0.11300	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

MAXIMUM ELEMENT LENGTH OCCURS IN ELEMENT 25 AND EQUALS 0.29000E 02 INCHES
MINIMUM ELEMENT LENGTH OCCURS IN ELEMENT 22 AND EQUALS 0.58903E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 10 AND EQUALS 0.34707E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 24 AND EQUALS 0.50199E 03

```
* CPU SECONDS ** THIS STEP "EDIT" TIME IS    2.79 ** LAST STEP "SELT" TIME IS    2.61 ** DELTA TIME IS    0.18 *
* ELAPSED SECONDS                            26.0                                22.3                      3.7 *
```

RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	-0.80999985E 01	0.0	0.0	0.0
3	0.0	0.0	-0.83999977E 01	0.0	0.0	0.0
4	0.0	0.0	-0.86999979E 01	0.0	0.0	0.0
5	0.0	0.0	-0.46320000E 01	0.0	0.0	0.0
7	0.13318652E 00	0.0	-0.70685339E 00	0.0	0.21741811E-01	0.0
9	-0.59604641E-07	0.0	-0.88560575E 00	0.0	0.82448423E-01	0.0
10	-0.59604641E-07	0.0	-0.91410416E 00	0.0	-0.11785096E 00	0.0
11	0.69284886E-02	0.0	-0.12166319E 01	0.0	-0.26709247E 00	0.0
13	-0.48464511E-01	0.60633853E-01	-0.41233432E 00	-0.49659982E-02	-0.39691068E-02	0.56292876E-07
16	0.48467848E-01	-0.60635321E-01	-0.41233689E 00	0.49667656E-02	0.39702617E-02	-0.43361450E-07
18	0.0	0.0	-0.20481243E 01	0.0	0.0	0.0
19	0.0	0.0	-0.32769985E 01	0.0	0.0	0.0
20	0.0	0.0	-0.31639986E 01	0.0	0.0	0.0
21	0.0	0.0	-0.30509987E 01	0.0	0.0	0.0
23	0.0	0.0	-0.45569944E 01	0.0	0.0	0.0
24	0.0	0.0	-0.86999979E 01	0.0	0.0	0.0
25	0.0	0.0	-0.83999987E 01	0.0	0.0	0.0
26	0.0	0.0	-0.80999985E 01	0.0	0.0	0.0
28	-0.87025017E-02	0.0	-0.70202327E 00	0.0	0.15373752E-01	0.0
29	-0.12448364E 00	0.0	-0.46532965E 00	0.0	-0.17401118E-01	0.0
30	-0.69282837E-02	0.0	-0.20630445E 01	0.0	0.56804493E-01	0.0
31	0.32006979E-02	-0.40047951E-02	-0.35063726E 00	-0.35115161E-02	-0.28070319E-02	0.35043417E-07
32	0.45263827E-01	-0.56629073E-01	-0.29525632E 00	-0.25664307E-01	-0.20514239E-01	0.0
33	-0.45266666E-01	0.56630820E-01	-0.29526162E 00	0.25664095E-01	0.20513762E-01	0.0
34	-0.32011552E-02	0.40044636E-02	-0.65459293E 00	0.35114207E-02	0.28065778E-02	-0.26994037E-07

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.0	0.80999985E 01	0.0	0.0	0.0
3	0.0	0.0	0.83999977E 01	0.0	0.0	0.0
4	0.0	0.0	0.86999979E 01	0.0	0.0	0.0
5	0.0	0.0	0.46320000E 01	0.0	0.0	0.0
7	-0.13318652E 00	0.0	0.70685339E 00	0.0	-0.21741811E-01	0.0
9	0.59604641E-07	0.0	0.88560575E 00	0.0	-0.82448423E-01	0.0
10	0.59604641E-07	0.0	0.91410416E 00	0.0	0.11785096E 00	0.0
11	-0.69284886E-02	0.0	0.12166319E 01	0.0	0.26709247E 00	0.0
13	0.48464511E-01	-0.60633853E-01	0.41233432E 00	0.49659982E-02	0.39691068E-02	-0.56292876E-07
16	-0.48467848E-01	0.60635321E-01	0.41233689E 00	-0.49667656E-02	-0.39702617E-02	0.43361450E-07
18	0.0	0.0	0.20481243E 01	0.0	0.0	0.0
19	0.0	0.0	0.32769985E 01	0.0	0.0	0.0
20	0.0	0.0	0.31639986E 01	0.0	0.0	0.0
21	0.0	0.0	0.30509987E 01	0.0	0.0	0.0
23	0.0	0.0	0.45569944E 01	0.0	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
24	0.0	0.0	0.86999979E 01	0.0	0.0	0.0
25	0.0	0.0	0.83999987E 01	0.0	0.0	0.0
26	0.0	0.0	0.80999985E 01	0.0	0.0	0.0
28	0.87025017E-02	0.0	0.70202327E 00	0.0	-0.15373752E-01	0.0
29	0.12448364E 00	0.0	0.46532965E 00	0.0	0.17401118E-01	0.0
30	0.69282837E-02	0.0	0.20630445E 01	0.0	-0.56804493E-01	0.0
31	-0.32006979E-02	0.40047951E-02	0.35063726E 00	0.35115161E-02	0.28070319E-02	-0.35043417E-07
32	-0.45263827E-01	0.56629073E-01	0.29525632E 00	0.25664307E-01	0.20514239E-01	0.0
33	0.45266666E-01	-0.56630820E-01	0.29526162E 00	-0.25664095E-01	-0.20513762E-01	0.0
34	0.32011552E-02	-0.40044636E-02	0.65459293E 00	-0.35114207E-02	-0.28065778E-02	0.26994037E-07

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.80999985E 01	0.0	0.0	0.0	0.19683834E-03	0.0
3	0.0	0.0	0.0	0.0	-0.27997780E 01	0.0
4	0.86999979E 01	0.0	0.0	0.0	0.20599361E-03	0.0
5	0.0	0.0	0.0	0.0	0.20936798E 02	0.0
7	0.70685315E 00	0.0	-0.13318795E 00	0.0	0.21740358E-01	0.0
9	0.88560581E 00	0.0	0.59604641E-07	0.0	0.11785096E 00	0.0
10	0.91410422E 00	0.0	0.59604641E-07	0.0	-0.70241630E-01	0.0
11	0.11981564E 01	0.0	-0.69283806E-02	0.0	0.76834798E 00	0.0
13	0.41233510E 00	0.13111401E-06	0.48465677E-01	0.29756941E-02	0.26348359E-02	-0.19974608E-03
16	0.41232920E 00	0.24678320E-05	-0.48463810E-01	0.29760562E-02	0.26331078E-02	0.20140831E-03
18	0.0	0.0	0.0	0.0	0.74244127E 01	0.0
19	0.32769985E 01	0.0	0.0	0.0	-0.86212138E-04	0.0
20	0.0	0.0	0.0	0.0	-0.10547934E 01	0.0
21	0.30509987E 01	0.0	0.0	0.0	-0.16725155E-03	0.0
23	0.0	0.0	0.0	0.0	0.20977341E 02	0.0
24	0.86999979E 01	0.0	0.0	0.0	-0.20599361E-03	0.0
25	0.0	0.0	0.0	0.0	-0.28001804E 01	0.0
26	0.80999985E 01	0.0	0.0	0.0	-0.19683834E-03	0.0
28	0.56883293E 00	0.0	0.12448668E 00	0.0	0.35553686E-01	0.0
29	0.59852010E 00	0.0	0.87015666E-02	0.0	0.15374996E-01	0.0
30	0.20815201E 01	0.0	0.69283508E-02	0.0	-0.17041349E 00	0.0
31	0.29669368E 00	0.18929191E-01	-0.45265134E-01	0.26760092E-02	0.14179338E-01	-0.14142539E-03
32	0.34919918E 00	-0.18929280E-01	-0.32005277E-02	0.21041369E-02	0.18631443E-02	-0.21378379E-01
33	0.34920764E 00	-0.18930346E-01	0.32007722E-02	0.21042814E-02	0.18631855E-02	0.21377828E-01
34	0.60065371E 00	0.18928029E-01	0.45263045E-01	0.26756180E-02	0.47621024E 00	0.14165840E-03

RESULTANT JOINT FORCES

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	-0.80999985E 01	0.0	0.0	0.0	-0.19683834E-03	0.0
3	0.0	0.0	0.0	0.0	0.27997780E 01	0.0
4	-0.86999979E 01	0.0	0.0	0.0	-0.20599361E-03	0.0
5	0.0	0.0	0.0	0.0	-0.20936798E 02	0.0
7	-0.70685315E 00	0.0	0.13318795E 00	0.0	-0.21740358E-01	0.0
9	-0.88560581E 00	0.0	-0.59604641E-07	0.0	-0.11785096E 00	0.0
10	-0.91410422E 00	0.0	-0.59604641E-07	0.0	0.70241630E-01	0.0
11	-0.11981564E 01	0.0	0.69283806E-02	0.0	-0.76834798E 00	0.0
13	-0.41233510E 00	-0.13111401E-06	-0.48465677E-01	-0.29756941E-02	-0.26348359E-02	0.19974608E-03
16	-0.41232920E 00	-0.24678320E-05	0.48463810E-01	-0.29760562E-02	-0.26331078E-02	-0.20140831E-03
18	0.0	0.0	0.0	0.0	-0.74244127E 01	0.0
19	-0.32769985E 01	0.0	0.0	0.0	0.86212138E-04	0.0
20	0.0	0.0	0.0	0.0	0.10547934E 01	0.0
21	-0.30509987E 01	0.0	0.0	0.0	0.16725155E-03	0.0
23	0.0	0.0	0.0	0.0	-0.20977341E 02	0.0
24	-0.86999979E 01	0.0	0.0	0.0	0.20599361E-03	0.0
25	0.0	0.0	0.0	0.0	0.28001804E 01	0.0
26	-0.80999985E 01	0.0	0.0	0.0	0.19683834E-03	0.0
28	-0.56883293E 00	0.0	-0.12448668E 00	0.0	-0.35553686E-01	0.0
29	-0.59852010E 00	0.0	-0.87015666E-02	0.0	-0.15374996E-01	0.0
30	-0.20815201E 01	0.0	-0.69283508E-02	0.0	0.17041349E 00	0.0
31	-0.29669368E 00	-0.18929191E-01	0.45265134E-01	-0.26760092E-02	-0.14179338E-01	0.14142539E-03
32	-0.34919918E 00	0.18929280E-01	0.32005277E-02	-0.21041369E-02	-0.18631443E-02	0.21378379E-01
33	-0.34920764E 00	0.18930346E-01	-0.32007722E-02	-0.21042814E-02	-0.18631855E-02	-0.21377828E-01
34	-0.60065371E 00	-0.18928029E-01	-0.45263045E-01	-0.26756180E-02	-0.47621024E 00	-0.14165840E-03

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	0.80999985E 01	0.0	-0.19683834E-03	0.0	0.0
3	0.0	0.0	0.0	0.27997599E 01	0.0	0.0
4	0.0	0.86999979E 01	0.0	-0.20599361E-03	0.0	0.0
5	0.0	0.0	0.0	-0.20936768E 02	0.0	0.0
7	0.0	0.70685387E 00	0.0	-0.87915594E-03	0.0	0.87623135E-03
9	0.0	0.88560575E 00	0.0	-0.11785084E 00	0.0	0.82448304E-01
10	0.0	0.91410422E 00	0.0	0.70241451E-01	0.0	-0.11785084E 00
11	0.0	0.11958466E 01	0.0	-0.76834810E 00	0.0	-0.26709247E 00
13	-0.41734029E-06	0.41233385E 00	-0.60634419E-01	-0.39791502E-02	-0.29756380E-02	-0.15935916E-03
16	0.28879213E-05	0.41232902E 00	0.60630936E-01	-0.39774925E-02	-0.29760995E-02	0.16122138E-03
18	0.0	0.0	0.0	-0.74244061E 01	0.0	0.0
19	0.0	0.32769985E 01	0.0	0.86212138E-04	0.0	0.0
20	0.0	0.0	0.0	0.10548029E 01	0.0	0.0
21	0.0	0.30509987E 01	0.0	0.16725155E-03	0.0	0.0
23	0.0	0.0	0.0	-0.20977310E 02	0.0	0.0
24	0.0	0.86999979E 01	0.0	0.20599361E-03	0.0	0.0
25	0.0	0.0	0.0	0.28001623E 01	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
26	0.0	0.80999985E 01	0.0	0.19683834E-03	0.0	0.0
28	0.0	0.63542789E 00	0.0	-0.16740672E-01	0.0	0.62083453E-03
29	0.0	0.53192472E 00	0.0	-0.62149437E-03	0.0	-0.36214564E-01
30	0.0	0.20838299E 01	0.0	0.17041349E 00	0.0	0.56804504E-01
31	0.18929735E-01	0.28814292E 00	0.56630272E-01	-0.15388109E-01	-0.26759736E-02	-0.11320387E-03
32	-0.18929269E-01	0.35775113E 00	0.40041544E-02	-0.28137630E-02	-0.21041376E-02	-0.17088484E-01
33	-0.18930338E-01	0.35775882E 00	-0.40043220E-02	-0.28137316E-02	-0.21042814E-02	0.17087627E-01
34	0.18927608E-01	0.59210259E 00	-0.56626629E-01	-0.47741723E 00	-0.26756451E-02	0.11310686E-03

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
2	0.0	-0.80999985E 01	0.0	0.19683834E-03	0.0	0.0
3	0.0	0.0	0.0	-0.27997599E 01	0.0	0.0
4	0.0	-0.86999979E 01	0.0	0.20599361E-03	0.0	0.0
5	0.0	0.0	0.0	0.20936768E 02	0.0	0.0
7	0.0	-0.70685387E 00	0.0	0.87915594E-03	0.0	-0.87623135E-03
9	0.0	-0.88560575E 00	0.0	0.11785084E 00	0.0	-0.82448304E-01
10	0.0	-0.91410422E 00	0.0	-0.70241451E-01	0.0	0.11785084E 00
11	0.0	-0.11958466E 01	0.0	0.76834810E 00	0.0	0.26709247E 00
13	0.41734029E-06	-0.41233385E 00	0.60634419E-01	0.39791502E-02	0.29756380E-02	0.15935916E-03
16	-0.28879213E-05	-0.41232902E 00	-0.60630936E-01	0.39774925E-02	0.29760995E-02	-0.16122138E-03
18	0.0	0.0	0.0	0.74244061E 01	0.0	0.0
19	0.0	-0.32769985E 01	0.0	-0.86212138E-04	0.0	0.0
20	0.0	0.0	0.0	-0.10548029E 01	0.0	0.0
21	0.0	-0.30509987E 01	0.0	-0.16725155E-03	0.0	0.0
23	0.0	0.0	0.0	0.20977310E 02	0.0	0.0
24	0.0	-0.86999979E 01	0.0	-0.20599361E-03	0.0	0.0
25	0.0	0.0	0.0	-0.28001623E 01	0.0	0.0
26	0.0	-0.80999985E 01	0.0	-0.19683834E-03	0.0	0.0
28	0.0	-0.63542789E 00	0.0	0.16740672E-01	0.0	-0.62083453E-03
29	0.0	-0.53192472E 00	0.0	0.62149437E-03	0.0	0.36214564E-01
30	0.0	-0.20838299E 01	0.0	-0.17041349E 00	0.0	-0.56804504E-01
31	-0.18929735E-01	-0.28814292E 00	-0.56630272E-01	0.15388109E-01	0.26759736E-02	0.11320387E-03
32	0.18929269E-01	-0.35775113E 00	-0.40041544E-02	0.28137630E-02	0.21041376E-02	0.17088484E-01
33	0.18930338E-01	-0.35775882E 00	0.40043220E-02	0.28137316E-02	0.21042814E-02	-0.17087627E-01
34	-0.18927608E-01	-0.59210259E 00	0.56626629E-01	0.47741723E 00	0.26756451E-02	-0.11310686E-03

RESULTANT JOINT FORCES

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
7	-0.20870414E 05	0.0	-0.20870230E 05	0.0	-0.42968750E-01	0.0
9	-0.12207852E 05	0.0	-0.33890906E 05	0.0	0.0	0.0
10	0.33890906E 05	0.0	0.12207852E 05	0.0	0.0	0.0
11	0.73730273E 04	0.0	-0.13097293E 05	0.0	0.0	0.0
13	0.72413906E 04	-0.90599883E 04	-0.11598227E 05	0.94182491E-02	0.16011465E-01	-0.66082105E-02
16	-0.72417266E 04	0.90594727E 04	-0.11598637E 05	0.62069010E-01	0.56109052E-01	0.50905123E-02
28	-0.14757730E 05	0.0	0.13945285E 05	0.0	0.29279055E 04	0.0
29	0.13945086E 05	0.0	-0.14758094E 05	0.0	-0.29278823E 04	0.0
30	-0.73730273E 04	0.0	0.22119090E 05	0.0	0.0	0.0
31	0.51208047E 04	-0.64062148E 04	0.10777977E 05	-0.63550635E 03	-0.50797119E 03	0.66081695E-02
32	-0.67292383E 04	0.84190313E 04	-0.82015391E 04	0.63550366E 03	0.50796045E 03	0.0
33	0.67293750E 04	-0.84187109E 04	-0.82014570E 04	-0.63552148E 03	-0.50799097E 03	0.0
34	-0.51205977E 04	0.64063984E 04	0.10778289E 05	0.63546655E 03	0.50794043E 03	-0.50905421E-02

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    4.50 ** LAST STEP "EDIT" TIME IS    2.79 ** DELTA TIME IS    1.71 *
* ELAPSED SECONDS                            79.2                                26.0                      53.2 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    4.58 ** LAST STEP "SLVR" TIME IS    4.50 ** DELTA TIME IS    0.08 *
* ELAPSED SECONDS                            80.0                                79.2                       0.9 *
```

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000002975	0.000000683	-0.000039767	0.000000025	0.000000107	0.000000011
3	0.0	0.0	-0.000069685	-0.000000101	-0.000000441	0.000000022
4	0.000016517	-0.000003791	-0.000090848	-0.000000078	-0.000000342	0.000000033
5	0.0	0.0	-0.000100649	0.000000422	0.000001837	0.000000045
7	-0.000005830	0.000001361	-0.000101930	0.000000476	0.000002209	0.000000045
9	-0.000006814	0.000001673	-0.000107342	0.000000519	0.000002150	0.000000042
10	-0.000002834	0.000000703	-0.000111181	0.000000519	0.000001980	0.000000040
11	-0.000012453	0.000003103	-0.000112378	0.000000645	0.000002565	0.000000030
13	-0.000019003	0.000005269	-0.000112013	0.000001038	0.000002833	-0.000000054
16	-0.000018716	0.000005342	-0.000102102	0.000001454	0.000003149	-0.000000094
18	0.0	0.0	-0.000100193	0.000000244	0.000001783	-0.000000088
19	0.000016035	-0.000002192	-0.000088970	-0.000000046	-0.000000336	-0.000000066
20	0.0	0.0	-0.000067461	-0.000000059	-0.000000429	-0.000000043
21	-0.000002897	0.000000396	-0.000038189	0.000000015	0.000000107	-0.000000021
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	-0.000110872	0.000000483	0.000001878	0.000000039
24	0.000016881	-0.000004340	-0.000098424	-0.000000090	-0.000000349	0.000000029
25	0.0	0.0	-0.000074613	-0.000000116	-0.000000450	0.000000019
26	-0.000003041	0.000000782	-0.000042231	0.000000028	0.000000110	0.000000009
27	0.0	0.0	0.0	0.0	0.0	0.0
28	-0.000003504	0.000000840	-0.000100892	0.000000468	0.000002143	0.000000045
29	-0.000006839	0.000001620	-0.000104438	0.000000485	0.000002236	0.000000044
30	-0.000004648	0.000001192	-0.000109498	0.000000529	0.000002079	0.000000042
31	-0.000017521	0.000004725	-0.000112559	0.000001018	0.000002818	-0.000000050
32	-0.000019600	0.000005514	-0.000110649	0.000001066	0.000002856	-0.000000057
33	-0.000019458	0.000005642	-0.000103797	0.000001463	0.000003158	-0.000000094
34	-0.000017023	0.000004577	-0.000101392	0.000001424	0.000003124	-0.000000094

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	37.	0.	-0.	-0.	0.	1.57	82.	1.	83.
			2	-0.	-29.	-0.	-0.	0.	0.	1.00	82.	0.	82.
2	TAN	1	2	0.	29.	0.	0.	-0.	-0.	1.00	82.	0.	82.
			3	-0.	-21.	-0.	-0.	0.	0.	1.00	82.	1.	83.
3	TAN	1	3	-0.	21.	-0.	0.	-0.	-0.	1.00	82.	1.	83.
			4	0.	-12.	0.	0.	0.	-0.	1.00	82.	1.	83.
4	TAN	1	4	-0.	12.	-0.	-0.	-0.	0.	1.00	82.	1.	83.
			5	0.	-3.	0.	0.	0.	-1.	1.00	82.	3.	85.
5	TAN	1	5	-0.	3.	0.	-0.	-0.	1.	1.00	82.	3.	85.
			28	0.	-3.	-0.	0.	0.	-2.	1.57	82.	9.	91.
6	BEND	1	28	-0.	-0.	3.	-0.	-2.	-0.	1.57	62.	3.	66.
			7	-1.	0.	-2.	0.	1.	-0.	1.57	62.	2.	65.
7	BEND	1	7	1.	-0.	2.	-0.	-1.	0.	1.57	62.	2.	65.
			29	-1.	0.	-0.	-0.	0.	-0.	1.57	62.	0.	63.
8	TAN	1	29	-0.	0.	1.	-0.	0.	0.	1.57	82.	1.	83.
			9	0.	-0.	-1.	-1.	-0.	-0.	1.57	82.	6.	88.
9	TEE	1	9	-1.	-0.	-0.	-0.	0.	1.	1.57	62.	2.	65.
			30	-0.	-1.	0.	0.	-0.	-2.	1.00	62.	2.	64.
10	TEE	1	10	-3.	4.	0.	-0.	-0.	0.	1.00	62.	0.	63.
			30	2.	-3.	-0.	0.	0.	-4.	1.00	62.	4.	66.
11	TEE	1	11	0.	1.	-0.	-0.	0.	-0.	1.00	62.	0.	63.
			30	-1.	-3.	0.	0.	-0.	2.	1.00	58.	2.	60.
12	TAN	1	10	-0.	5.	0.	0.	-0.	0.	1.57	82.	2.	84.
			23	0.	-5.	-0.	-0.	0.	-1.	1.00	82.	3.	85.
13	TAN	1	23	0.	5.	-0.	0.	-0.	1.	1.00	82.	3.	85.
			24	-0.	-14.	0.	-0.	0.	-0.	1.00	82.	1.	83.
14	TAN	1	24	0.	14.	-0.	0.	-0.	0.	1.00	82.	1.	83.
			25	-0.	-23.	0.	0.	0.	0.	1.00	82.	1.	83.
15	TAN	1	25	-0.	23.	0.	-0.	-0.	-0.	1.00	82.	1.	83.
			26	0.	-31.	-0.	0.	0.	0.	1.00	82.	0.	82.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	-0.	31.	0.	-0.	-0.	-0.	1.00	82.	0.	82.
			27	0.	-39.	-0.	-0.	0.	-0.	1.57	82.	1.	83.
17	TAN	2	11	0.	1.	0.	-0.	0.	0.	1.00	58.	4.	62.
			31	-0.	-1.	-0.	0.	-0.	-0.	1.57	58.	5.	63.
18	BEND	2	31	-0.	0.	1.	0.	0.	0.	1.57	37.	1.	39.
			13	-0.	-0.	-0.	-0.	-0.	-0.	1.57	37.	2.	39.
19	BEND	2	13	0.	0.	0.	0.	0.	0.	1.57	37.	2.	39.
			32	0.	-0.	-0.	-0.	-0.	0.	1.57	37.	2.	40.
20	TAN	2	32	0.	0.	0.	-0.	-0.	-0.	1.57	58.	8.	66.
			33	0.	-0.	-0.	-0.	0.	0.	1.57	58.	0.	58.
21	BEND	2	33	-0.	0.	0.	0.	-0.	-0.	1.57	37.	0.	38.
			16	0.	-0.	-1.	0.	0.	0.	1.57	37.	2.	39.
22	BEND	2	16	-0.	0.	1.	-0.	-0.	-0.	1.57	37.	2.	39.
			34	-0.	-0.	-1.	0.	0.	-0.	1.57	37.	2.	40.
23	TAN	2	34	0.	1.	-0.	0.	0.	0.	1.57	58.	9.	67.
			18	-0.	-2.	0.	-0.	-0.	-0.	1.00	58.	2.	60.
24	TAN	2	18	0.	2.	-0.	0.	0.	0.	1.00	58.	2.	60.
			19	-0.	-5.	0.	-0.	-0.	-0.	1.00	58.	1.	59.
25	TAN	2	19	0.	5.	-0.	0.	0.	0.	1.00	58.	1.	59.
			20	-0.	-8.	0.	0.	-0.	0.	1.00	58.	0.	59.
26	TAN	2	20	-0.	8.	0.	-0.	0.	-0.	1.00	58.	0.	59.
			21	0.	-12.	-0.	0.	-0.	0.	1.00	58.	0.	58.
27	TAN	2	21	-0.	12.	0.	-0.	0.	-0.	1.00	58.	0.	58.
			22	0.	-15.	-0.	-0.	-0.	-0.	1.57	58.	0.	58.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	32	-0.000019600	0.000005514	-0.000110649
2	33	-0.000019458	0.000005642	-0.000103797
3	31	-0.000017521	0.000004725	-0.000112559

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	5	9.	5	91.
2	23	9.	23	67.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-0.	37.	-0.	-0.	-0.
3	-0.	0.	0.	0.	0.	-0.
5	-0.	-0.	0.	-0.	-0.	-0.
18	-0.	0.	-0.	0.	0.	-0.
20	-0.	0.	-0.	-0.	-0.	-0.
22	0.	-0.	15.	-0.	-0.	0.
23	1.	-0.	-0.	0.	0.	0.
25	-0.	0.	-0.	-0.	-0.	0.
27	0.	-0.	39.	-0.	-0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000002975	-0.000000683	0.000039767	-0.000000025	-0.000000107	-0.000000011
3	0.0	0.0	0.000069685	0.000000101	0.000000441	-0.000000022
4	-0.000016517	0.000003791	0.000090848	0.000000078	0.000000342	-0.000000033
5	0.0	0.0	0.000100649	-0.000000422	-0.000001837	-0.000000045
7	0.000005830	-0.000001361	0.000101930	-0.000000476	-0.000002209	-0.000000045
9	0.000006814	-0.000001673	0.000107342	-0.000000519	-0.000002150	-0.000000042
10	0.000002834	-0.000000703	0.000111181	-0.000000519	-0.000001980	-0.000000040
11	0.000012453	-0.000003103	0.000112378	-0.000000645	-0.000002565	-0.000000030
13	0.000019003	-0.000005269	0.000112013	-0.000001038	-0.000002833	0.000000054
16	0.000018716	-0.000005342	0.000102102	-0.000001454	-0.000003149	0.000000094
18	0.0	0.0	0.000100193	-0.000000244	-0.000001783	0.000000088
19	-0.000016035	0.000002192	0.000088970	0.000000046	0.000000336	0.000000066
20	0.0	0.0	0.000067461	0.000000059	0.000000429	0.000000043
21	0.000002897	-0.000000396	0.000038189	-0.000000015	-0.000000107	0.000000021
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.000110872	-0.000000483	-0.000001878	-0.000000039
24	-0.000016881	0.000004340	0.000098424	0.000000090	0.000000349	-0.000000029
25	0.0	0.0	0.000074613	0.000000116	0.000000450	-0.000000019
26	0.000003041	-0.000000782	0.000042231	-0.000000028	-0.000000110	-0.000000009
27	0.0	0.0	0.0	0.0	0.0	0.0
28	0.000003504	-0.000000840	0.000100892	-0.000000468	-0.000002143	-0.000000045
29	0.000006839	-0.000001620	0.000104438	-0.000000485	-0.000002236	-0.000000044
30	0.000004648	-0.000001192	0.000109498	-0.000000529	-0.000002079	-0.000000042
31	0.000017521	-0.000004725	0.000112559	-0.000001018	-0.000002818	0.000000050
32	0.000019600	-0.000005514	0.000110649	-0.000001066	-0.000002856	0.000000057
33	0.000019458	-0.000005642	0.000103797	-0.000001463	-0.000003158	0.000000094
34	0.000017023	-0.000004577	0.000101392	-0.000001424	-0.000003124	0.000000094

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	-37.	-0.	0.	0.	-0.	1.57	82.	1.	83.
			2	0.	29.	0.	0.	-0.	-0.	1.00	82.	0.	82.
2	TAN	1	2	-0.	-29.	-0.	-0.	0.	0.	1.00	82.	0.	82.
			3	0.	21.	0.	0.	-0.	-0.	1.00	82.	1.	83.
3	TAN	1	3	0.	-21.	0.	-0.	0.	0.	1.00	82.	1.	83.
			4	-0.	12.	-0.	-0.	-0.	0.	1.00	82.	1.	83.
4	TAN	1	4	0.	-12.	0.	0.	0.	-0.	1.00	82.	1.	83.
			5	-0.	3.	-0.	-0.	-0.	1.	1.00	82.	3.	85.
5	TAN	1	5	0.	-3.	-0.	0.	0.	-1.	1.00	82.	3.	85.
			28	-0.	3.	0.	-0.	-0.	2.	1.57	82.	9.	91.
6	BEND	1	28	0.	0.	-3.	0.	2.	0.	1.57	62.	3.	66.
			7	1.	-0.	2.	-0.	-1.	0.	1.57	62.	2.	65.
7	BEND	1	7	-1.	0.	-2.	0.	1.	-0.	1.57	62.	2.	65.
			29	1.	-0.	0.	0.	-0.	0.	1.57	62.	0.	63.
8	TAN	1	29	0.	-0.	-1.	0.	-0.	-0.	1.57	82.	1.	83.
			9	-0.	0.	1.	1.	0.	0.	1.57	82.	6.	88.
9	TEE	1	9	1.	0.	0.	0.	-0.	-1.	1.57	62.	2.	65.
			30	0.	1.	-0.	-0.	0.	2.	1.00	62.	2.	64.
10	TEE	1	10	3.	-4.	-0.	0.	0.	-0.	1.00	62.	0.	63.
			30	-2.	3.	0.	-0.	-0.	4.	1.00	62.	4.	66.
11	TEE	1	11	-0.	-1.	0.	0.	-0.	0.	1.00	62.	0.	63.
			30	1.	3.	-0.	-0.	0.	-2.	1.00	58.	2.	60.
12	TAN	1	10	0.	-5.	-0.	-0.	0.	-0.	1.57	82.	2.	84.
			23	-0.	5.	0.	0.	-0.	1.	1.00	82.	3.	85.
13	TAN	1	23	-0.	-5.	0.	-0.	0.	-1.	1.00	82.	3.	85.
			24	0.	14.	-0.	0.	-0.	0.	1.00	82.	1.	83.
14	TAN	1	24	-0.	-14.	0.	-0.	0.	-0.	1.00	82.	1.	83.
			25	0.	23.	-0.	-0.	-0.	-0.	1.00	82.	1.	83.
15	TAN	1	25	0.	-23.	-0.	0.	0.	0.	1.00	82.	1.	83.
			26	-0.	31.	0.	-0.	-0.	-0.	1.00	82.	0.	82.

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	-31.	-0.	0.	0.	0.	1.00	82.	0.	82.
			27	-0.	39.	0.	0.	-0.	0.	1.57	82.	1.	83.
17	TAN	2	11	-0.	-1.	-0.	0.	-0.	-0.	1.00	58.	4.	62.
			31	0.	1.	0.	-0.	0.	0.	1.57	58.	5.	63.
18	BEND	2	31	0.	-0.	-1.	-0.	-0.	-0.	1.57	37.	1.	39.
			13	0.	0.	0.	0.	0.	0.	1.57	37.	2.	39.
19	BEND	2	13	-0.	-0.	-0.	-0.	-0.	-0.	1.57	37.	2.	39.
			32	-0.	0.	0.	0.	0.	-0.	1.57	37.	2.	40.
20	TAN	2	32	0.	-0.	-0.	0.	0.	0.	1.57	58.	8.	66.
			33	-0.	0.	0.	0.	-0.	-0.	1.57	58.	0.	58.
21	BEND	2	33	0.	-0.	-0.	-0.	0.	0.	1.57	37.	0.	38.
			16	-0.	0.	1.	-0.	-0.	-0.	1.57	37.	2.	39.
22	BEND	2	16	0.	-0.	-1.	0.	0.	0.	1.57	37.	2.	39.
			34	0.	0.	1.	-0.	-0.	0.	1.57	37.	2.	40.
23	TAN	2	34	-0.	-1.	0.	-0.	-0.	-0.	1.57	58.	9.	67.
			18	0.	2.	-0.	0.	0.	0.	1.00	58.	2.	60.
24	TAN	2	18	-0.	-2.	0.	-0.	-0.	-0.	1.00	58.	2.	60.
			19	0.	5.	-0.	0.	0.	0.	1.00	58.	1.	59.
25	TAN	2	19	-0.	-5.	0.	-0.	-0.	-0.	1.00	58.	1.	59.
			20	0.	8.	-0.	-0.	0.	-0.	1.00	58.	0.	59.
26	TAN	2	20	0.	-8.	-0.	0.	-0.	0.	1.00	58.	0.	59.
			21	-0.	12.	0.	-0.	0.	-0.	1.00	58.	0.	58.
27	TAN	2	21	0.	-12.	-0.	0.	-0.	0.	1.00	58.	0.	58.
			22	-0.	15.	0.	0.	0.	0.	1.57	58.	0.	58.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	32	0.000019600	-0.000005514	0.000110649
2	33	0.000019458	-0.000005642	0.000103797
3	31	0.000017521	-0.000004725	0.000112559

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	5	9.	5	91.
2	23	9.	23	67.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-0.	0.	-37.	0.	0.	0.
3	0.	-0.	-0.	-0.	-0.	0.
5	0.	0.	-0.	0.	0.	0.
18	0.	-0.	0.	-0.	-0.	0.
20	0.	-0.	0.	0.	0.	0.
22	-0.	0.	-15.	0.	0.	-0.
23	-1.	0.	0.	-0.	-0.	-0.
25	0.	-0.	0.	0.	0.	-0.
27	-0.	0.	-39.	0.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000637539	0.000000607	0.000025491	0.000000022	0.000005775	0.000000280
3	0.0	0.0	0.000050982	-0.000000090	-0.000023683	0.000000560
4	0.001667640	-0.000003371	0.000078362	-0.000000070	-0.000009028	0.000000860
5	0.0	0.0	0.000105741	0.000000375	0.000060586	0.000001161
7	-0.000151661	0.000001493	0.000087241	0.000000799	0.000047992	0.000001180
9	-0.000171615	0.000004277	-0.000011086	0.000001780	0.000047715	0.000001582
10	-0.000075954	0.000003406	-0.000105489	0.000002088	0.000050846	0.000001783
11	-0.000272056	0.000013749	-0.000106704	0.000001948	0.000049324	0.000004439
13	-0.000394521	0.000014975	-0.000099797	0.000001031	0.000048146	0.000019386
16	-0.000460876	-0.000035302	-0.000008970	-0.000001539	0.000039191	0.000027107
18	0.0	0.0	-0.000003693	-0.000006129	0.000119361	0.000025448
19	0.004545916	0.000035130	-0.000002737	0.000001156	-0.000015382	0.000018859
20	0.0	0.0	-0.000001781	0.000001475	-0.000057453	0.000012270
21	0.002067816	-0.000009959	-0.000000890	-0.000000366	0.000014260	0.000006135
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	-0.000104205	0.000002082	0.000059679	0.000001761
24	0.001659495	-0.000018714	-0.000077223	-0.000000387	-0.000008860	0.000001305
25	0.0	0.0	-0.000050242	-0.000000499	-0.000023465	0.000000849
26	0.000639005	0.000003371	-0.000025121	0.000000122	0.000005722	0.000000425
27	0.0	0.0	0.0	0.0	0.0	0.0
28	-0.000101070	0.000000359	0.000107516	0.000000672	0.000049517	0.000001181
29	-0.000171772	0.000002980	0.000039206	0.000000991	0.000047204	0.000001213
30	-0.000124483	0.000003890	-0.000057555	0.000002002	0.000048862	0.000001816
31	-0.000365450	0.000017019	-0.000106642	0.000001078	0.000048426	0.000018591
32	-0.000413403	0.000008618	-0.000083434	0.000000982	0.000047761	0.000020010
33	-0.000458088	-0.000026577	-0.000021385	-0.000001379	0.000039579	0.000027036
34	-0.000445139	-0.000038156	-0.000003932	-0.000001716	0.000038941	0.000027095

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-8.	-21.	0.	-0.	-0.	-65.	1.57	82.	316.	398.
			2	-0.	21.	-0.	-0.	0.	-33.	1.00	82.	100.	182.
2	TAN	1	2	0.	-21.	0.	0.	-0.	33.	1.00	82.	100.	182.
			3	-9.	21.	-0.	-0.	0.	88.	1.00	82.	269.	351.
3	TAN	1	3	-9.	-21.	-0.	0.	-0.	-88.	1.00	82.	269.	351.
			4	1.	21.	0.	0.	0.	-55.	1.00	82.	167.	249.
4	TAN	1	4	-1.	-21.	-0.	-0.	-0.	55.	1.00	82.	167.	249.
			5	-8.	21.	0.	0.	0.	55.	1.00	82.	169.	251.
5	TAN	1	5	-5.	-21.	-1.	-0.	-0.	-55.	1.00	82.	169.	251.
			28	5.	21.	1.	3.	0.	46.	1.57	82.	224.	306.
6	BEND	1	28	-5.	1.	-21.	-3.	46.	-0.	1.57	62.	81.	143.
			7	18.	-1.	12.	3.	-33.	-2.	1.57	62.	57.	120.
7	BEND	1	7	-18.	1.	-12.	-3.	33.	2.	1.57	62.	57.	120.
			29	21.	-1.	-3.	2.	-9.	-4.	1.57	62.	17.	80.
8	TAN	1	29	1.	3.	-21.	9.	4.	-2.	1.57	82.	48.	130.
			9	-1.	-3.	21.	16.	-4.	3.	1.57	82.	83.	164.
9	TEE	1	9	13.	17.	1.	-1.	6.	-16.	1.57	62.	30.	92.
			30	-14.	-16.	-1.	-1.	-6.	35.	1.00	62.	36.	98.
10	TEE	1	10	-15.	14.	2.	1.	1.	-55.	1.00	62.	60.	123.
			30	14.	-15.	-2.	-3.	-1.	34.	1.00	62.	34.	97.
11	TEE	1	11	1.	-1.	-0.	-2.	-6.	-1.	1.00	62.	7.	69.
			30	1.	0.	0.	3.	6.	1.	1.00	58.	6.	65.
12	TAN	1	10	1.	21.	2.	-1.	-0.	-55.	1.57	82.	263.	345.
			23	-1.	-21.	-2.	-1.	0.	56.	1.00	82.	171.	253.
13	TAN	1	23	-8.	21.	-0.	1.	-0.	-56.	1.00	82.	171.	253.
			24	-1.	-21.	0.	-0.	0.	-54.	1.00	82.	167.	249.
14	TAN	1	24	1.	21.	-0.	0.	-0.	54.	1.00	82.	167.	249.
			25	-9.	-21.	0.	0.	0.	88.	1.00	82.	269.	351.
15	TAN	1	25	9.	21.	0.	-0.	-0.	-88.	1.00	82.	269.	351.
			26	0.	-21.	-0.	0.	0.	-33.	1.00	82.	100.	182.

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	-0.	21.	0.	-0.	-0.	33.	1.00	82.	100.	182.
			27	-8.	-21.	-0.	-0.	0.	66.	1.57	82.	316.	398.
17	TAN	2	11	1.	-0.	0.	0.	-6.	1.	1.00	58.	85.	144.
			31	-1.	0.	-0.	-1.	6.	2.	1.57	58.	140.	198.
18	BEND	2	31	-1.	-1.	-0.	1.	-2.	-6.	1.57	37.	37.	75.
			13	1.	1.	-1.	3.	2.	5.	1.57	37.	38.	75.
19	BEND	2	13	-1.	-1.	1.	-3.	-2.	-5.	1.57	37.	38.	75.
			32	0.	2.	-2.	5.	3.	2.	1.57	37.	36.	73.
20	TAN	2	32	2.	2.	0.	3.	-2.	5.	1.57	58.	134.	192.
			33	-2.	-2.	-0.	-4.	2.	-1.	1.57	58.	92.	150.
21	BEND	2	33	-0.	-2.	2.	-1.	-4.	-2.	1.57	37.	24.	62.
			16	-1.	2.	-2.	1.	3.	1.	1.57	37.	21.	58.
22	BEND	2	16	1.	-2.	2.	-1.	-3.	-1.	1.57	37.	21.	58.
			34	-2.	2.	-0.	0.	2.	0.	1.57	37.	13.	50.
23	TAN	2	34	3.	0.	-0.	2.	-0.	1.	1.57	58.	49.	107.
			18	-4.	-0.	0.	0.	0.	25.	1.00	58.	358.	416.
24	TAN	2	18	-3.	0.	0.	-0.	-0.	-25.	1.00	58.	358.	416.
			19	-0.	-0.	-0.	0.	0.	-19.	1.00	58.	269.	327.
25	TAN	2	19	0.	0.	0.	-0.	-0.	19.	1.00	58.	269.	327.
			20	-3.	-0.	-0.	-0.	0.	32.	1.00	58.	451.	509.
26	TAN	2	20	-3.	0.	-0.	0.	-0.	-32.	1.00	58.	451.	509.
			21	0.	-0.	0.	-0.	0.	-13.	1.00	58.	179.	237.
27	TAN	2	21	-0.	0.	-0.	0.	-0.	13.	1.00	58.	179.	237.
			22	-3.	-0.	0.	0.	0.	25.	1.57	58.	564.	622.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	19	0.004545916	0.000055130	-0.000002737
2	19	0.004545916	0.000055130	-0.000002737
3	28	-0.000101070	0.000000359	0.000107516

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	316.	16	398.
2	27	564.	27	622.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	-8.	-0.	-21.	-0.	65.	-0.
3	-18.	0.	-0.	0.	0.	-0.
5	-13.	1.	-0.	-0.	0.	-0.
18	-7.	0.	-0.	-0.	-0.	0.
20	-7.	-0.	-0.	0.	-0.	0.
22	-3.	0.	0.	0.	25.	-0.
23	-9.	-2.	-0.	0.	-0.	0.
25	-18.	0.	-0.	-0.	-0.	0.
27	-8.	-0.	21.	-0.	66.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000637539	-0.000000607	-0.000025491	-0.000000022	-0.000005775	-0.000000280
3	0.0	0.0	-0.000050982	0.000000090	0.000023683	-0.000000560
4	-0.001667640	0.000003371	-0.000078362	0.000000070	0.000009028	-0.000000860
5	0.0	0.0	-0.000105741	-0.000000375	-0.000060586	-0.000001161
7	0.000151661	-0.000001493	-0.000087241	-0.000000799	-0.000047992	-0.000001180
9	0.000171615	-0.000004277	0.000011086	-0.000001780	-0.000047715	-0.000001582
10	0.000075954	-0.000003406	0.000105489	-0.000002088	-0.000050846	-0.000001783
11	0.000272056	-0.000013749	0.000106704	-0.000001948	-0.000049324	-0.000004439
13	0.000394521	-0.000014975	0.000099797	-0.000001031	-0.000048146	-0.000019386
16	0.000460876	0.000035302	0.000008970	0.000001539	-0.000039191	-0.000027107
18	0.0	0.0	0.000003693	0.000006129	-0.000119361	-0.000025448
19	-0.004545916	-0.000055130	0.000002737	-0.000001156	0.000015382	-0.000018859
20	0.0	0.0	0.000001781	-0.000001475	0.000057453	-0.000012270
21	-0.002067816	0.000009959	0.000000890	0.000000366	-0.000014260	-0.000006135
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.000104205	-0.000002082	-0.000059679	-0.000001761
24	-0.001659495	0.000018714	0.000077223	0.000000387	0.000008860	-0.000001305
25	0.0	0.0	0.000050242	0.000000499	0.000023465	-0.000000849
26	-0.000639005	-0.000003371	0.000025121	-0.000000122	-0 000005722	-0.000000425
27	0.0	0.0	0.0	0.0	0.0	0.0
28	0.000101070	-0.000000359	-0.000107516	-0.000000672	-0.000049517	-0.000001181
29	0.000171772	-0.000002980	-0.000039206	-0.000000991	-0.000047204	-0.000001213
30	0.000124483	-0.000003890	0.000057555	-0.000002002	-0.000048862	-0.000001816
31	0.000365450	-0.000017019	0.000106642	-0.000001078	-0.000048426	-0.000018591
32	0.000413403	-0.000008618	0.000083434	-0.000000982	-0.000047761	-0.000020010
33	0.000458088	0.000026577	0.000021385	0.000001379	-0.000039579	-0.000027036
34	0.000445139	0.000038156	0.000003932	0.000001716	-0.000038941	-0.000027095

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	8.	21.	-0.	0.	0.	65.	1.57	82.	316.	398.
			2	0.	-21.	0.	0.	-0.	33.	1.00	82.	100.	182.
2	TAN	1	2	-0.	21.	-0.	-0.	0.	-33.	1.00	82.	100.	182.
			3	9.	-21.	0.	0.	-0.	-88.	1.00	82.	269.	351.
3	TAN	1	3	9.	21.	0.	-0.	0.	88.	1.00	82.	269.	351.
			4	-1.	-21.	-0.	-0.	-0.	55.	1.00	82.	167.	249.
4	TAN	1	4	1.	21.	0.	0.	0.	-55.	1.00	82.	167.	249.
			5	8.	-21.	-0.	-0.	-0.	-55.	1.00	82.	169.	251.
5	TAN	1	5	5.	21.	1.	0.	0.	55.	1.00	82.	169.	251.
			28	-5.	-21.	-1.	-3.	-0.	-46.	1.57	82.	224.	306.
6	BEND	1	28	5.	-1.	21.	3.	-46.	0.	1.57	62.	81.	143.
			7	-18.	1.	-12.	-3.	33.	2.	1.57	62.	57.	120.
7	BEND	1	7	18.	-1.	12.	3.	-33.	-2.	1.57	62.	57.	120.
			29	-21.	1.	3.	-2.	9.	4.	1.57	62.	17.	80.
8	TAN	1	29	-1.	-3.	21.	-9.	-4.	2.	1.57	82.	48.	130.
			9	1.	3.	-21.	-16.	4.	-3.	1.57	82.	83.	164.
9	TEE	1	9	-13.	-17.	-1.	1.	-6.	16.	1.57	62.	30.	92.
			30	14.	16.	1.	1.	6.	-35.	1.00	62.	36.	98.
10	TEE	1	10	15.	-14.	-2.	-1.	-1.	55.	1.00	62.	60.	123.
			30	-14.	15.	2.	3.	1.	-34.	1.00	62.	34.	97.
11	TEE	1	11	-1.	1.	0.	2.	6.	1.	1.00	62.	7.	69.
			30	-1.	-0.	-0.	-3.	-6.	-1.	1.00	58.	6.	65.
12	TAN	1	10	-1.	-21.	-2.	1.	0.	55.	1.57	82.	263.	345.
			23	1.	21.	2.	1.	-0.	-56.	1.00	82.	171.	253.
13	TAN	1	23	8.	-21.	0.	-1.	0.	56.	1.00	82.	171.	253.
			24	1.	21.	-0.	0.	-0.	54.	1.00	82.	167.	249.
14	TAN	1	24	-1.	-21.	0.	-0.	0.	-54.	1.00	82.	167.	249.
			25	9.	21.	-0.	-0.	-0.	-88.	1.00	82.	269.	351.
15	TAN	1	25	9.	-21.	-0.	0.	0.	88.	1.00	82.	269.	351.
			26	-0.	21.	0.	-0.	-0.	33.	1.00	82.	100.	182.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	-21.	-0.	0.	0.	-33.	1.00	82.	100.	182.
			27	8.	21.	0.	0.	-0..	-66.	1.57	82.	316.	398.
17	TAN	2	11	-1.	0.	-0.	-0.	6.	-1.	1.00	58.	85.	144.
			31	1.	-0.	0.	1.	-6.	-2.	1.57	58.	140.	198.
18	BEND	2	31	1.	1.	0.	-1.	2.	6.	1.57	37.	37.	75.
			13	-1.	-1.	1.	-3.	-2.	-5.	1.57	37.	38.	75.
19	BEND	2	13	1.	1.	-1.	3.	2.	5.	1.57	37.	38.	75.
			32	-0.	-2.	2.	-5.	-3.	-2.	1.57	37.	36.	73.
20	TAN	2	32	-2.	-2.	-0.	-3.	2.	-5.	1.57	58.	134.	192.
			33	2.	2.	0.	4.	-2.	1.	1.57	58.	92.	150.
21	BEND	2	33	0.	2.	-2.	1.	4.	2.	1.57	37.	24.	62.
			16	1.	-2.	2.	-1.	-3.	-1.	1.57	37.	21.	58.
22	BEND	2	16	-1.	2.	-2.	1.	3.	1.	1.57	37.	21.	58.
			34	2.	-2.	0.	-0.	-2.	-0.	1.57	37.	13.	50.
23	TAN	2	34	-3.	-0.	0.	-2.	0.	-1.	1.57	58.	49.	107.
			18	4.	0.	-0.	-0.	-0.	-25.	1.00	58.	358.	416.
24	TAN	2	18	3.	-0.	-0.	0.	0.	25.	1.00	58.	358.	416.
			19	0.	0.	0.	-0.	-0.	19.	1.00	58.	269.	327.
25	TAN	2	19	-0.	-0.	-0.	0.	0.	-19.	1.00	58.	269.	327.
			20	3.	0.	0.	0.	-0.	-32.	1.00	58.	451.	509.
26	TAN	2	20	3.	-0.	0.	-0.	0.	32.	1.00	58.	451.	509.
			21	-0.	0.	-0.	0.	-0.	13.	1.00	58.	179.	237.
27	TAN	2	21	0.	-0.	0.	-0.	0.	-13.	1.00	58.	179.	237.
			22	3.	0.	-0.	-0.	-0.	-25.	1.57	58.	564.	622.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	19	-0.004545916	-0.000055130	0.000002737
2	19	-0.004545916	-0.000055130	0.000002737
3	28	0.000101070	-0.000000359	-0.000107516

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	316.	16	398.
2	27	564.	27	622.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	8.	0.	21.	0.	-65.	0.
3	18.	-0.	0.	-0.	-0.	0.
5	13.	-1.	0.	0.	-0.	0.
18	7.	-0.	0.	0.	0.	-0.
20	7.	0.	0.	-0.	0.	-0.
22	3.	-0.	-0.	-0.	-25.	0.
23	9.	2.	0.	-0.	0.	-0.
25	18.	-0.	0.	0.	0.	-0.
27	8.	0.	-21.	0.	-66.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.000000526	0.000526464	0.000004948	-0.000009787	0.000000019	0.000000899
3	0.0	0.0	0.000009896	0.000040138	-0.000000078	0.000001797
4	0.000002921	0.002284293	0.000015211	0.000021785	-0.000000060	0.000002762
5	0.0	0.0	0.000020525	-0.000129186	0.000000325	0.000003728
7	-0.000001186	-0.000369078	0.000021024	-0.000124695	-0.000000132	0.000003738
9	-0.000001152	-0.000415497	0.000022796	-0.000121396	0.000000183	0.000003552
10	-0.000000447	-0.000167316	0.000022012	-0.000121278	0.000000570	0.000003404
11	-0.000009109	-0.000631163	0.000021447	-0.000113564	0.000003944	0.000005000
13	-0.000057795	-0.000859173	0.000013311	-0.000081474	0.000028792	0.000013871
16	-0.000101612	-0.000896395	-0.000100278	-0.000072682	0.000031710	0.000018572
18	0.0	0.0	-0.000101589	-0.000179616	0.000003292	0.000017436
19	0.000029610	0.005087916	-0.000075285	0.000026748	-0.000000621	0.000012921
20	0.0	0.0	-0.000048980	0.000071958	-0.000000792	0.000008406
21	-0.000005349	0.001969908	-0.000024490	-0.000017861	0.000000197	0.000004203
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.000021744	-0.000124181	0.000000451	0.000003362
24	0.000004052	0.002239309	0.000016114	0.000020854	-0.000000084	0.000002492
25	0.0	0.0	0.000010484	0.000038938	-0.000000108	0.000001621
26	-0.000000730	0.000534566	0.000005242	-0.000009494	0.000000026	0.000000811
27	0.0	0.0	0.0	0.0	0.0	0.0
28	-0.000001195	-0.000238283	0.000020870	-0.000125302	-0.000000000	0.000003790
29	-0.000001058	-0.000419783	0.000021588	-0.000124011	-0.000000196	0.000003663
30	-0.000001213	-0.000291021	0.000022923	-0.000120664	0.000000546	0.000003626
31	-0.000040235	-0.000813853	0.000023143	-0.000083138	0.000027612	0.000013397
32	-0.000070259	-0.000881465	-0.000009600	-0.000080087	0.000029693	0.000014245
33	-0.000100988	-0.000905896	-0.000081734	-0.000072074	0.000032350	0.000018527
34	-0.000088169	-0.000860450	-0.000108165	-0.000073613	0.000030907	0.000018564

WPPSS SEAL LOOP
WPPSS SEAL LOOP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	-4.	7.	-60.	-0.	0.	1.57	82.	291.	373.
			2	-0.	4.	1.	-30.	0.	0.	1.00	82.	92.	174.
2	TAN	1	2	0.	-4.	-1.	30.	-0.	-0.	1.00	82.	92.	174.
			3	0.	4.	9.	98.	0.	0.	1.00	82.	301.	383.
3	TAN	1	3	-0.	-4.	10.	-98.	-0.	-0.	1.00	82.	301.	383.
			4	0.	4.	-1.	-67.	0.	-0.	1.00	82.	206.	288.
4	TAN	1	4	-0.	-4.	1.	67.	-0.	0.	1.00	82.	206.	288.
			5	0.	4.	7.	20.	0.	-0.	1.00	82.	60.	142.
5	TAN	1	5	2.	-4.	2.	-20.	-0.	0.	1.00	82.	60.	142.
			28	-2.	4.	-2.	16.	0.	3.	1.57	82.	79.	161.
6	BEND	1	28	2.	-2.	-4.	-16.	3.	-0.	1.57	62.	29.	91.
			7	2.	1.	4.	10.	-3.	-11.	1.57	62.	26.	89.
7	BEND	1	7	-2.	-1.	-4.	-10.	3.	11.	1.57	62.	26.	89.
			29	4.	0.	2.	-1.	0.	-15.	1.57	62.	25.	88.
8	TAN	1	29	-0.	-2.	-4.	-0.	15.	1.	1.57	82.	70.	152.
			9	-0.	2.	4.	5.	-15.	-1.	1.57	82.	75.	157.
9	TEE	1	9	4.	2.	0.	-11.	10.	-5.	1.57	62.	27.	89.
			30	-4.	-2.	-2.	10.	-10.	11.	1.00	62.	18.	80.
10	TEE	1	10	3.	-4.	6.	-10.	-10.	1.	1.00	62.	16.	78.
			30	-3.	4.	-4.	3.	10.	2.	1.00	62.	11.	73.
11	TEE	1	11	-2.	-8.	-1.	-18.	2.	-14.	1.00	62.	25.	88.
			30	2.	8.	3.	23.	-2.	9.	1.00	58.	25.	83.
12	TAN	1	10	1.	-4.	6.	14.	-0.	1.	1.57	82.	68.	150.
			23	-1.	4.	-6.	-22.	0.	-0.	1.00	82.	68.	150.
13	TAN	1	23	0.	-4.	-7.	22.	-0.	0.	1.00	82.	68.	150.
			24	-0.	4.	-1.	66.	0.	-0.	1.00	82.	203.	285.
14	TAN	1	24	0.	-4.	1.	-66.	-0.	0.	1.00	82.	203.	285.
			25	-0.	4.	-10.	-98.	0.	0.	1.00	82.	299.	381.
15	TAN	1	25	-0.	-4.	-9.	98.	-0.	-0.	1.00	82.	299.	381.
			26	0.	4.	1.	30.	0.	0.	1.00	82.	93.	175.

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	-0.	-4.	-1.	-30.	-0.	-0.	1.00	82.	93.	175.
			27	0.	4.	-7.	-61.	0.	-0.	1.57	82.	293.	375.
17	TAN	2	11	1.	-8.	1.	-17.	-4.	14.	1.00	58.	321.	379.
			31	-1.	8.	-1.	16.	4.	-12.	1.57	58.	455.	513.
18	BEND	2	31	-1.	-0.	-8.	1.	20.	-4.	1.57	37.	121.	158.
			13	7.	1.	5.	2.	-18.	3.	1.57	37.	107.	144.
19	BEND	2	13	-7.	-1.	-5.	-2.	18.	-3.	1.57	37.	107.	144.
			32	8.	1.	-1.	3.	-13.	1.	1.57	37.	80.	117.
20	TAN	2	32	1.	1.	8.	-13.	-1.	3.	1.57	58.	301.	359.
			33	-1.	-0.	-8.	-6.	1.	-1.	1.57	58.	135.	193.
21	BEND	2	33	-8.	-1.	0.	-1.	-6.	-1.	1.57	37.	36.	73.
			16	6.	1.	-6.	1.	10.	0.	1.57	37.	61.	99.
22	BEND	2	16	-6.	-1.	6.	-1.	-10.	-0.	1.57	37.	61.	99.
			34	0.	2.	-8.	-0.	12.	0.	1.57	37.	73.	110.
23	TAN	2	34	1.	8.	1.	10.	-0.	8.	1.57	58.	273.	331.
			18	-1.	-8.	-2.	-21.	0.	-0.	1.00	58.	305.	363.
24	TAN	2	18	0.	8.	-3.	21.	-0.	0.	1.00	58.	305.	363.
			19	-0.	-8.	-0.	20.	0.	-0.	1.00	58.	288.	346.
25	TAN	2	19	0.	8.	0.	-20.	-0.	0.	1.00	58.	288.	346.
			20	-0.	-8.	-3.	-33.	0.	0.	1.00	58.	467.	525.
26	TAN	2	20	-0.	8.	-3.	33.	-0.	-0.	1.00	58.	467.	525.
			21	0.	-8.	0.	12.	0.	0.	1.00	58.	175.	233.
27	TAN	2	21	-0.	8.	-0.	-12.	-0.	-0.	1.00	58.	175.	233.
			22	0.	-8.	-3.	-25.	0.	-0.	1.57	58.	552.	610.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	16	-0.000101612	-0.000896395	-0.000100278
2	19	0.000029610	0.005087916	-0.000075285
3	34	-0.000088169	-0.000860450	-0.000108165

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	301.	2	383.
2	27	552.	27	610.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	-7.	-4.	-60.	-0.	-0.
3	-0.	-19.	-0.	-0.	0.	-0.
5	2.	-9.	-0.	-0.	-0.	-0.
18	-1.	-5.	-0.	0.	0.	0.
20	-0.	-7.	-0.	0.	-0.	0.
22	0.	-3.	8.	-25.	-0.	-0.
23	-1.	-13.	0.	0.	0.	0.
25	-0.	-19.	0.	0.	-0.	0.
27	0.	-7.	-4.	-61.	-0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.000000526	-0.000526464	-0.000004948	0.000009787	-0.000000019	-0.000000899
3	0.0	0.0	-0.000009896	-0.000040138	0.000000078	-0.000001797
4	-0.000002921	-0.002284293	-0.000015211	-0.000021785	0.000000060	-0.000002762
5	0.0	0.0	-0.000020525	0.000129186	-0.000000325	-0.000003728
7	0.000001186	0.000369078	-0.000021024	0.000124695	0.000000132	-0.000003738
9	0.000001152	0.000415497	-0.000022796	0.000121396	-0.000000183	-0.000003552
10	0.000000447	0.000167316	-0.000022012	0.000121278	-0.000000570	-0.000003404
11	0.000009109	0.000631163	-0.000021447	0.000113564	-0.000003944	-0.000005000
13	0.000057795	0.000859173	-0.000013311	0.000081474	-0.000028792	-0.000013871
16	0.000101612	0.000896395	0.000100278	0.000072682	-0.000031710	-0.000018572
18	0.0	0.0	0.000101589	0.000179616	-0.000003292	-0.000017436
19	-0.000029610	-0.005087916	0.000075285	-0.000026748	0.000000621	-0.000012921
20	0.0	0.0	0.000048980	-0.000071958	0.000000792	-0.000008406
21	0.000005349	-0.001969908	0.000024490	0.000017861	-0.000000197	-0.000004203
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	-0.000021744	0.000124181	-0.000000451	-0.000003362
24	-0.000004052	-0.002239309	-0.000016114	-0.000020854	0.000000084	-0.000002492
25	0.0	0.0	-0.000010484	-0.000038938	0.000000108	-0.000001621
26	0.000000730	-0.000534566	-0.000005242	0.000009494	-0.000000026	-0.000000811
27	0.0	0.0	0.0	0.0	0.0	0.0
28	0.000001195	0.000238283	-0.000020870	0.000125302	0.000000000	-0.000003790
29	0.000001058	0.000419783	-0.000021588	0.000124011	0.000000196	-0.000003663
30	0.000001213	0.000291021	-0.000022923	0.000120664	-0.000000546	-0.000003626
31	0.000040235	0.000813853	-0.000023143	0.000083138	-0.000027612	-0.000013397
32	0.000070259	0.000881465	0.000009600	0.000080087	-0.000029693	-0.000014245
33	0.000100988	0.000905896	0.000081734	0.000072074	-0.000032350	-0.000018527
34	0.000088169	0.000860450	0.000108165	0.000073613	-0.000030907	-0.000018564

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	4.	-7.	60.	0.	-0.	1.57	82.	291.	373.
			2	0.	-4.	-1.	30.	-0.	-0.	1.00	82.	92.	174.
2	TAN	1	2	-0.	4.	1.	-30.	0.	0.	1.00	82.	92.	174.
			3	0.	-4.	-9.	-98.	-0.	-0.	1.00	82.	301.	383.
3	TAN	1	3	0.	4.	-10.	98.	0.	0.	1.00	82.	301.	383.
			4	-0.	-4.	1.	67.	-0.	0.	1.00	82.	206.	288.
4	TAN	1	4	0.	4.	-1.	-67.	0.	-0.	1.00	82.	206.	288.
			5	-0.	-4.	-7.	-20.	-0.	0.	1.00	82.	60.	142.
5	TAN	1	5	-2.	4.	-2.	20.	0.	-0.	1.00	82.	60.	142.
			28	2.	-4.	2.	-16.	-0.	-3.	1.57	82.	79.	161.
6	BEND	1	28	-2.	2.	4.	16.	-3.	0.	1.57	62.	29.	91.
			7	-2.	-1.	-4.	-10.	3.	11.	1.57	62.	26.	89.
7	BEND	1	7	2.	1.	4.	10.	-3.	-11.	1.57	62.	26.	89.
			29	-4.	-0.	-2.	1.	-0.	15.	1.57	62.	25.	88.
8	TAN	1	29	0.	2.	4.	0.	-15.	-1.	1.57	82.	70.	152.
			9	0.	-2.	-4.	-5.	15.	1.	1.57	82.	75.	157.
9	TEE	1	9	-4.	-2.	-0.	11.	-10.	5.	1.57	62.	27.	89.
			30	4.	2.	2.	-10.	10.	-11.	1.00	62.	18.	80.
10	TEE	1	10	-3.	4.	-6.	10.	10.	-1.	1.00	62.	16.	78.
			30	3.	-4.	4.	-3.	-10.	-2.	1.00	62.	11.	73.
11	TEE	1	11	2.	8.	1.	18.	-2.	14.	1.00	62.	25.	88.
			30	-2.	-8.	-3.	-23.	2.	-9.	1.00	58.	25.	83.
12	TAN	1	10	-1.	4.	-6.	-14.	0.	-1.	1.57	82.	68.	150.
			23	1.	-4.	6.	22.	-0.	0.	1.00	82.	68.	150.
13	TAN	1	23	-0.	4.	7.	-22.	0.	-0.	1.00	82.	68.	150.
			24	0.	-4.	1.	-66.	-0.	0.	1.00	82.	203.	285.
14	TAN	1	24	-0.	4.	-1.	66.	0.	-0.	1.00	82.	203.	285.
			25	0.	-4.	10.	98.	-0.	-0.	1.00	82.	299.	381.
15	TAN	1	25	0.	4.	9.	-98.	0.	0.	1.00	82.	299.	381.
			26	-0.	-4.	-1.	-30.	-0.	-0.	1.00	82.	93.	175.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	4.	1.	30.	0.	0.	1.00	82.	93.	175.
			27	-0.	-4.	7.	61.	-0.	0.	1.57	82.	293.	375.
17	TAN	2	11	-1.	8.	-1.	17.	4.	-14.	1.00	58.	321.	379.
			31	1.	-8.	1.	-16.	-4.	12.	1.57	58.	455.	513.
18	BEND	2	31	1.	0.	8.	-1.	-20.	4.	1.57	37.	121.	158.
			13	-7.	-1.	-5.	-2.	18.	-3.	1.57	37.	107.	144.
19	BEND	2	13	7.	1.	5.	2.	-18.	3.	1.57	37.	107.	144.
			32	-8.	-1.	1.	-3.	13.	-1.	1.57	37.	80.	117.
20	TAN	2	32	-1.	-1.	-8.	13.	1.	-3.	1.57	58.	301.	359.
			33	1.	0.	8.	6.	-1.	1.	1.57	58.	135.	193.
21	BEND	2	33	8.	1.	-0.	1.	6.	1.	1.57	37.	36.	73.
			16	-6.	-1.	6.	-1.	-10.	-0.	1.57	37.	61.	99.
22	BEND	2	16	6.	1.	-6.	1.	10.	0.	1.57	37.	61.	99.
			34	-0.	-2.	8.	0.	-12.	-0.	1.57	37.	73.	110.
23	TAN	2	34	-1.	-8.	-1.	-10.	0.	-8.	1.57	58.	273.	331.
			18	1.	8.	2.	21.	-0.	0.	1.00	58.	305.	363.
24	TAN	2	18	-0.	-8.	3.	-21.	0.	-0.	1.00	58.	305.	363.
			19	0.	8.	0.	-20.	-0.	0.	1.00	58.	288.	346.
25	TAN	2	19	-0.	-8.	-0.	20.	0.	-0.	1.00	58.	288.	346.
			20	0.	8.	3.	33.	-0.	-0.	1.00	58.	467.	525.
26	TAN	2	20	0.	-8.	3.	-33.	0.	0.	1.00	58.	467.	525.
			21	-0.	8.	-0.	-12.	-0.	-0.	1.00	58.	175.	233.
27	TAN	2	21	0.	-8.	0.	12.	0.	0.	1.00	58.	175.	233.
			22	-0.	8.	3.	25.	-0.	0.	1.57	58.	552.	610.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	16	0.000101612	0.000896395	0.000100278
2	19	-0.000029610	-0.005087916	0.000075285
3	34	0.000088169	0.000860450	0.000108165

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	301.	2	383.
2	27	552.	27	610.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-0.	7.	4.	60.	0.	0.
3	0.	19.	0.	0.	-0.	0.
5	-2.	9.	0.	0.	0.	0.
18	1.	5.	0.	-0.	-0.	-0.
20	0.	7.	0.	-0.	0.	-0.
22	-0.	3.	-8.	25.	0.	0.
23	1.	13.	-0.	-0.	-0.	-0.
25	0.	19.	-0.	-0.	0.	-0.
27	-0.	7.	4.	61.	0.	0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER . 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
2	-0.001087220	-0.000017061	-0.026380941	-0.000000616	0.000039274	-0.000000046
3	0.0	0.0	-0.052761886	0.000002528	-0.000161070	-0.000000092
4	0.006035920	0.000094719	-0.081096947	0.000001959	-0.000124868	-0.000000141
5	0.0	0.0	-0.109432042	-0.000010537	0.000671471	-0.000000191
7	-0.001890290	-0.000034076	-0.112540126	-0.000011079	0.000413163	-0.000000182
9	0.000031706	-0.000039896	-0.113418341	-0.000010136	-0.000218825	0.000000746
10	0.001080504	-0.000016751	-0.110629618	-0.000010332	-0.000443271	0.000001369
11	0.002646467	-0.000049869	-0.114656568	-0.000002610	-0.000349256	0.000003259
13	0.003254339	0.000233011	-0.117021501	0.000101269	-0.000280573	0.000037323
16	0.001120274	0.002630986	-0.117036819	0.000261655	-0.000199371	0.000053411
18	0.0	0.0	-0.109417617	0.000365784	-0.000076847	0.000050055
19	-0.000691262	-0.003290331	-0.081086278	-0.000069003	0.000014497	0.000037095
20	0.0	0.0	-0.052754935	-0.000088054	0.000018499	0.000024134
21	0.000124870	0.000594367	-0.026377466	0.000021857	-0.000004592	0.000012067
22	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	-0.109283090	-0.000010278	-0.000529123	0.000001352
24	-0.004756339	0.000092389	-0.080986559	0.000001911	0.000098396	0.000001002
25	0.0	0.0	-0.052690078	0.000002465	0.000126924	0.000000652
26	0.000856736	-0.000016642	-0.026345037	-0.000000601	-0.000030948	0.000000326
27	0.0	0.0	0.0	0.0	0.0	0.0
28	-0.001699072	-0.000021835	-0.111268938	-0.000011141	0.000507220	-0.000000194
29	-0.001067547	-0.000039434	-0.113375843	-0.000010907	0.000284009	-0.000000090
30	0.000612241	-0.000029326	-0.112080038	-0.000009927	-0.000356687	0.000001241
31	0.003244452	0.000019711	-0.116481781	0.000094198	-0.000284616	0.000035451
32	0.002976388	0.000647240	-0.117284536	0.000108775	-0.000276675	0.000038773
33	0.001509806	0.002301811	-0.117292404	0.000255192	-0.000202607	0.000053373
34	0.000872704	0.002649713	-0.116500437	0.000267412	-0.000196205	0.000053296

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	3.	13.	-0.	1.	0.	51.	2.10	82.	327.	408.
			2	-3.	-13.	0.	0.	-0.	26.	1.00	82.	79.	161.
2	TAN	1	2	3.	13.	-0.	-0.	0.	-26.	1.00	82.	79.	161.
			3	-3.	-13.	0.	2.	-0.	102.	1.00	82.	313.	395.
3	TAN	1	3	-8.	13.	0.	-2.	0.	-102.	1.00	82.	313.	395.
			4	8.	-13.	-0.	-2.	-0.	-124.	1.00	82.	379.	461.
4	TAN	1	4	-8.	13.	0.	2.	0.	124.	1.00	82.	379.	461.
			5	8.	-13.	-0.	-5.	-0.	-349.	1.00	82.	1071.	1152.
5	TAN	1	5	1171.	13.	-3.	5.	0.	349.	1.00	82.	1071.	1152.
			28	-1171.	-13.	3.	-0.	-0.	1853.	2.10	82.	11930.	12012.
6	BEND	1	28	1171.	3.	13.	0.	1853.	0.	2.10	62.	4297.	4360.
			7	-837.	-3.	819.	3.	-3101.	-1.	2.10	62.	7191.	7254.
7	BEND	1	7	837.	3.	-819.	-3.	3101.	1.	2.10	62.	7191.	7254.
			29	-13.	-3.	1171.	4.	-3629.	-4.	2.10	62.	8416.	8478.
8	TAN	1	29	3.	-1171.	13.	3629.	4.	-4.	2.10	82.	23365.	23447.
			9	-3.	1171.	-13.	-3645.	-4.	8.	2.10	82.	23463.	23545.
9	TEE	1	9	819.	-837.	3.	2.	9.	3645.	2.10	62.	8451.	8513.
			30	-819.	837.	-3.	-7.	-9.	-2486.	1.00	62.	2501.	2563.
10	TEE	1	10	-819.	-843.	-7.	-3.	-3.	1346.	1.00	62.	1486.	1549.
			30	819.	843.	7.	14.	3.	-2504.	1.00	62.	2519.	2582.
11	TEE	1	11	-4.	-3.	10.	-46.	1.	-32.	1.00	62.	62.	124.
			30	4.	3.	-10.	14.	-1.	18.	1.00	58.	23.	81.
12	TAN	1	10	1175.	-17.	-7.	5.	-0.	1346.	2.10	82.	8666.	8748.
			23	-1175.	17.	7.	5.	0.	275.	1.00	82.	844.	926.
13	TAN	1	23	-6.	-17.	0.	-5.	-0.	-275.	1.00	82.	844.	926.
			24	6.	17.	-0.	2.	0.	97.	1.00	82.	299.	380.
14	TAN	1	24	-6.	-17.	0.	-2.	-0.	-97.	1.00	82.	299.	380.
			25	6.	17.	-0.	-2.	0.	-80.	1.00	82.	247.	328.
15	TAN	1	25	2.	-17.	-0.	2.	-0.	80.	1.00	82.	247.	328.
			26	-2.	17.	0.	-0.	0.	-20.	1.00	82.	62.	144.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	2.	-17.	-0.	0.	-0.	20.	1.00	82.	62.	144.
			27	-2.	17.	0.	1.	0.	40.	2.10	82.	257.	339.
17	TAN	2	11	-3.	-4.	-10.	-44.	-14.	32.	1.00	58.	796.	854.
			31	3.	4.	10.	63.	14.	-39.	2.10	58.	2232.	2290.
18	BEND	2	31	10.	-4.	-4.	9.	73.	-14.	2.10	37.	592.	630.
			13	-4.	4.	10.	1.	-78.	17.	2.10	37.	627.	665.
19	BEND	2	13	4.	-4.	-10.	-1.	78.	-17.	2.10	37.	627.	665.
			32	4.	4.	10.	11.	-78.	12.	2.10	37.	626.	663.
20	TAN	2	32	4.	-10.	4.	-78.	-12.	11.	2.10	58.	2359.	2417.
			33	-4.	10.	-4.	68.	12.	-2.	2.10	58.	2066.	2124.
21	BEND	2	33	-4.	-4.	-10.	-2.	68.	-12.	2.10	37.	548.	586.
			16	10.	4.	4.	8.	-64.	7.	2.10	37.	513.	550.
22	BEND	2	16	-10.	-4.	-4.	-8.	64.	-7.	2.10	37.	513.	550.
			34	10.	4.	-4.	9.	-58.	0.	2.10	37.	462.	499.
23	TAN	2	34	-3.	4.	10.	-51.	-0.	-29.	2.10	58.	1740.	1798.
			18	3.	-4.	-10.	-23.	0.	5.	1.00	58.	330.	388.
24	TAN	2	18	-0.	4.	-1.	23.	-0.	-5.	1.00	58.	330.	388.
			19	0.	-4.	1.	-8.	0.	2.	1.00	58.	117.	175.
25	TAN	2	19	-0.	4.	-1.	8.	-0.	-2.	1.00	58.	117.	175.
			20	0.	-4.	1.	7.	0.	-1.	1.00	58.	97.	155.
26	TAN	2	20	0.	4.	0.	-7.	-0.	1.	1.00	58.	97.	155.
			21	-0.	-4.	-0.	2.	0.	-0.	1.00	58.	25.	83.
27	TAN	2	21	0.	4.	0.	-2.	-0.	0.	1.00	58.	25.	83.
			22	-0.	-4.	-0.	-3.	0.	1.	2.10	58.	102.	160.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	4	0.006035920	0.000094719	-0.081096947
2	19	-0.000691262	-0.003290331	-0.081086278
3	33	0.001509806	0.002301811	-0.117292404

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	8	23463.	8	23545.
2	20	2359.	20	2417.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	3.	0.	13.	1.	-51.	0.
3	-11.	-0.	0.	-0.	0.	0.
5	1179.	3.	0.	0.	-0.	0.
18	3.	-11.	-0.	0.	-0.	0.
20	0.	1.	-0.	-0.	0.	0.
22	-0.	-0.	4.	-3.	1.	-0.
23	-1181.	7.	0.	-0.	-0.	0.
25	8.	-0.	0.	0.	0.	0.
27	-2.	0.	-17.	1.	40.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS    6.59 ** LAST STEP "UPDT" TIME IS    4.58 ** DELTA TIME IS    2.01 *
* ELAPSED SECONDS                          116.4                                80.0                      36.3 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    6.63 ** LAST STEP "ST3D" TIME IS    6.59 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                          116.5                               116.4                       0.2 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 27
NUMBER OF JOINTS 28
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	1.0400	3	0.8000				
2	1	2.0400	3	0.8000						
3	1	1.0000	2	1.0400	5	0.8000				
4	1	2.0400	5	0.8000						
5	1	1.0000	2	1.0400	4	0.8000				
6	1	2.0400	4	0.8000						
7	1	1.0000	2	1.0400	6	0.8000				
8	1	2.0400	6	0.8000						
9	1	1.0000	2	1.9000	3	1.3000				
10	1	2.9000	3	1.3000						
11	1	1.0000	2	1.9000	5	1.3000				
12	1	2.9000	5	1.3000						
13	1	1.0000	2	1.9000	4	1.3000				
14	1	2.9000	4	1.3000						
15	1	1.0000	2	1.9000	6	1.3000				
16	1	2.9000	6	1.3000						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS    6.76 ** LAST STEP "BEGP" TIME IS    6.63 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                          120.3                                116.5                      3.8 *
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LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	6.	92.	0.	0.	0.	53.	1.57	82.	254.	336.
			2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
2	TAN	1	2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
			3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
3	TAN	1	3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
			4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
4	TAN	1	4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
			5	7.	23.	0.	1.	0.	46.	1.00	82.	142.	223.
5	TAN	1	5	5.	23.	1.	1.	0.	46.	1.00	82.	142.	223.
			28	5.	22.	1.	2.	0.	41.	1.57	82.	197.	279.
6	BEND	1	28	5.	1.	22.	2.	41.	0.	1.57	62.	71.	133.
			7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
7	BEND	1	7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
			29	19.	1.	3.	2.	7.	4.	1.57	62.	14.	77.
8	TAN	1	29	1.	3.	19.	7.	4.	2.	1.57	82.	40.	121.
			9	1.	3.	18.	15.	4.	3.	1.57	82.	78.	159.
9	TEE	1	9	12.	14.	1.	1.	5.	15.	1.57	62.	28.	90.
			30	11.	14.	1.	1.	5.	32.	1.00	62.	32.	95.
10	TEE	1	10	18.	19.	1.	1.	1.	44.	1.00	62.	49.	111.
			30	15.	18.	1.	3.	1.	35.	1.00	62.	35.	98.
11	TEE	1	11	1.	2.	0.	2.	5.	1.	1.00	62.	6.	68.
			30	2.	5.	0.	3.	5.	5.	1.00	58.	8.	66.
12	TAN	1	10	2.	26.	1.	1.	0.	44.	1.57	82.	214.	296.
			23	2.	27.	1.	1.	0.	47.	1.00	82.	143.	225.
13	TAN	1	23	7.	27.	0.	1.	0.	47.	1.00	82.	143.	225.
			24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
14	TAN	1	24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
			25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
15	TAN	1	25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
			26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.
			27	6.	96.	0.	0.	0.	53.	1.57	82.	254.	336.
17	TAN	2	11	1.	2.	0.	1.	5.	1.	1.00	58.	71.	129.
			31	1.	2.	0.	1.	5.	2.	1.57	58.	116.	174.
18	BEND	2	31	1.	1.	2.	1.	2.	5.	1.57	37.	31.	68.
			13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
19	BEND	2	13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
			32	0.	1.	1.	4.	3.	1.	1.57	37.	31.	69.
20	TAN	2	32	1.	1.	0.	3.	1.	4.	1.57	58.	117.	175.
			33	1.	1.	1.	3.	1.	1.	1.57	58.	74.	132.
21	BEND	2	33	1.	1.	1.	1.	3.	1.	1.57	37.	20.	57.
			16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
22	BEND	2	16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
			34	2.	2.	3.	0.	3.	0.	1.57	37.	15.	53.
23	TAN	2	34	3.	3.	0.	2.	0.	2.	1.57	58.	58.	116.
			18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
24	TAN	2	18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
			19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
25	TAN	2	19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
			20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
26	TAN	2	20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
			21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
27	TAN	2	21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
			22	2.	30.	0.	0.	0.	20.	1.57	58.	452.	510.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	254.	16	336.
2	27	452.	27	510.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	6.	-0.	92.	0.	-53.	0.
3	14.	-0.	117.	0.	-142.	0.
5	12.	-1.	46.	1.	-92.	0.
18	6.	0.	-8.	1.	41.	-0.
20	5.	0.	-35.	0.	51.	-0.
22	2.	0.	-30.	0.	20.	-0.
23	8.	1.	-54.	3.	93.	-0.
25	14.	0.	-125.	1.	142.	-0.
27	6.	0.	-96.	0.	53.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	6.	92.	0.	0.	0.	53.	1.57	82.	254.	336.
			2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
2	TAN	1	2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
			3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
3	TAN	1	3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
			4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
4	TAN	1	4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
			5	7.	23.	0.	1.	0.	46.	1.00	82.	142.	223.
5	TAN	1	5	5.	23.	1.	1.	0.	46.	1.00	82.	142.	223.
			28	5.	22.	1.	2.	0.	41.	1.57	82.	197.	279.
6	BEND	1	28	5.	1.	22.	2.	41.	0.	1.57	62.	71.	133.
			7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
7	BEND	1	7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
			29	19.	1.	3.	2.	7.	4.	1.57	62.	14.	77.
8	TAN	1	29	1.	3.	19.	7.	4.	2.	1.57	82.	40.	121.
			9	1.	3.	18.	15.	4.	3.	1.57	82.	78.	159.
9	TEE	1	9	12.	14.	1.	1.	5.	15.	1.57	62.	28.	90.
			30	11.	14.	1.	1.	5.	32.	1.00	62.	32.	95.
10	TEE	1	10	18.	19.	1.	1.	1.	44.	1.00	62.	49.	111.
			30	15.	18.	1.	3.	1.	35.	1.00	62.	35.	98.
11	TEE	1	11	1.	2.	0.	2.	5.	1.	1.00	62.	6.	68.
			30	2.	5.	0.	3.	5.	5.	1.00	58.	8.	66.
12	TAN	1	10	2.	26.	1.	1.	0.	44.	1.57	82.	214.	296.
			23	2.	27.	1.	1.	0.	47.	1.00	82.	143.	225.
13	TAN	1	23	7.	27.	0.	1.	0.	47.	1.00	82.	143.	225.
			24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
14	TAN	1	24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
			25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
15	TAN	1	25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
			26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.
			27	6.	96.	0.	0.	0.	53.	1.57	82.	254.	336.
17	TAN	2	11	1.	2.	0.	1.	5.	1.	1.00	58.	71.	129.
			31	1.	2.	0.	1.	5.	2.	1.57	58.	116.	174.
18	BEND	2	31	1.	1.	2.	1.	2.	5.	1.57	37.	31.	68.
			13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
19	BEND	2	13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
			32	0.	1.	1.	4.	3.	1.	1.57	37.	31.	69.
20	TAN	2	32	1.	1.	0.	3.	1.	4.	1.57	58.	117.	175.
			33	1.	1.	1.	3.	1.	1.	1.57	58.	74.	132.
21	BEND	2	33	1.	1.	1.	1.	3.	1.	1.57	37.	20.	57.
			16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
22	BEND	2	16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
			34	2.	2.	3.	0.	3.	0.	1.57	37.	15.	53.
23	TAN	2	34	3.	3.	0.	2.	0.	2.	1.57	58.	58.	116.
			18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
24	TAN	2	18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
			19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
25	TAN	2	19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
			20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
26	TAN	2	20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
			21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
27	TAN	2	21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
			22	2.	30.	0.	0.	0.	20.	1.57	58.	452.	510.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	254.	16	336.
2	27	452.	27	510.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	6.	-0.	92.	0.	-53.	0.
3	14.	-0.	117.	0.	-142.	0.
5	12.	-1.	46.	1.	-92.	0.
18	6.	0.	-8.	1.	41.	-0.
20	5.	0.	-35.	0.	51.	-0.
22	2.	0.	-30.	0.	20.	-0.
23	8.	1.	-54.	3.	93.	-0.
25	14.	0.	-125.	1.	142.	-0.
27	6.	0.	-96.	0.	53.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	78.	6.	48.	0.	0.	1.57	82.	233.	315.
			2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
2	TAN	1	2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
			3	0.	45.	7.	79.	0.	1.	1.00	82.	242.	323.
3	TAN	1	3	0.	45.	8.	79.	0.	1.	1.00	82.	242.	323.
			4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
4	TAN	1	4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
			5	0.	10.	6.	16.	0.	2.	1.00	82.	50.	132.
5	TAN	1	5	2.	10.	2.	16.	0.	2.	1.00	82.	50.	132.
			28	2.	9.	1.	13.	0.	6.	1.57	82.	71.	153.
6	BEND	1	28	2.	1.	9.	13.	6.	0.	1.57	62.	26.	88.
			7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
7	BEND	1	7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
			29	6.	0.	2.	1.	0.	12.	1.57	62.	21.	83.
8	TAN	1	29	0.	2.	6.	0.	12.	1.	1.57	82.	58.	140.
			9	0.	2.	5.	7.	12.	1.	1.57	82.	66.	148.
9	TEE	1	9	5.	2.	0.	9.	8.	7.	1.57	62.	24.	86.
			30	3.	3.	1.	8.	8.	12.	1.00	62.	17.	79.
10	TEE	1	10	8.	10.	5.	8.	8.	2.	1.00	62.	13.	76.
			30	6.	8.	3.	2.	8.	10.	1.00	62.	13.	76.
11	TEE	1	11	2.	9.	1.	15.	2.	12.	1.00	62.	21.	83.
			30	3.	12.	2.	19.	2.	11.	1.00	58.	23.	81.
12	TAN	1	10	2.	13.	5.	12.	0.	2.	1.57	82.	57.	139.
			23	2.	14.	5.	18.	0.	2.	1.00	82.	56.	138.
13	TAN	1	23	0.	14.	6.	18.	0.	2.	1.00	82.	56.	138.
			24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
14	TAN	1	24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
			25	0.	50.	8.	78.	0.	1.	1.00	82.	240.	322.
15	TAN	1	25	0.	50.	7.	78.	0.	1.	1.00	82.	240.	322.
			26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.
			27	0.	83.	6.	49.	0.	0.	1.57	82.	235.	316.
17	TAN	2	11	1.	9.	1.	14.	3.	12.	1.00	58.	266.	324.
			31	1.	8.	1.	13.	3.	10.	1.57	58.	374.	432.
18	BEND	2	31	1.	0.	8.	0.	16.	3.	1.57	37.	99.	137.
			13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
19	BEND	2	13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
			32	7.	1.	1.	2.	11.	1.	1.57	37.	68.	106.
20	TAN	2	32	1.	1.	7.	11.	1.	2.	1.57	58.	257.	315.
			33	1.	0.	7.	5.	1.	1.	1.57	58.	108.	166.
21	BEND	2	33	7.	1.	0.	1.	5.	1.	1.57	37.	29.	66.
			16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
22	BEND	2	16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
			34	0.	1.	9.	0.	11.	0.	1.57	37.	63.	101.
23	TAN	2	34	1.	9.	1.	8.	0.	7.	1.57	58.	238.	296.
			18	1.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
24	TAN	2	18	0.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
			19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
25	TAN	2	19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
			20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
26	TAN	2	20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
			21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
27	TAN	2	21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
			22	0.	36.	2.	20.	0.	0.	1.57	58.	442.	500.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	242.	2	323.
2	27	442.	27	500.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-6.	78.	48.	-0.	0.
3	0.	-15.	90.	158.	-1.	0.
5	2.	-8.	19.	32.	-4.	0.
18	1.	4.	-21.	34.	1.	-0.
20	0.	5.	-48.	53.	0.	-0.
22	0.	2.	-36.	20.	0.	-0.
23	2.	11.	-28.	37.	4.	-0.
25	0.	15.	-99.	156.	1.	-0.
27	0.	6.	-83.	49.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

WPPSS SEAL LOOP
SEALLOOP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600 .

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	78.	6.	48.	0.	0.	1.57	82.	233.	315.
			2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
2	TAN	1	2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
			3	0.	45.	7.	79.	0.	1.	1.00	82.	242.	323.
3	TAN	1	3	0.	45.	8.	79.	0.	1.	1.00	82.	242.	323.
			4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
4	TAN	1	4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
			5	0.	10.	6.	16.	0.	2.	1.00	82.	50.	132.
5	TAN	1	5	2.	10.	2.	16.	0.	2.	1.00	82.	50.	132.
			28	2.	9.	1.	13.	0.	6.	1.57	82.	71.	153.
6	BEND	1	28	2.	1.	9.	13.	6.	0.	1.57	62.	26.	88.
			7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
7	BEND	1	7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
			29	6.	0.	2.	1.	0.	12.	1.57	62.	21.	83.
8	TAN	1	29	0.	2.	6.	0.	12.	1.	1.57	82.	58.	140.
			9	0.	2.	5.	7.	12.	1.	1.57	82.	66.	148.
9	TEE	1	9	5.	2.	0.	9.	8.	7.	1.57	62.	24.	86.
			30	3.	3.	1.	8.	8.	12.	1.00	62.	17.	79.
10	TEE	1	10	8.	10.	5.	8.	8.	2.	1.00	62.	13.	76.
			30	6.	8.	3.	2.	8.	10.	1.00	62.	13.	76.
11	TEE	1	11	2.	9.	1.	15.	2.	12.	1.00	62.	21.	83.
			30	3.	12.	2.	19.	2.	11.	1.00	58.	23.	81.
12	TAN	1	10	2.	13.	5.	12.	0.	2.	1.57	82.	57.	139.
			23	2.	14.	5.	18.	0.	2.	1.00	82.	56.	138.
13	TAN	1	23	0.	14.	6.	18.	0.	2.	1.00	82.	56.	138.
			24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
14	TAN	1	24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
			25	0.	50.	8.	78.	0.	1.	1.00	82.	240.	322.
15	TAN	1	25	0.	50.	7.	78.	0.	1.	1.00	82.	240.	322.
			26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.
			27	0.	83.	6.	49.	0.	0.	1.57	82.	235.	316.
17	TAN	2	11	1.	9.	1.	14.	3.	12.	1.00	58.	266.	324.
			31	1.	8.	1.	13.	3.	10.	1.57	58.	374.	432.
18	BEND	2	31	1.	0.	8.	0.	16.	3.	1.57	37.	99.	137.
			13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
19	BEND	2	13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
			32	7.	1.	1.	2.	11.	1.	1.57	37.	68.	106.
20	TAN	2	32	1.	1.	7.	11.	1.	2.	1.57	58.	257.	315.
			33	1.	0.	7.	5.	1.	1.	1.57	58.	108.	166.
21	BEND	2	33	7.	1.	0.	1.	5.	1.	1.57	37.	29.	66.
			16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
22	BEND	2	16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
			34	0.	1.	9.	0.	11.	0.	1.57	37.	63.	101.
23	TAN	2	34	1.	9.	1.	8.	0.	7.	1.57	58.	238.	296.
			18	1.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
24	TAN	2	18	0.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
			19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
25	TAN	2	19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
			20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
26	TAN	2	20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
			21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
27	TAN	2	21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
			22	0.	36.	2.	20.	0.	0.	1.57	58.	442.	500.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	242.	2	323.
2	27	442.	27	500.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-6.	78.	48.	-0.	0.
3	0.	-15.	90.	158.	-1.	0.
5	2.	-8.	19.	32.	-4.	0.
18	1.	4.	-21.	34.	1.	-0.
20	0.	5.	-48.	53.	0.	-0.
22	0.	2.	-36.	20.	0.	-0.
23	2.	11.	-28.	37.	4.	-0.
25	0.	15.	-99.	156.	1.	-0.
27	0.	6.	-83.	49.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

WPPSS SEAL LOOP
SEALLOOP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	6.	92.	0.	0.	0.	53.	1.57	82.	254.	336.
			2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
2	TAN	1	2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
			3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
3	TAN	1	3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
			4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
4	TAN	1	4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
			5	7.	23.	0.	1.	0.	46.	1.00	82.	142.	223.
5	TAN	1	5	5.	23.	1.	1.	0.	46.	1.00	82.	142.	223.
			28	5.	22.	1.	2.	0.	41.	1.57	82.	197.	279.
6	BEND	1	28	5.	1.	22.	2.	41.	0.	1.57	62.	71.	133.
			7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
7	BEND	1	7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
			29	19.	1.	3.	2.	7.	4.	1.57	62.	14.	77.
8	TAN	1	29	1.	3.	19.	7.	4.	2.	1.57	82.	40.	121.
			9	1.	3.	18.	15.	4.	3.	1.57	82.	78.	159.
9	TEE	1	9	12.	14.	1.	1.	5.	15.	1.57	62.	28.	90.
			30	11.	14.	1.	1.	5.	32.	1.00	62.	32.	95.
10	TEE	1	10	18.	19.	1.	1.	1.	44.	1.00	62.	49.	111.
			30	15.	18.	1.	3.	1.	35.	1.00	62.	35.	98.
11	TEE	1	11	1.	2.	0.	2.	5.	1.	1.00	62.	6.	68.
			30	2.	5.	0.	3.	5.	5.	1.00	58.	8.	66.
12	TAN	1	10	2.	26.	1.	1.	0.	44.	1.57	82.	214.	296.
			23	2.	27.	1.	1.	0.	47.	1.00	82.	143.	225.
13	TAN	1	23	7.	27.	0.	1.	0.	47.	1.00	82.	143.	225.
			24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
14	TAN	1	24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
			25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
15	TAN	1	25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
			26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.
			27	6.	96.	0.	0.	0.	53.	1.57	82.	254.	336.
17	TAN	2	11	1.	2.	0.	1.	5.	1.	1.00	58.	71.	129.
			31	1.	2.	0.	1.	5.	2.	1.57	58.	116.	174.
18	BEND	2	31	1.	1.	2.	1.	2.	5.	1.57	37.	31.	68.
			13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
19	BEND	2	13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
			32	0.	1.	1.	4.	3.	1.	1.57	37.	31.	69.
20	TAN	2	32	1.	1.	0.	3.	1.	4.	1.57	58.	117.	175.
			33	1.	1.	1.	3.	1.	1.	1.57	58.	74.	132.
21	BEND	2	33	1.	1.	1.	1.	3.	1.	1.57	37.	20.	57.
			16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
22	BEND	2	16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
			34	2.	2.	3.	0.	3.	0.	1.57	37.	15.	53.
23	TAN	2	34	3.	3.	0.	2.	0.	2.	1.57	58.	58.	116.
			18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
24	TAN	2	18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
			19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
25	TAN	2	19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
			20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
26	TAN	2	20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
			21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
27	TAN	2	21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
			22	2.	30.	0.	0.	0.	20.	1.57	58.	452.	510.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 . LOAD TITLE: OBE + SRV -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	254.	16	336.
2	27	452.	27	510.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	6.	-0.	92.	0.	-53.	0.
3	14.	-0.	117.	0.	-142.	0.
5	12.	-1.	46.	1.	-92.	0.
18	6.	0.	-8.	1.	41.	-0.
20	5.	0.	-35.	0.	51.	-0.
22	2.	0.	-30.	0.	20.	-0.
23	8.	1.	-54.	3.	93.	-0.
25	14.	0.	-125.	1.	142.	-0.
27	6.	0.	-96.	0.	53.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	6.	92.	0.	0.	0.	53.	1.57	82.	254.	336.
			2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
2	TAN	1	2	0.	75.	0.	0.	0.	26.	1.00	82.	81.	162.
			3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
3	TAN	1	3	7.	59.	0.	0.	0.	71.	1.00	82.	217.	299.
			4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
4	TAN	1	4	0.	41.	0.	0.	0.	44.	1.00	82.	136.	218.
			5	7.	23.	0.	1.	0.	46.	1.00	82.	142.	223.
5	TAN	1	5	5.	23.	1.	1.	0.	46.	1.00	82.	142.	223.
			28	5.	22.	1.	2.	0.	41.	1.57	82.	197.	279.
6	BEND	1	28	5.	1.	22.	2.	41.	0.	1.57	62.	71.	133.
			7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
7	BEND	1	7	16.	1.	13.	3.	29.	2.	1.57	62.	51.	113.
			29	19.	1.	3.	2.	7.	4.	1.57	62.	14.	77.
8	TAN	1	29	1.	3.	19.	7.	4.	2.	1.57	82.	40.	121.
			9	1.	3.	18.	15.	4.	3.	1.57	82.	78.	159.
9	TEE	1	9	12.	14.	1.	1.	5.	15.	1.57	62.	28.	90.
			30	11.	14.	1.	1.	5.	32.	1.00	62.	32.	95.
10	TEE	1	10	18.	19.	1.	1.	1.	44.	1.00	62.	49.	111.
			30	15.	18.	1.	3.	1.	35.	1.00	62.	35.	98.
11	TEE	1	11	1.	2.	0.	2.	5.	1.	1.00	62.	6.	68.
			30	2.	5.	0.	3.	5.	5.	1.00	58.	8.	66.
12	TAN	1	10	2.	26.	1.	1.	0.	44.	1.57	82.	214.	296.
			23	2.	27.	1.	1.	0.	47.	1.00	82.	143.	225.
13	TAN	1	23	7.	27.	0.	1.	0.	47.	1.00	82.	143.	225.
			24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
14	TAN	1	24	0.	45.	0.	0.	0.	44.	1.00	82.	136.	217.
			25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
15	TAN	1	25	7.	63.	0.	0.	0.	71.	1.00	82.	217.	299.
			26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	79.	0.	0.	0.	26.	1.00	82.	81.	163.
			27	6.	96.	0.	0.	0.	53.	1.57	82.	254.	336.
17	TAN	2	11	1.	2.	0.	1.	5.	1.	1.00	58.	71.	129.
			31	1.	2.	0.	1.	5.	2.	1.57	58.	116.	174.
18	BEND	2	31	1.	1.	2.	1.	2.	5.	1.57	37.	31.	68.
			13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
19	BEND	2	13	1.	1.	1.	2.	2.	4.	1.57	37.	32.	69.
			32	0.	1.	1.	4.	3.	1.	1.57	37.	31.	69.
20	TAN	2	32	1.	1.	0.	3.	1.	4.	1.57	58.	117.	175.
			33	1.	1.	1.	3.	1.	1.	1.57	58.	74.	132.
21	BEND	2	33	1.	1.	1.	1.	3.	1.	1.57	37.	20.	57.
			16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
22	BEND	2	16	2.	2.	2.	1.	3.	1.	1.57	37.	20.	57.
			34	2.	2.	3.	0.	3.	0.	1.57	37.	15.	53.
23	TAN	2	34	3.	3.	0.	2.	0.	2.	1.57	58.	58.	116.
			18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
24	TAN	2	18	3.	4.	0.	0.	0.	20.	1.00	58.	290.	348.
			19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
25	TAN	2	19	0.	11.	0.	0.	0.	15.	1.00	58.	216.	274.
			20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
26	TAN	2	20	3.	18.	0.	0.	0.	26.	1.00	58.	362.	420.
			21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
27	TAN	2	21	0.	24.	0.	0.	0.	10.	1.00	58.	144.	202.
			22	2.	30.	0.	0.	0.	20.	1.57	58.	452.	510.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	254.	16	336.
2	27	452.	27	510.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	6.	-0.	92.	0.	-53.	0.
3	14.	-0.	117.	0.	-142.	0.
5	12.	-1.	46.	1.	-92.	0.
18	6.	0.	-8.	1.	41.	-0.
20	5.	0.	-35.	0.	51.	-0.
22	2.	0.	-30.	0.	20.	-0.
23	8.	1.	-54.	3.	93.	-0.
25	14.	0.	-125.	1.	142.	-0.
27	6.	0.	-96.	0.	53.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	78.	6.	48.	0.	0.	2.10	82.	311.	393.
			2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
2	TAN	1	2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
			3	0.	45.	7.	79.	0.	1.	1.00	82.	242.	323.
3	TAN	1	3	0.	45.	8.	79.	0.	1.	1.00	82.	242.	323.
			4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
4	TAN	1	4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
			5	0.	10.	6.	16.	0.	2.	1.00	82.	50.	132.
5	TAN	1	5	2.	10.	2.	16.	0.	2.	1.00	82.	50.	132.
			28	2.	9.	1.	13.	0.	6.	2.10	82.	95.	177.
6	BEND	1	28	2.	1.	9.	13.	6.	0.	2.10	62.	34.	97.
			7	3.	1.	7.	9.	5.	9.	2.10	62.	31.	94.
7	BEND	1	7	3.	1.	7.	9.	5.	9.	2.10	62.	31.	94.
			29	6.	0.	2.	1.	0.	12.	2.10	62.	28.	90.
8	TAN	1	29	0.	2.	6.	0.	12.	1.	2.10	82.	78.	159.
			9	0.	2.	5.	7.	12.	1.	2.10	82.	88.	170.
9	TEE	1	9	5.	2.	0.	9.	8.	7.	2.10	62.	32.	94.
			30	3.	3.	1.	8.	8.	12.	1.00	62.	17.	79.
10	TEE	1	10	8.	10.	5.	8.	8.	2.	1.00	62.	13.	76.
			30	6.	8.	3.	2.	8.	10.	1.00	62.	13.	76.
11	TEE	1	11	2.	9.	1.	15.	2.	12.	1.00	62.	21.	83.
			30	3.	12.	2.	19.	2.	11.	1.00	58.	23.	81.
12	TAN	1	10	2.	13.	5.	12.	0.	2.	2.10	82.	76.	158.
			23	2.	14.	5.	18.	0.	2.	1.00	82.	56.	138.
13	TAN	1	23	0.	14.	6.	18.	0.	2.	1.00	82.	56.	138.
			24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
14	TAN	1	24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
			25	0.	50.	8.	78.	0.	1.	1.00	82.	240.	322.
15	TAN	1	25	0.	50.	7.	78.	0.	1.	1.00	82.	240.	322.
			26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.
			27	0.	83.	6.	49.	0.	0.	2.10	82.	313.	395.
17	TAN	2	11	1.	9.	1.	14.	3.	12.	1.00	58.	266.	324.
			31	1.	8.	1.	13.	3.	10.	2.10	58.	498.	556.
18	BEND	2	31	1.	0.	8.	0.	16.	3.	2.10	37.	132.	170.
			13	6.	1.	5.	2.	15.	2.	2.10	37.	119.	156.
19	BEND	2	13	6.	1.	5.	2.	15.	2.	2.10	37.	119.	156.
			32	7.	1.	1.	2.	11.	1.	2.10	37.	91.	128.
20	TAN	2	32	1.	1.	7.	11.	1.	2.	2.10	58.	343.	401.
			33	1.	0.	7.	5.	1.	1.	2.10	58.	144.	202.
21	BEND	2	33	7.	1.	0.	1.	5.	1.	2.10	37.	38.	76.
			16	6.	1.	6.	1.	9.	0.	2.10	37.	69.	107.
22	BEND	2	16	6.	1.	6.	1.	9.	0.	2.10	37.	69.	107.
			34	0.	1.	9.	0.	11.	0.	2.10	37.	84.	122.
23	TAN	2	34	1.	9.	1.	8.	0.	7.	2.10	58.	317.	375.
			18	1.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
24	TAN	2	18	0.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
			19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
25	TAN	2	19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
			20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
26	TAN	2	20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
			21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
27	TAN	2	21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
			22	0.	36.	2.	20.	0.	0.	2.10	58.	589.	647.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	313.	16	395.
2	27	589.	27	647.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	-6.	78.	48.	-0.	0.
3	0.	-15.	90.	158.	-1.	0.
5	2.	-8.	19.	32.	-4.	0.
18	1.	4.	-21.	34.	1.	-0.
20	0.	5.	-48.	53.	0.	-0.
22	0.	2.	-36.	20.	0.	-0.
23	2.	11.	-28.	37.	4.	-0.
25	0.	15.	-99.	156.	1.	-0.
27	0.	6.	-83.	49.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	78.	6.	48.	0.	0.	1.57	82.	233.	315.
			2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
2	TAN	1	2	0.	62.	1.	24.	0.	0.	1.00	82.	74.	156.
			3	0.	45.	7.	79.	0.	1.	1.00	82.	242.	323.
3	TAN	1	3	0.	45.	8.	79.	0.	1.	1.00	82.	242.	323.
			4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
4	TAN	1	4	0.	27.	1.	54.	0.	1.	1.00	82.	165.	247.
			5	0.	10.	6.	16.	0.	2.	1.00	82.	50.	132.
5	TAN	1	5	2.	10.	2.	16.	0.	2.	1.00	82.	50.	132.
			28	2.	9.	1.	13.	0.	6.	1.57	82.	71.	153.
6	BEND	1	28	2.	1.	9.	13.	6.	0.	1.57	62.	26.	88.
			7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
7	BEND	1	7	3.	1.	7.	9.	5.	9.	1.57	62.	23.	86.
			29	6.	0.	2.	1.	0.	12.	1.57	62.	21.	83.
8	TAN	1	29	0.	2.	6.	0.	12.	1.	1.57	82.	58.	140.
			9	0.	2.	5.	7.	12.	1.	1.57	82.	66.	148.
9	TEE	1	9	5.	2.	0.	9.	8.	7.	1.57	62.	24.	86.
			30	3.	3.	1.	8.	8.	12.	1.00	62.	17.	79.
10	TEE	1	10	8.	10.	5.	8.	8.	2.	1.00	62.	13.	76.
			30	6.	8.	3.	2.	8.	10.	1.00	62.	13.	76.
11	TEE	1	11	2.	9.	1.	15.	2.	12.	1.00	62.	21.	83.
			30	3.	12.	2.	19.	2.	11.	1.00	58.	23.	81.
12	TAN	1	10	2.	13.	5.	12.	0.	2.	1.57	82.	57.	139.
			23	2.	14.	5.	18.	0.	2.	1.00	82.	56.	138.
13	TAN	1	23	0.	14.	6.	18.	0.	2.	1.00	82.	56.	138.
			24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
14	TAN	1	24	0.	32.	1.	53.	0.	1.	1.00	82.	163.	245.
			25	0.	50.	8.	78.	0.	1.	1.00	82.	240.	322.
15	TAN	1	25	0.	50.	7.	78.	0.	1.	1.00	82.	240.	322.
			26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	66.	1.	24.	0.	0.	1.00	82.	74.	156.
			27	0.	83.	6.	49.	0.	0.	1.57	82.	235.	316.
17	TAN	2	11	1.	9.	1.	14.	3.	12.	1.00	58.	266.	324.
			31	1.	8.	1.	13.	3.	10.	1.57	58.	374.	432.
18	BEND	2	31	1.	0.	8.	0.	16.	3.	1.57	37.	99.	137.
			13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
19	BEND	2	13	6.	1.	5.	2.	15.	2.	1.57	37.	89.	127.
			32	7.	1.	1.	2.	11.	1.	1.57	37.	68.	106.
20	TAN	2	32	1.	1.	7.	11.	1.	2.	1.57	58.	257.	315.
			33	1.	0.	7.	5.	1.	1.	1.57	58.	108.	166.
21	BEND	2	33	7.	1.	0.	1.	5.	1.	1.57	37.	29.	66.
			16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
22	BEND	2	16	6.	1.	6.	1.	9.	0.	1.57	37.	52.	90.
			34	0.	1.	9.	0.	11.	0.	1.57	37.	63.	101.
23	TAN	2	34	1.	9.	1.	8.	0.	7.	1.57	58.	238.	296.
			18	1.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
24	TAN	2	18	0.	11.	2.	17.	0.	0.	1.00	58.	244.	302.
			19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
25	TAN	2	19	0.	17.	0.	16.	0.	0.	1.00	58.	230.	288.
			20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
26	TAN	2	20	0.	24.	3.	26.	0.	0.	1.00	58.	374.	432.
			21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
27	TAN	2	21	0.	30.	0.	10.	0.	0.	1.00	58.	140.	198.
			22	0.	36.	2.	20.	0.	0.	1.57	58.	442.	500.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	242.	2	323.
2	27	442.	27	500.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-6.	78.	48.	-0.	0.
3	0.	-15.	90.	158.	-1.	0.
5	2.	-8.	19.	32.	-4.	0.
18	1.	4.	-21.	34.	1.	-0.
20	0.	5.	-48.	53.	0.	-0.
22	0.	2.	-36.	20.	0.	-0.
23	2.	11.	-28.	37.	4.	-0.
25	0.	15.	-99.	156.	1.	-0.
27	0.	6.	-83.	49.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	134.	0.	0.	0.	85.	1.57	82.	413.	495.
			2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
2	TAN	1	2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
			3	11.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
3	TAN	1	3	12.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
			4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
4	TAN	1	4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
			5	11.	36.	0.	1.	0.	75.	1.00	82.	229.	311.
5	TAN	1	5	8.	36.	2.	1.	0.	75.	1.00	82.	229.	311.
			28	7.	35.	2.	4.	0.	65.	1.57	82.	317.	398.
6	BEND	1	28	7.	2.	35.	4.	65.	0.	1.57	62.	114.	177.
			7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
7	BEND	1	7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
			29	31.	2.	5.	3.	11.	6.	1.57	62.	23.	86.
8	TAN	1	29	2.	5.	31.	11.	6.	3.	1.57	82.	64.	146.
			9	2.	5.	30.	24.	6.	4.	1.57	82.	124.	206.
9	TEE	1	9	19.	23.	2.	1.	8.	24.	1.57	62.	45.	107.
			30	18.	23.	2.	2.	8.	51.	1.00	62.	52.	114.
10	TEE	1	10	28.	29.	2.	1.	1.	72.	1.00	62.	79.	142.
			30	24.	28.	2.	4.	1.	55.	1.00	62.	56.	118.
11	TEE	1	11	2.	4.	0.	3.	8.	1.	1.00	62.	9.	72.
			30	3.	8.	0.	4.	8.	8.	1.00	58.	12.	70.
12	TAN	1	10	2.	41.	2.	2.	0.	72.	1.57	82.	347.	428.
			23	3.	42.	2.	2.	0.	75.	1.00	82.	231.	313.
13	TAN	1	23	11.	42.	0.	2.	0.	75.	1.00	82.	231.	313.
			24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
14	TAN	1	24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
			25	12.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
15	TAN	1	25	11.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
			26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.
			27	10.	139.	0.	0.	0.	86.	1.57	82.	413.	495.
17	TAN	2	11	2.	3.	0.	1.	8.	1.	1.00	58.	114.	172.
			31	2.	3.	0.	1.	8.	3.	1.57	58.	188.	246.
18	BEND	2	31	2.	1.	3.	1.	3.	8.	1.57	37.	50.	87.
			13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
19	BEND	2	13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
			32	1.	2.	2.	7.	5.	2.	1.57	37.	50.	87.
20	TAN	2	32	2.	2.	1.	5.	2.	7.	1.57	58.	188.	246.
			33	2.	2.	1.	5.	2.	2.	1.57	58.	120.	178.
21	BEND	2	33	1.	2.	2.	2.	5.	2.	1.57	37.	32.	69.
			16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
22	BEND	2	16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
			34	3.	3.	4.	0.	4.	0.	1.57	37.	24.	62.
23	TAN	2	34	4.	4.	0.	3.	0.	3.	1.57	58.	91.	149.
			18	5.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
24	TAN	2	18	4.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
			19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
25	TAN	2	19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
			20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
26	TAN	2	20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
			21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
27	TAN	2	21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
			22	4.	43.	0.	0.	0.	33.	1.57	58.	735.	793.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	413.	16	495.
2	27	735.	27	793.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	10.	-0.	134.	0.	-85.	0.
3	23.	-0.	174.	1.	-230.	0.
5	19.	-2.	73.	2.	-149.	0.
18	10.	0.	-12.	1.	66.	-0.
20	9.	0.	-50.	0.	83.	-0.
22	4.	0.	-43.	0.	33.	-0.
23	14.	2.	-84.	4.	151.	-0.
25	23.	0.	-185.	1.	230.	-0.
27	10.	0.	-139.	0.	86.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	134.	0.	0.	0.	85.	1.57	82.	413.	495.
			2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
2	TAN	1	2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
			3	11.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
3	TAN	1	3	12.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
			4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
4	TAN	1	4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
			5	11.	36.	0.	1.	0.	75.	1.00	82.	229.	311.
5	TAN	1	5	8.	36.	2.	1.	0.	75.	1.00	82.	229.	311.
			28	7.	35.	2.	4.	0.	65.	1.57	82.	317.	398.
6	BEND	1	28	7.	2.	35.	4.	65.	0.	1.57	62.	114.	177.
			7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
7	BEND	1	7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
			29	31.	2.	5.	3.	11.	6.	1.57	62.	23.	86.
8	TAN	1	29	2.	5.	31.	11.	6.	3.	1.57	82.	64.	146.
			9	2.	5.	30.	24.	6.	4.	1.57	82.	124.	206.
9	TEE	1	9	19.	23.	2.	1.	8.	24.	1.57	62.	45.	107.
			30	18.	23.	2.	2.	8.	51.	1.00	62.	52.	114.
10	TEE	1	10	28.	29.	2.	1.	1.	72.	1.00	62.	79.	142.
			30	24.	28.	2.	4.	1.	55.	1.00	62.	56.	118.
11	TEE	1	11	2.	4.	0.	3.	8.	1.	1.00	62.	9.	72.
			30	3.	8.	0.	4.	8.	8.	1.00	58.	12.	70.
12	TAN	1	10	2.	41.	2.	2.	0.	72.	1.57	82.	347.	428.
			23	3.	42.	2.	2.	0.	75.	1.00	82.	231.	313.
13	TAN	1	23	11.	42.	0.	2.	0.	75.	1.00	82.	231.	313.
			24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
14	TAN	1	24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
			25	12.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
15	TAN	1	25	11.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
			26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.
			27	10.	139.	0.	0.	0.	86.	1.57	82.	413.	495.
17	TAN	2	11	2.	3.	0.	1.	8.	1.	1.00	58.	114.	172.
			31	2.	3.	0.	1.	8.	3.	1.57	58.	188.	246.
18	BEND	2	31	2.	1.	3.	1.	3.	8.	1.57	37.	50.	87.
			13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
19	BEND	2	13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
			32	1.	2.	2.	7.	5.	2.	1.57	37.	50.	87.
20	TAN	2	32	2.	2.	1.	5.	2.	7.	1.57	58.	188.	246.
			33	2.	2.	1.	5.	2.	2.	1.57	58.	120.	178.
21	BEND	2	33	1.	2.	2.	2.	5.	2.	1.57	37.	32.	69.
			16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
22	BEND	2	16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
			34	3.	3.	4.	0.	4.	0.	1.57	37.	24.	62.
23	TAN	2	34	4.	4.	0.	3.	0.	3.	1.57	58.	91.	149.
			18	5.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
24	TAN	2	18	4.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
			19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
25	TAN	2	19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
			20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
26	TAN	2	20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
			21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
27	TAN	2	21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
			22	4.	43.	0.	0.	0.	33.	1.57	58.	735.	793.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	413.	16	495.
2	27	735.	27	793.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	10.	-0.	134.	0.	-85.	0.
3	23.	-0.	174.	1.	-230.	0.
5	19.	-2.	73.	2.	-149.	0.
18	10.	0.	-12.	1.	66.	-0.
20	9.	0.	-50.	0.	83.	-0.
22	4.	0.	-43.	0.	33.	-0.
23	14.	2.	-84.	4.	151.	-0.
25	23.	0.	-185.	1.	230.	-0.
27	10.	0.	-139.	0.	86.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	112.	10.	78.	0.	0.	1.57	82.	379.	461.
			2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
2	TAN	1	2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
			3	0.	65.	11.	128.	0.	1.	1.00	82.	392.	474.
3	TAN	1	3	0.	65.	13.	128.	0.	1.	1.00	82.	392.	474.
			4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
4	TAN	1	4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
			5	0.	14.	10.	26.	0.	3.	1.00	82.	81.	163.
5	TAN	1	5	4.	14.	3.	26.	0.	3.	1.00	82.	81.	163.
			28	4.	13.	2.	22.	0.	9.	1.57	82.	114.	196.
6	BEND	1	28	4.	2.	13.	22.	9.	0.	1.57	62.	41.	103.
			7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
7	BEND	1	7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
			29	9.	0.	4.	1.	0.	19.	1.57	62.	34.	96.
8	TAN	1	29	0.	4.	9.	0.	19.	1.	1.57	82.	94.	176.
			9	0.	4.	8.	10.	19.	1.	1.57	82.	106.	188.
9	TEE	1	9	8.	3.	0.	14.	13.	10.	1.57	62.	38.	101.
			30	6.	4.	2.	13.	13.	19.	1.00	62.	27.	89.
10	TEE	1	10	12.	15.	7.	13.	14.	2.	1.00	62.	21.	84.
			30	9.	13.	6.	4.	14.	14.	1.00	62.	20.	83.
11	TEE	1	11	3.	13.	1.	24.	3.	19.	1.00	62.	33.	96.
			30	5.	18.	4.	31.	3.	17.	1.00	58.	36.	94.
12	TAN	1	10	2.	19.	7.	19.	0.	2.	1.57	82.	92.	174.
			23	2.	21.	8.	30.	0.	3.	1.00	82.	91.	173.
13	TAN	1	23	0.	21.	10.	30.	0.	3.	1.00	82.	91.	173.
			24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
14	TAN	1	24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
			25	0.	71.	13.	127.	0.	1.	1.00	82.	390.	471.
15	TAN	1	25	0.	71.	11.	127.	0.	1.	1.00	82.	390.	471.
			26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.
			27	0.	118.	10.	79.	0.	0.	1.57	82.	381.	463.
17	TAN	2	11	1.	14.	1.	23.	5.	19.	1.00	58.	430.	488.
			31	1.	13.	1.	21.	5.	16.	1.57	58.	605.	663.
18	BEND	2	31	2.	1.	13.	1.	27.	5.	1.57	37.	161.	198.
			13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
19	BEND	2	13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
			32	11.	1.	1.	4.	18.	1.	1.57	37.	110.	147.
20	TAN	2	32	1.	1.	11.	18.	1.	4.	1.57	58.	414.	472.
			33	1.	1.	12.	8.	1.	1.	1.57	58.	176.	234.
21	BEND	2	33	12.	1.	1.	1.	8.	1.	1.57	37.	47.	84.
			16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
22	BEND	2	16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
			34	1.	2.	14.	0.	17.	0.	1.57	37.	101.	139.
23	TAN	2	34	1.	14.	2.	13.	0.	11.	1.57	58.	382.	440.
			18	1.	17.	3.	28.	0.	1.	1.00	58.	397.	455.
24	TAN	2	18	0.	17.	4.	28.	0.	1.	1.00	58.	397.	455.
			19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
25	TAN	2	19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
			20	0.	36.	5.	43.	0.	0.	1.00	58.	607.	665.
26	TAN	2	20	0.	36.	4.	43.	0.	0.	1.00	58.	607.	665.
			21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
27	TAN	2	21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
			22	0.	53.	4.	32.	0.	0.	1.57	58.	718.	776.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 . LOAD TITLE: SSE + SRV + LOCA YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	392.	2	474.
2	27	718.	27	776.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	-10.	112.	78.	-0.	0.
3	0.	-25.	130.	256.	-2.	1.
5	4.	-12.	29.	52.	-6.	1.
18	1.	7.	-33.	56.	1.	-0.
20	0.	9.	-71.	86.	0.	-0.
22	0.	4.	-53.	32.	0.	-0.
23	2.	18.	-41.	59.	6.	-1.
25	0.	24.	-142.	254.	2.	-1.
27	0.	10.	-118.	79.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	112.	10.	78.	0.	0.	1.57	82.	379.	461.
			2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
2	TAN	1	2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
			3	0.	65.	11.	128.	0.	1.	1.00	82.	392.	474.
3	TAN	1	3	0.	65.	13.	128.	0.	1.	1.00	82.	392.	474.
			4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
4	TAN	1	4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
			5	0.	14.	10.	26.	0.	3.	1.00	82.	81.	163.
5	TAN	1	5	4.	14.	3.	26.	0.	3.	1.00	82.	81.	163.
			28	4.	13.	2.	22.	0.	9.	1.57	82.	114.	196.
6	BEND	1	28	4.	2.	13.	22.	9.	0.	1.57	62.	41.	103.
			7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
7	BEND	1	7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
			29	9.	0.	4.	1.	0.	19.	1.57	62.	34.	96.
8	TAN	1	29	0.	4.	9.	0.	19.	1.	1.57	82.	94.	176.
			9	0.	4.	8.	10.	19.	1.	1.57	82.	106.	188.
9	TEE	1	9	8.	3.	0.	14.	13.	10.	1.57	62.	38.	101.
			30	6.	4.	2.	13.	13.	19.	1.00	62.	27.	89.
10	TEE	1	10	12.	15.	7.	13.	14.	2.	1.00	62.	21.	84.
			30	9.	13.	6.	4.	14.	14.	1.00	62.	20.	83.
11	TEE	1	11	3.	13.	1.	24.	3.	19.	1.00	62.	33.	96.
			30	5.	18.	4.	31.	3.	17.	1.00	58.	36.	94.
12	TAN	1	10	2.	19.	7.	19.	0.	2.	1.57	82.	92.	174.
			23	2.	21.	8.	30.	0.	3.	1.00	82.	91.	173.
13	TAN	1	23	0.	21.	10.	30.	0.	3.	1.00	82.	91.	173.
			24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
14	TAN	1	24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
			25	0.	71.	13.	127.	0.	1.	1.00	82.	390.	471.
15	TAN	1	25	0.	71.	11.	127.	0.	1.	1.00	82.	390.	471.
			26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.
			27	0.	118.	10.	79.	0.	0.	1.57	82.	381.	463.
17	TAN	2	11	1.	14.	1.	23.	5.	19.	1.00	58.	430.	488.
			31	1.	13.	1.	21.	5.	16.	1.57	58.	605.	663.
18	BEND	2	31	2.	1.	13.	1.	27.	5.	1.57	37.	161.	198.
			13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
19	BEND	2	13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
			32	11.	1.	1.	4.	18.	1.	1.57	37.	110.	147.
20	TAN	2	32	1.	1.	11.	18.	1.	4.	1.57	58.	414.	472.
			33	1.	1.	12.	8.	1.	1.	1.57	58.	176.	234.
21	BEND	2	33	12.	1.	1.	1.	8.	1.	1.57	37.	47.	84.
			16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
22	BEND	2	16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
			34	1.	2.	14.	0.	17.	0.	1.57	37.	101.	139.
23	TAN	2	34	1.	14.	2.	13.	0.	11.	1.57	58.	382.	440.
			18	1.	17.	3.	28.	0.	1.	1.00	58.	397.	455.
24	TAN	2	18	0.	17.	4.	28.	0.	1.	1.00	58.	397.	455.
			19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
25	TAN	2	19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
			20	0.	36.	5.	43.	0.	0.	1.00	58.	607.	665.
26	TAN	2	20	0.	36.	4.	43.	0.	0.	1.00	58.	607.	665.
			21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
27	TAN	2	21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
			22	0.	53.	4.	32.	0.	0.	1.57	58.	718.	776.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	392.	2	474.
2	27	718.	27	776.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-10.	112.	78.	-0.	0.
3	0.	-25.	130.	256.	-2.	1.
5	4.	-12.	29.	52.	-6.	1.
18	1.	7.	-33.	56.	1.	-0.
20	0.	9.	-71.	86.	0.	-0.
22	0.	4.	-53.	32.	0.	-0.
23	2.	18.	-41.	59.	6.	-1.
25	0.	24.	-142.	254.	2.	-1.
27	0.	10.	-118.	79.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	134.	0.	0.	0.	85.	1.57	82.	413.	495.
			2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
2	TAN	1	2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
			3	11.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
3	TAN	1	3	12.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
			4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
4	TAN	1	4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
			5	11.	36.	0.	1.	0.	75.	1.00	82.	229.	311.
5	TAN	1	5	8.	36.	2.	1.	0.	75.	1.00	82.	229.	311.
			28	7.	35.	2.	4.	0.	65.	1.57	82.	317.	398.
6	BEND	1	28	7.	2.	35.	4.	65.	0.	1.57	62.	114.	177.
			7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
7	BEND	1	7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
			29	31.	2.	5.	3.	11.	6.	1.57	62.	23.	86.
8	TAN	1	29	2.	5.	31.	11.	6.	3.	1.57	82.	64.	146.
			9	2.	5.	30.	24.	6.	4.	1.57	82.	124.	206.
9	TEE	1	9	19.	23.	2.	1.	8.	24.	1.57	62.	45.	107.
			30	18.	23.	2.	2.	8.	51.	1.00	62.	52.	114.
10	TEE	1	10	28.	29.	2.	1.	1.	72.	1.00	62.	79.	142.
			30	24.	28.	2.	4.	1.	55.	1.00	62.	56.	118.
11	TEE	1	11	2.	4.	0.	3.	8.	1.	1.00	62.	9.	72.
			30	3.	8.	0.	4.	8.	8.	1.00	58.	12.	70.
12	TAN	1	10	2.	41.	2.	2.	0.	72.	1.57	82.	347.	428.
			23	3.	42.	2.	2.	0.	75.	1.00	82.	231.	313.
13	TAN	1	23	11.	42.	0.	2.	0.	75.	1.00	82.	231.	313.
			24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
14	TAN	1	24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
			25	12.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
15	TAN	1	25	11.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
			26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.
			27	10.	139.	0.	0.	0.	86.	1.57	82.	413.	495.
17	TAN	2	11	2.	3.	0.	1.	8.	1.	1.00	58.	114.	172.
			31	2.	3.	0.	1.	8.	3.	1.57	58.	188.	246.
18	BEND	2	31	2.	1.	3.	1.	3.	8.	1.57	37.	50.	87.
			13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
19	BEND	2	13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
			32	1.	2.	2.	7.	5.	2.	1.57	37.	50.	87.
20	TAN	2	32	2.	2.	1.	5.	2.	7.	1.57	58.	188.	246.
			33	2.	2.	1.	5.	2.	2.	1.57	58.	120.	178.
21	BEND	2	33	1.	2.	2.	2.	5.	2.	1.57	37.	32.	69.
			16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
22	BEND	2	16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
			34	3.	3.	4.	0.	4.	0.	1.57	37.	24.	62.
23	TAN	2	34	4.	4.	0.	3.	0.	3.	1.57	58.	91.	149.
			18	5.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
24	TAN	2	18	4.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
			19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
25	TAN	2	19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
			20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
26	TAN	2	20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
			21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
27	TAN	2	21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
			22	4.	43.	0.	0.	0.	33.	1.57	58.	735.	793.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	413.	16	495.
2	27	735.	27	793.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	10.	-0.	134.	0.	-85.	0.
3	23.	-0.	174.	1.	-230.	0.
5	19.	-2.	73.	2.	-149.	0.
18	10.	0.	-12.	1.	66.	-0.
20	9.	0.	-50.	0.	83.	-0.
22	4.	0.	-43.	0.	33.	-0.
23	14.	2.	-84.	4.	151.	-0.
25	23.	0.	-185.	1.	230.	-0.
27	10.	0.	-139.	0.	86.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	10.	134.	0.	0.	0.	85.	1.57	82.	413.	495.
			2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
2	TAN	1	2	1.	110.	0.	0.	0.	43.	1.00	82.	131.	213.
			3	11.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
3	TAN	1	3	12.	87.	0.	0.	0.	115.	1.00	82.	353.	435.
			4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
4	TAN	1	4	1.	62.	0.	0.	0.	72.	1.00	82.	220.	302.
			5	11.	36.	0.	1.	0.	75.	1.00	82.	229.	311.
5	TAN	1	5	8.	36.	2.	1.	0.	75.	1.00	82.	229.	311.
			28	7.	35.	2.	4.	0.	65.	1.57	82.	317.	398.
6	BEND	1	28	7.	2.	35.	4.	65.	0.	1.57	62.	114.	177.
			7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
7	BEND	1	7	26.	2.	21.	4.	46.	3.	1.57	62.	81.	144.
			29	31.	2.	5.	3.	11.	6.	1.57	62.	23.	86.
8	TAN	1	29	2.	5.	31.	11.	6.	3.	1.57	82.	64.	146.
			9	2.	5.	30.	24.	6.	4.	1.57	82.	124.	206.
9	TEE	1	9	19.	23.	2.	1.	8.	24.	1.57	62.	45.	107.
			30	18.	23.	2.	2.	8.	51.	1.00	62.	52.	114.
10	TEE	1	10	28.	29.	2.	1.	1.	72.	1.00	62.	79.	142.
			30	24.	28.	2.	4.	1.	55.	1.00	62.	56.	118.
11	TEE	1	11	2.	4.	0.	3.	8.	1.	1.00	62.	9.	72.
			30	3.	8.	0.	4.	8.	8.	1.00	58.	12.	70.
12	TAN	1	10	2.	41.	2.	2.	0.	72.	1.57	82.	347.	428.
			23	3.	42.	2.	2.	0.	75.	1.00	82.	231.	313.
13	TAN	1	23	11.	42.	0.	2.	0.	75.	1.00	82.	231.	313.
			24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
14	TAN	1	24	1.	67.	0.	1.	0.	72.	1.00	82.	220.	302.
			25	12.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
15	TAN	1	25	11.	92.	0.	1.	0.	115.	1.00	82.	352.	434.
			26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	1.	116.	0.	0.	0.	43.	1.00	82.	131.	213.
			27	10.	139.	0.	0.	0.	86.	1.57	82.	413.	495.
17	TAN	2	11	2.	3.	0.	1.	8.	1.	1.00	58.	114.	172.
			31	2.	3.	0.	1.	8.	3.	1.57	58.	188.	246.
18	BEND	2	31	2.	1.	3.	1.	3.	8.	1.57	37.	50.	87.
			13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
19	BEND	2	13	2.	2.	2.	4.	4.	7.	1.57	37.	52.	89.
			32	1.	2.	2.	7.	5.	2.	1.57	37.	50.	87.
20	TAN	2	32	2.	2.	1.	5.	2.	7.	1.57	58.	188.	246.
			33	2.	2.	1.	5.	2.	2.	1.57	58.	120.	178.
21	BEND	2	33	1.	2.	2.	2.	5.	2.	1.57	37.	32.	69.
			16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
22	BEND	2	16	3.	3.	4.	1.	5.	1.	1.57	37.	31.	69.
			34	3.	3.	4.	0.	4.	0.	1.57	37.	24.	62.
23	TAN	2	34	4.	4.	0.	3.	0.	3.	1.57	58.	91.	149.
			18	5.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
24	TAN	2	18	4.	6.	0.	1.	0.	33.	1.00	58.	470.	528.
			19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
25	TAN	2	19	0.	16.	0.	0.	0.	25.	1.00	58.	351.	409.
			20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
26	TAN	2	20	4.	25.	0.	0.	0.	41.	1.00	58.	588.	646.
			21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
27	TAN	2	21	0.	34.	0.	0.	0.	16.	1.00	58.	233.	291.
			22	4.	43.	0.	0.	0.	33.	1.57	58.	735.	793.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	16	413.	16	495.
2	27	735.	27	793.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	10.	-0.	134.	0.	-85.	0.
3	23.	-0.	174.	1.	-230.	0.
5	19.	-2.	73.	2.	-149.	0.
18	10.	0.	-12.	1.	66.	-0.
20	9.	0.	-50.	0.	83.	-0.
22	4.	0.	-43.	0.	33.	-0.
23	14.	2.	-84.	4.	151.	-0.
25	23.	0.	-185.	1.	230.	-0.
27	10.	0.	-139.	0.	86.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	112.	10.	78.	0.	0.	1.57	82.	379.	461.
			2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
2	TAN	1	2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
			3	0.	65.	11.	128.	0.	1.	1.00	82.	392.	474.
3	TAN	1	3	0.	65.	13.	128.	0.	1.	1.00	82.	392.	474.
			4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
4	TAN	1	4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
			5	0.	14.	10.	26.	0.	3.	1.00	82.	81.	163.
5	TAN	1	5	4.	14.	3.	26.	0.	3.	1.00	82.	81.	163.
			28	4.	13.	2.	22.	0.	9.	1.57	82.	114.	196.
6	BEND	1	28	4.	2.	13.	22.	9.	0.	1.57	62.	41.	103.
			7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
7	BEND	1	7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
			29	9.	0.	4.	1.	0.	19.	1.57	62.	34.	96.
8	TAN	1	29	0.	4.	9.	0.	19.	1.	1.57	82.	94.	176.
			9	0.	4.	8.	10.	19.	1.	1.57	82.	106.	188.
9	TEE	1	9	8.	3.	0.	14.	13.	10.	1.57	62.	38.	101.
			30	6.	4.	2.	13.	13.	19.	1.00	62.	27.	89.
10	TEE	1	10	12.	15.	7.	13.	14.	2.	1.00	62.	21.	84.
			30	9.	13.	6.	4.	14.	14.	1.00	62.	20.	83.
11	TEE	1	11	3.	13.	1.	24.	3.	19.	1.00	62.	33.	96.
			30	5.	18.	4.	31.	3.	17.	1.00	58.	36.	94.
12	TAN	1	10	2.	19.	7.	19.	0.	2.	1.57	82.	92.	174.
			23	2.	21.	8.	30.	0.	3.	1.00	82.	91.	173.
13	TAN	1	23	0.	21.	10.	30.	0.	3.	1.00	82.	91.	173.
			24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
14	TAN	1	24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
			25	0.	71.	13.	127.	0.	1.	1.00	82.	390.	471.
15	TAN	1	25	0.	71.	11.	127.	0.	1.	1.00	82.	390.	471.
			26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.
			27	0.	118.	10.	79.	0.	0.	1.57	82.	381.	463.
17	TAN	2	11	1.	14.	1.	23.	5.	19.	1.00	58.	430.	488.
			31	1.	13.	1.	21.	5.	16.	1.57	58.	605.	663.
18	BEND	2	31	2.	1.	13.	1.	27.	5.	1.57	37.	161.	198.
			13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
19	BEND	2	13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
			32	11.	1.	1.	4.	18.	1.	1.57	37.	110.	147.
20	TAN	2	32	1.	1.	11.	18.	1.	4.	1.57	58.	414.	472.
			33	1.	1.	12.	8.	1.	1.	1.57	58.	176.	234.
21	BEND	2	33	12.	1.	1.	1.	8.	1.	1.57	37.	47.	84.
			16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
22	BEND	2	16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
			34	1.	2.	14.	0.	17.	0.	1.57	37.	101.	139.
23	TAN	2	34	1.	14.	2.	13.	0.	11.	1.57	58.	382.	440.
			18	1.	17.	3.	28.	0.	1.	1.00	58.	397.	455.
24	TAN	2	18	0.	17.	4.	28.	0.	1.	1.00	58.	397.	455.
			19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
25	TAN	2	19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
			20	0.	36.	5.	43.	0.	0.	1.00	58.	607.	665.
26	TAN	2	20	0.	36.	4.	43.	0.	0.	1.00	58.	607.	665.
			21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
27	TAN	2	21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
			22	0.	53.	4.	32.	0.	0.	1.57	58.	718.	776.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	392.	2	474.
2	27	718.	27	776.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-10.	112.	78.	-0.	0.
3	0.	-25.	130.	256.	-2.	1.
5	4.	-12.	29.	52.	-6.	1.
18	1.	7.	-33.	56.	1.	-0.
20	0.	9.	-71.	86.	0.	-0.
22	0.	4.	-53.	32.	0.	-0.
23	2.	18.	-41.	59.	6.	-1.
25	0.	24.	-142.	254.	2.	-1.
27	0.	10.	-118.	79.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	112.	10.	78.	0.	0.	1.57	82.	379.	461.
			2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
2	TAN	1	2	0.	88.	1.	39.	0.	0.	1.00	82.	120.	202.
			3	0.	65.	11.	128.	0.	1.	1.00	82.	392.	474.
3	TAN	1	3	0.	65.	13.	128.	0.	1.	1.00	82.	392.	474.
			4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
4	TAN	1	4	0.	40.	2.	88.	0.	1.	1.00	82.	268.	350.
			5	0.	14.	10.	26.	0.	3.	1.00	82.	81.	163.
5	TAN	1	5	4.	14.	3.	26.	0.	3.	1.00	82.	81.	163.
			28	4.	13.	2.	22.	0.	9.	1.57	82.	114.	196.
6	BEND	1	28	4.	2.	13.	22.	9.	0.	1.57	62.	41.	103.
			7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
7	BEND	1	7	5.	1.	10.	14.	8.	14.	1.57	62.	37.	100.
			29	9.	0.	4.	1.	0.	19.	1.57	62.	34.	96.
8	TAN	1	29	0.	4.	9.	0.	19.	1.	1.57	82.	94.	176.
			9	0.	4.	8.	10.	19.	1.	1.57	82.	106.	188.
9	TEE	1	9	8.	3.	0.	14.	13.	10.	1.57	62.	38.	101.
			30	6.	4.	2.	13.	13.	19.	1.00	62.	27.	89.
10	TEE	1	10	12.	15.	7.	13.	14.	2.	1.00	62.	21.	84.
			30	9.	13.	6.	4.	14.	14.	1.00	62.	20.	83.
11	TEE	1	11	3.	13.	1.	24.	3.	19.	1.00	62.	33.	96.
			30	5.	18.	4.	31.	3.	17.	1.00	58.	36.	94.
12	TAN	1	10	2.	19.	7.	19.	0.	2.	1.57	82.	92.	174.
			23	2.	21.	8.	30.	0.	3.	1.00	82.	91.	173.
13	TAN	1	23	0.	21.	10.	30.	0.	3.	1.00	82.	91.	173.
			24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
14	TAN	1	24	0.	46.	2.	86.	0.	1.	1.00	82.	265.	347.
			25	0.	71.	13.	127.	0.	1.	1.00	82.	390.	471.
15	TAN	1	25	0.	71.	11.	127.	0.	1.	1.00	82.	390.	471.
			26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	26	0.	95.	1.	39.	0.	0.	1.00	82.	121.	203.
			27	0.	118.	10.	79.	0.	0.	1.57	82.	381.	463.
17	TAN	2	11	1.	14.	1.	23.	5.	19.	1.00	58.	430.	488.
			31	1.	13.	1.	21.	5.	16.	1.57	58.	605.	663.
18	BEND	2	31	2.	1.	13.	1.	27.	5.	1.57	37.	161.	198.
			13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
19	BEND	2	13	9.	1.	8.	2.	24.	4.	1.57	37.	144.	181.
			32	11.	1.	1.	4.	18.	1.	1.57	37.	110.	147.
20	TAN	2	32	1.	1.	11.	18.	1.	4.	1.57	58.	414.	472.
			33	1.	1.	12.	8.	1.	1.	1.57	58.	176.	234.
21	BEND	2	33	12.	1.	1.	1.	8.	1.	1.57	37.	47.	84.
			16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
22	BEND	2	16	9.	2.	9.	1.	14.	1.	1.57	37.	84.	122.
			34	1.	2.	14.	0.	17.	0.	1.57	37.	101.	139.
23	TAN	2	34	1.	14.	2.	13.	0.	11.	1.57	58.	382.	440.
			18	1.	17.	3.	28.	0.	1.	1.00	58.	397.	455.
24	TAN	2	18	0.	17.	4.	28.	0.	1.	1.00	58.	397.	455.
			19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
25	TAN	2	19	0.	26.	0.	26.	0.	0.	1.00	58.	374.	432.
			20	0.	36.	5.	43.	0.	0.	1.00	58.	607.	665.
26	TAN	2	20	0.	36.	4.	43.	0.	0.	1.00	58.	607.	665.
			21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
27	TAN	2	21	0.	44.	0.	16.	0.	0.	1.00	58.	228.	286.
			22	0.	53.	4.	32.	0.	0.	1.57	58.	718.	776.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	2	392.	2	474.
2	27	718.	27	776.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	* MOMENTS (IN-LBS) M1	M2	M3
1	0.	-10.	112.	78.	-0.	0.
3	0.	-25.	130.	256.	-2.	1.
5	4.	-12.	29.	52.	-6.	1.
18	1.	7.	-33.	56.	1.	-0.
20	0.	9.	-71.	86.	0.	-0.
22	0.	4.	-53.	32.	0.	-0.
23	2.	18.	-41.	59.	6.	-1.
25	0.	24.	-142.	254.	2.	-1.
27	0.	10.	-118.	79.	0.	-0.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 23

```
* CPU SECONDS ** THIS STEP "STRE" TIME IS   10.96 ** LAST STEP "COMB" TIME IS    6.76 ** DELTA TIME IS    4.20 *
* ELAPSED SECONDS                           181.9                                120.3                     61.6 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   10.96 ** LAST STEP "STRE" TIME IS   10.96 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           182.0                                181.9                      0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   11.00 ** LAST STEP "SUPR" TIME IS   10.96 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           182.1                                182.0                      0.1 *
```

```
START NC3600 NO PRODUCTION NO TAPE 31
WPPSS SEAL LOOP
GEOMETRY
WPPSS SEAL LOOP
COORDINATE INCHES
1 0 0 0
2 0 0 -27
3 0 0 -54
4 0 0 -83
5 0 0 -112
7 0 0 -115.38
9 2.69 0 -115.38
10 4.69 0 -113.38
11 4.69 0 -117.38
13 4.69 0 -120
16 2.34 2.94 -120
18 2.34 2.94 -112
19 2.34 2.94 -83
20 2.34 2.94 -54
21 2.34 2.94 -27
22 2.34 2.94 0
23 4.69 0 -112
24 4.69 0 -83
25 4.69 0 -54
26 4.69 0 -27
27 4.69 0 0
BOUNDARY
1 ANCHOR
22 ANCHOR
27 ANCHOR
3 XYSTOP
5 XYSTOP
20 XYSTOP
18 XYSTOP
25 XYSTOP
23 XYSTOP
MATERIAL 15
70 28300000 .3 .0000091
150 27900000 .3 .00000925
175 27775000 .3 .0000093
MATERIAL 75
70 28300000 .3 .0000091
150 27900000 .3 .00000925
175 27775000 .3 .0000093
SIF
101 2.1 2.1 1
BRANCH 1 15 25 1
RUN 1 2 1.9 .145 .30 1
RUN 2 3 1.9 .145 .30 0
RUN 3 4
RUN 4 5
RUN 5 0 1.9 .145 .30 2
ELBOW 7 1.5 2.5 .25 .6 0 101
RUN 0 9 1.9 .145 .30 3
TEE RUN 50 9 WELDED 1
FULL 2.5 .25 1
TEE RUN 50 10 WELDED 2
FULL 2.5 .25 1
TEE BRANCH 50 11 WELDED 2
```

```
REDUCED 2.5 .25 1 1.05 .113 .113
RUN 10 23 1.9 .145 .3 1
RUN 23 24 1.9 .145 .3 0
RUN 24 25
RUN 25 26
RUN 26 27 1.9 .145 .3 2
BRANCH 2 75 25 1
RUN 11 0 1.05 .113 .113 2
ELBOW 13 .75 1.5 .25 .7 0 101
RUN 0 0 1.05 .113 .113 3
ELBOW 16 .75 1.5 .25 .7 0 101
RUN 0 18 1.05 .113 .113 1
RUN 18 19 1.05 .113 .113 0
RUN 19 20
RUN 20 21
RUN 21 22 1.05 .113 .113 2
FREQUENCY 6 10 1 1
SEALLOOP
3DOF 2 4 7 13 16 19 21 24 26
END OF JOB
```

```
     6    31     0     0                                                  PD1
WPPSS SEAL LOOP
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0     0     1                                            P 1
WPPSS SEAL LOOP                                                           P 2
    27    28    27     0     9     5     3     2     0     0     0     0  P 3
     0     1     0     1     1     0     0                                P 4
     1    28     3     0     0    30     1                                P 5
     1   0.0           0.0          0.0          0                       P 7
     2   0.0           0.0       -27.00000       0                       P 7
     3   0.0           0.0       -54.00000       0                       P 7
     4   0.0           0.0       -83.00000       0                       P 7
     5   0.0           0.0      -112.00000       0                       P 7
     7   0.43934       0.0      -114.94064       0                       P 7
     9   2.69000       0.0      -115.37999       0                       P 7
    10   4.69000       0.0      -113.37999       0                       P 7
    11   4.69000       0.0      -117.37999       0                       P 7
    13   4.55284       0.17159  -119.78032       0                       P 7
    16   2.47715       2.76841  -119.78032       0                       P 7
    18   2.34000       2.94000  -112.00000       0                       P 7
    19   2.34000       2.94000   -83.00000       0                       P 7
    20   2.34000       2.94000   -54.00000       0                       P 7
    21   2.34000       2.94000   -27.00000       0                       P 7
    22   2.34000       2.94000     0.0           0                       P 7
    23   4.69000       0.0      -112.00000       0                       P 7
    24   4.69000       0.0       -83.00000       0                       P 7
    25   4.69000       0.0       -54.00000       0                       P 7
    26   4.69000       0.0       -27.00000       0                       P 7
    27   4.69000       0.0         0.0           0                       P 7
    28   0.0           0.0      -113.87999       0                       P 7
    29   1.50000       0.0      -115.37999       0                       P 7
    30   3.69000       0.0      -114.37999       0                       P 7
    31   4.69000       0.0      -119.25000       0                       P 7
    32   4.22172       0.58585  -120.00000       0                       P 7
    33   2.80828       2.35415  -120.00000       0                       P 7
    34   2.34000       2.94000  -119.25000       0                       P 7
    50   1.50000       0.0      -113.87999       0                       P 7
    51   4.22172       0.58585  -119.25000       0                       P 7
    52   2.80828       2.35415  -119.25000       0                       P 7
  1  3   1.9000      0.1450      2.0000      0.0         0.0         0.0     P11D
  2  4   2.5000      0.2500      2.0000      0.0         0.0         0.0     P11D
  3  3   2.5000      0.2500      2.0000      0.0         0.0         0.0     P11D
  4  3   1.0500      0.1130      2.0000      0.0         0.0         0.0     P11D
  5  4   1.5000      0.2500      2.0000      0.0         0.0         0.0     P11D
  1  5   2.5000      0.2500      2.5000      0.2500      0.0         0.0     P12
  101    2.099999    2.099999    1.000000                                   P 12.1
    0.300     0.600     1.000     0.113     0.700
  1  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0   P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05     0.0  0.0  0.0   P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05     0.0  0.0  0.0   P14A
  2  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05     0.0  0.0  0.0   P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05     0.0  0.0  0.0   P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05     0.0  0.0  0.0   P14A
    25.00000     0.0         0.0         0.0         0.0         0.0        P15
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
 22  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
 27  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01          P18
  3  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
  5  0 0.100E 01 0.100E 01 0.0       0.0       0.0       0.0               P18
```

```
20   0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0                P18
18   0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0                P18
25   0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0                P18
23   0 0.100E 01 0.100E 01 0.0        0.0        0.0        0.0                P18
  1   1   21001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   1   1   0   0   1                                                        P21B
  2   2   31001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
  3   3   41001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
  4   4   51001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
  5   5  281001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   1                                                        P21B
  6  28   7  50   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   1                                                        P21B
  7   7  29  50   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   1                                                        P21B
  8  29   91002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   3   1   0   0   1                                                        P21B
  9   9  30  11   1   1   1   3   3   2   1   0   0   0   0  0.0               P21
   1   1   1   1   1   1                                                        P21B
 10  10  30  11   1   1   1   3   3   2   1   0   0   0   0  0.0               P21
   1   2   1   1   1   1                                                        P21B
 11  11  30   9   1   3   2   3   4   2   1   0   0   0   0  0.0               P21
   1   2   1   2   1   1                                                        P21B
 12  10  231001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   1   1   0   0   1                                                        P21B
 13  23  241001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
 14  24  251001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
 15  25  261001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   1                                                        P21B
 16  26  271001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   1                                                        P21B
 17  11  311001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   2                                                        P21B
 18  31  13  51   2   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   2                                                        P21B
 19  13  32  51   2   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   2                                                        P21B
 20  32  331001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   3   1   0   0   2                                                        P21B
 21  33  16  52   2   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   2                                                        P21B
 22  16  34  52   2   2   1   5   5   1   1   0   0   0   0  0.0               P21
   1 101   1   0   0   2                                                        P21B
 23  34  181001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   1   1   0   0   2                                                        P21B
 24  18  191001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   2                                                        P21B
 25  19  201001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   2                                                        P21B
 26  20  211001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   0   1   0   0   2                                                        P21B
 27  21  221001   2   1   1   4   4   1   1   0   0   0   0  0.0               P21
   1   2   1   0   0   2                                                        P21B
    9     0 0.10000E 01 0.10000E 01                                             P25
  2   4   7  13  16  19  21  24  26   0   0   0   0   0   0   0   0   0        P26
```

```
     0      0                                                                P28
     0      0                                                                P30
     0                                                                       P68
SEALLOOP                                                                     D1
     1     -1     10      0      1      0                                   D2
     4      0.00100      6                                                   D3
     0                                                                       PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.15 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                             5.5                                 0.0                        5.5 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS SEAL LOOP
WPPSS SEAL LOOP

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	27
TOTAL NUMBER OF STRUCTURAL JOINTS	28
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	3
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	27
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	9
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	5
TOTAL NUMBER OF MATERIALS	2
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	28
TOTAL FICTIOUS JOINTS READ IN	3
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
2	0.0	0.0	-27.000000
3	0.0	0.0	-54.000000
4	0.0	0.0	-83.000000
5	0.0	0.0	-112.000000
7	0.439340	0.0	-114.940628
9	2.690000	0.0	-115.379990
10	4.690000	0.0	-113.379990
11	4.690000	0.0	-117.379990
13	4.552839	0.171590	-119.780319
16	2.477150	2.768410	-119.780319
18	2.339999	2.940000	-112.000000
19	2.339999	2.940000	-83.000000
20	2.339999	2.940000	-54.000000
21	2.339999	2.940000	-27.000000
22	2.339999	2.940000	0.0
23	4.690000	0.0	-112.000000
24	4.690000	0.0	-83.000000
25	4.690000	0.0	-54.000000
26	4.690000	0.0	-27.000000
27	4.690000	0.0	0.0
28	0.0	0.0	-113.879990
29	1.500000	0.0	-115.379990
30	3.690000	0.0	-114.379990
31	4.690000	0.0	-119.250000
32	4.221720	0.585850	-120.000000
33	2.808280	2.354150	-120.000000
34	2.339999	2.940000	-119.250000
50	1.500000	0.0	-113.879990
51	4.221720	0.585850	-119.250000
52	2.808280	2.354150	-119.250000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	C	2.500	0.250	.1767E 01	.1132E 01	.1132E 01	.2264E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
3	S	2.500	0.250	.1767E 01	.1132E 01	.2264E 01	.1132E 01	2.0	2.0	1.25	0.0	0.0	1.25	-1.25	0.0	0.0	-1.25
4	S	1.050	0.113	.3326E 00	.3704E-01	.7407E-01	.3704E-01	2.0	2.0	0.52	0.0	0.0	0.52	-0.52	0.0	0.0	-0.52
5	C	1.500	0.250	.9817E 00	.1994E 00	.1994E 00	.3988E 00	2.0	2.0	0.75	0.0	0.0	0.75	-0.75	0.0	0.0	-0.75

CROSS-SECTIONAL PROPERTIES FOR TEES

TYPE	PIPE MATCHING RUN OD(IN)	PIPE MATCHING RUN WT(IN)	PIPE MATCHING BRANCH OD(IN)	PIPE MATCHING BRANCH WT(IN)	REINFORCEMENT THICKNESS FOR REINFORCED TEES (IN)
1	.2500000E 01	.2500000E 00	.2500000E 01	.2500000E 00	.0

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	0.0
1-A	150.00	27900000.00	0.300000	0.000009250	0.0
1-B	175.00	27774992.00	0.300000	0.000009300	0.0
2	70.00	28300000.00	0.300000	0.000009100	0.0
2-A	150.00	27900000.00	0.300000	0.000009250	0.0
2-B	175.00	27774992.00	0.300000	0.000009300	0.0

PRESSURE DATA

TYPE	PRESSURE
1	25.00

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	22	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	27	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	3	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
5	5	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
6	20	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
7	18	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
8	25	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0
9	23	0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.25 ** LAST STEP "BEGP" TIME IS    0.15 ** DELTA TIME IS    0.10 *
* ELAPSED SECONDS                            17.0                                 5.5                      11.5 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   28


 BAND-WIDTH =    24  BY D.O.F.          BAND-WIDTH =     4  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.38 ** LAST STEP "DA3D" TIME IS    0.25 ** DELTA TIME IS    0.13 *
* ELAPSED SECONDS                            33.9                                 17.0                     16.9 *
```

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 27

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	7	1	2	7	2	3	7	3	4	24	1	5	24	2
6	24	3	7	13	1	8	13	2	9	13	3	10	26	1
11	26	2	12	26	3	13	4	1	14	4	2	15	4	3
16	16	1	17	16	2	18	16	3	19	2	1	20	2	2
21	2	3	22	19	1	23	19	2	24	19	3	25	21	1
26	21	2	27	21	3									

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.43 ** LAST STEP "JCSO" TIME IS    0.38 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                            51.2                                33.9                      17.2 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.55668E 08) OCCURS AT THE 5TH DOF
MINIMUM VALUE (0.63297E 03) OCCURS AT THE 164TH DOF
RATIO OF MAX/MIN= 0.87948E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    1.57 ** LAST STEP "INPT" TIME IS    0.43 ** DELTA TIME IS    1.14 *
* ELAPSED SECONDS                            117.7                               51.2                      66.6 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    2.33 ** LAST STEP "EQ3D" TIME IS    1.57 ** DELTA TIME IS    0.76 *
* ELAPSED SECONDS                            218.0                               117.7                     100.2 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
1	1	2	1001	1	1	1	1	1	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
2	2	3	1001	1	1	1	1	0	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
3	3	4	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
4	4	5	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
5	5	28	1001	1	1	1	1	2	1	1	1	1.87999	0.30000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
6	28	7	50	1	2	1	1	101	1	1	2	0.78540	0.60000	RAD=	1.5000	1.000000 0.0 0.0
														FLX=	5.5688	0.0 1.000000 0.0
														ECC=	0.0	0.0 0.0 1.000000
7	7	29	50	1	2	1	1	101	1	1	2	0.78540	0.60000	RAD=	1.5000	0.707114 0.0 0.707100
														FLX=	5.5688	0.0 1.000000 0.0
														ECC=	0.0	-0.707100 0.0 0.707114
8	29	9	1002	1	1	1	1	3	1	1	1	1.19000	0.30000			0.0 1.000000 0.0 -1.000000 0.0 0.0 0.0 0.0 1.000000
9	9	30	11	1	1	2	1	1	1	1	3	1.41421	1.00000			0.707107 0.0 -0.707107 -0.707107 0.0 -0.707107 0.0 1.000000 0.0
10	10	30	11	1	1	2	1	2	1	1	3	1.41421	1.00000			0.707107 0.0 -0.707107 0.707107 0.0 0.707107 0.0 -1.000000 0.0
11	11	30	9	1	3	2	1	2	1	1	3 4	0.0 3.16228	0.55650			-0.948683 0.0 -0.316228 0.316228 0.0 -0.948683 0.0 -1.000000 0.0
12	10	23	1001	1	1	1	1	1	1	1	1	1.37999	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
13	23	24	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
14	24	25	1001	1	1	1	1	0	1	1	1	29.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
15	25	26	1001	1	1	1	1	0	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
16	26	27	1001	1	1	1	1	2	1	1	1	27.00000	0.30000			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
17	11	31	1001	2	1	1	1	2	1	2	4	1.87001	0.11300			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
18	31	13	51	2	2	1	1	101	1	2	5	0.78540	0.70000	RAD= FLX= ECC=	0.7500 3.4375 0.0	-0.624370 0.781129 0.0 -0.781129-0.624370 0.000008 0.000006 0.000005 1.000000
19	13	32	51	2	2	1	1	101	1	2	5	0.78540	0.70000	RAD= FLX= ECC=	0.7500 3.4375 0.0	-0.441497 0.552352 0.707099 -0.781134-0.624363 0.0 0.441486-0.552339 0.707115
20	32	33	1001	2	1	1	1	3	1	2	4	2.26378	0.11300			0.781127 0.624372 0.0 0.624372-0.781127 0.0 0.0 0.0 -1.000000
21	33	16	52	2	2	1	1	101	1	2	5	0.78542	0.70000	RAD= FLX= ECC=	0.7500 3.4375 0.0	0.0 0.0 1.000000 -0.781124-0.624375 0.0 0.624375-0.781124 0.0
22	16	34	52	2	2	1	1	101	1	2	5	0.78537	0.70000	RAD= FLX= ECC=	0.7500 3.4375 0.0	0.441508-0.552348 0.707094 -0.781128-0.624371 0.000006 0.441485-0.552334-0.707119
23	34	18	1001	2	1	1	1	1	1	2	4	7.25000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
24	18	19	1001	2	1	1	1	0	1	2	4	29.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
25	19	20	1001	2	1	1	1	0	1	2	4	29.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0
26	20	21	1001	2	1	1	1	0	1	2	4	27.00000	0.11300			1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

ELM NO.	*** JOINTS END 1	END 2	*** MAT. REF	ELM. CODE	PIPE TYPE	PRES CODE	SIF TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN	ORIENTATION MATRIX (I,J')
27	21	22	1001	2	1	1	1	2	1	2	4	27.00000	0.11300	1.000000 0.0 0.0 0.0 0.0 -1.000000 0.0 1.000000 0.0

MAXIMUM ELEMENT LENGTH OCCURS IN ELEMENT 25 AND EQUALS 0.29000E 02 INCHES
MINIMUM ELEMENT LENGTH OCCURS IN ELEMENT 22 AND EQUALS 0.58903E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 10 AND EQUALS 0.35363E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 24 AND EQUALS 0.51148E 03

```
* CPU SECONDS ** THIS STEP "EDIT" TIME IS    2.50 ** LAST STEP "SELT" TIME IS    2.33 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                           229.4                                218.0                      11.4 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS    4.78 ** LAST STEP "EDIT" TIME IS    2.50 ** DELTA TIME IS    2.28 *
* ELAPSED SECONDS                           426.5                                229.4                     197.2 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    4.82 ** LAST STEP "SLVR" TIME IS    4.78 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           428.5                                426.5                       2.0 *
```

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
1	0.0	0.0	0.0	2	0.20963E-01	0.20963E-01	0.20963E-01	3	0.0	0.0	0.21739E-01
4	0.22516E-01	0.22516E-01	0.22516E-01	5	0.0	0.0	0.11988E-01	7	0.18293E-02	0.18293E-02	0.18293E-02
9	0.22919E-02	0.22919E-02	0.22919E-02	10	0.23657E-02	0.23657E-02	0.23657E-02	11	0.25506E-02	0.25506E-02	0.25506E-02
13	0.10671E-02	0.10671E-02	0.10671E-02	16	0.10671E-02	0.10671E-02	0.10671E-02	18	0.0	0.0	0.53005E-02
19	0.84808E-02	0.84808E-02	0.84808E-02	20	0.0	0.0	0.81884E-02	21	0.78960E-02	0.78960E-02	0.78960E-02
22	0.0	0.0	0.0	23	0.0	0.0	0.11793E-01	24	0.22516E-01	0.22516E-01	0.22516E-01
25	0.0	0.0	0.21739E-01	26	0.20963E-01	0.20963E-01	0.20963E-01	27	0.0	0.0	0.0
28	0.16445E-02	0.16445E-02	0.16445E-02	29	0.13766E-02	0.13766E-02	0.13766E-02	30	0.59372E-02	0.59372E-02	0.59372E-02
31	0.80700E-03	0.80700E-03	0.80700E-03	32	0.86457E-03	0.86457E-03	0.86457E-03	33	0.86459E-03	0.86459E-03	0.86459E-03
34	0.15936E-02	0.15936E-02	0.15936E-02								

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.22369E-07) OCCURS AT DOF 23
MINIMUM VALUE (0.21235E-12) OCCURS AT DOF 21
RATIO OF MAX/MIN = 0.10534E 06

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS    5.09 ** LAST STEP "UPDT" TIME IS    4.82 ** DELTA TIME IS    0.27 *
* ELAPSED SECONDS                           439.8                               428.5                      11.3 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.15776E-02) OCCURS AT DOF 23
MINIMUM VALUE(0.11430E-05) OCCURS AT DOF 12
RATIO OF CMAX/CMIN= 0.13802E 04

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS    5.28 ** LAST STEP "MASM" TIME IS    5.09 ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                           476.8                               439.8                      36.9 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    5.30 ** LAST STEP "INFM" TIME IS    5.28 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           476.9                               476.8                       0.1 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    5.30 ** LAST STEP "BEGP" TIME IS    5.30 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           477.0                               476.9                       0.1 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS    5.36 ** LAST STEP "SRTL" TIME IS    5.30 ** DELTA TIME IS    0.06 *
* ELAPSED SECONDS                           477.5                               477.0                       0.5 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS    5.37 ** LAST STEP "SQRT" TIME IS    5.36 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                           477.5                               477.5                       0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS    5.41 ** LAST STEP "INYG" TIME IS    5.37 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                           477.8                               477.5                       0.2 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS    5.78 ** LAST STEP "TQAD" TIME IS    5.41 ** DELTA TIME IS    0.37 *
* ELAPSED SECONDS                           483.0                               477.8                       5.2 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS    5.83 ** LAST STEP "JAMX" TIME IS    5.78 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           483.4                               483.0                       0.4 *

* CPU SECONDS ** THIS STEP "TRPL" TIME IS    5.92 ** LAST STEP "RENM" TIME IS    5.83 ** DELTA TIME IS    0.09 *
* ELAPSED SECONDS                           484.4                               483.4                       1.0 *
```

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99996E 00
AVERAGE  DIAGONAL TERM........ 0.99999E 00
LARGEST OFF-DIAGONAL TERM..... 0.61728E-05
AVERAGE OFF-DIAGONAL TERM..... 0.22944E-06
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS    5.92 ** LAST STEP "TRPL" TIME IS    5.92 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           484.4                               484.4                        0.0 *
```

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N					
168	0.0	0.0	0.0	0.0	0.0	0.0
167	0.0	0.0	0.0	0.0	0.0	0.0
166	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0
164	0.0	0.0	0.0	0.0	0.0	0.0
163	0.0	0.0	0.0	0.0	0.0	0.0
162	0.75363E-04	-0.36341E-04	-0.12654E-04	-0.29345E-04	-0.17845E-04	0.10526E-04
161	0.20453E-03	-0.35438E-03	0.62031E-05	0.13341E-03	-0.25165E-05	0.60978E-05
160	-0.35264E-03	-0.20223E-03	-0.14113E-03	0.13751E-05	-0.27822E-04	0.43319E-06
159	-0.33165E-04	-0.17274E-04	0.64878E-04	-0.65468E-05	-0.94259E-04	-0.63565E-05
158	-0.16298E-01	-0.95657E-02	-0.24724E-01	0.27811E-03	-0.11572E-01	-0.82186E-04
157	-0.94532E-02	0.16763E-01	-0.10871E-02	-0.26981E-01	0.10480E-02	0.11594E-02
156	0.15073E-03	-0.72682E-04	-0.25308E-04	0.58691E-04	-0.35691E-04	0.21052E-04
155	-0.82401E-03	0.14277E-02	-0.24991E-04	-0.53745E-03	0.10138E-04	-0.24567E-04
154	0.14207E-02	0.81474E-03	0.56857E-03	-0.55398E-05	0.11209E-03	-0.17452E-05
153	-0.66227E-04	-0.34492E-04	0.12934E-03	-0.13051E-04	-0.18785E-03	-0.12659E-04
152	0.0	0.0	0.0	0.0	0.0	0.0
151	0.0	0.0	0.0	0.0	0.0	0.0
150	0.23167E-03	-0.11172E-03	-0.38899E-04	-0.90210E-04	-0.54858E-04	0.32358E-04
149	0.11482E-03	-0.23015E-03	0.10639E-04	0.20098E-03	0.17248E-05	0.44730E-04
148	-0.19794E-03	-0.13134E-03	-0.24272E-03	0.20740E-05	0.18510E-04	0.31858E-05
147	-0.10174E-03	-0.52986E-04	0.19859E-03	-0.20037E-04	-0.28838E-03	-0.19427E-04
146	0.32734E-01	0.18349E-01	-0.94452E-02	0.13210E-03	-0.89409E-02	-0.12965E-03
145	0.18986E-01	-0.32154E-01	-0.41525E-03	-0.12814E-01	0.80971E-03	0.18289E-02
144	0.0	0.0	0.0	0.0	0.0	0.0
143	0.0	0.0	0.0	0.0	0.0	0.0
142	0.0	0.0	0.0	0.0	0.0	0.0

141	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0
139	0.0	0.0	0.0	0.0	0.0	0.0
138	0.31261E-03	-0.15075E-03	-0.52490E-04	-0.12173E-03	-0.74025E-04	0.43664E-04
137	0.36188E-03	-0.50140E-03	-0.17832E-04	-0.27145E-03	-0.17080E-04	-0.15547E-03
136	-0.62397E-03	-0.28612E-03	0.40836E-03	-0.28079E-05	-0.18659E-03	-0.11077E-04
135	-0.13699E-03	-0.71347E-04	0.26680E-03	-0.26920E-04	-0.38725E-03	-0.26080E-04
134	0.0.	0.0	0.0	0.0	0.0	0.0
133	0.0	0.0	0.0	0.0	0.0	0.0
132	-0.40720E-06	-0.30625E-05	-0.83311E-06	-0.99669E-06	0.38066E-05	0.82269E-06
131	0.27209E-05	-0.49156E-05	-0.68504E-06	-0.72334E-05	0.22191E-05	-0.10099E-03
130	-0.13864E-04	-0.79384E-05	0.51738E-04	-0.54003E-05	-0.90929E-04	-0.31455E-05
129	0.22820E-04	-0.26003E-04	-0.14357E-04	-0.19648E-04	0.23258E-04	-0.12431E-03
128	-0.44303E-03	-0.25495E-03	0.19737E-02	-0.20795E-03	-0.36141E-02	-0.13847E-03
127	-0.86944E-04	0.15787E-03	0.26133E-04	0.27853E-03	-0.88202E-04	0.44459E-02
126	0.33285E-03	-0.16051E-03	-0.55888E-04	-0.12961E-03	-0.78817E-04	0.46490E-04
125	0.10809E-03	0.19674E-05	-0.85473E-04	-0.29471E-04	0.84301E-04	-0.25333E-03
124	-0.11092E-03	-0.16297E-04	0.21574E-03	-0.51608E-05	-0.33224E-03	-0.28528E-05
123	-0.14581E-03	-0.75937E-04	0.28385E-03	-0.28641E-04	-0.41197E-03	-0.27743E-04
122	-0.20507E-02	-0.65542E-03	0.22543E-02	-0.18813E-04	-0.25502E-02	-0.83755E-04
121	-0.12880E-02	0.10797E-02	0.26986E-03	0.75592E-03	-0.26096E-04	0.16575E-02
120	-0.81440E-06	-0.61250E-05	-0.16662E-05	-0.19934E-05	0.76133E-05	0.16454E-05
119	-0.11159E-04	0.20160E-04	0.28095E-05	0.29666E-04	-0.91012E-05	0.41418E-03
118	0.56861E-04	0.32557E-04	-0.21219E-03	0.22148E-04	0.37292E-03	0.12900E-04
117	0.45562E-04	-0.51914E-04	-0.28613E-04	-0.39157E-04	0.46336E-04	-0.24744E-03
116	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0
114	0.33243E-03	-0.16044E-03	-0.55893E-04	-0.12950E-03	-0.78503E-04	0.46372E-04
113	0.11144E-03	-0.17843E-05	-0.92863E-04	-0.30551E-04	0.98040E-04	-0.25133E-03
112	-0.10939E-03	-0.20496E-04	0.20653E-03	-0.58083E-05	-0.31324E-03	-0.10670E-05

111	-0.14272E-03	-0.73572E-04	0.26108E-03	-0.23831E-04	-0.37056E-03	0.71482E-05
110	-0.20612E-02	-0.68574E-03	0.23581E-02	-0.39469E-04	-0.27337E-02	-0.78467E-04
109	-0.12878E-02	0.10497E-02	0.30754E-03	0.74845E-03	-0.87810E-04	0.17999E-02
108	0.0	0.0	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	0.0	0.0
102	-0.12518E-05	-0.94143E-05	-0.25610E-05	-0.30639E-05	0.11702E-04	0.25290E-05
101	-0.47485E-05	0.83685E-05	0.33214E-06	0.31095E-05	-0.55814E-06	-0.25680E-04
100	0.24198E-04	0.13516E-04	-0.25079E-04	0.23224E-05	0.22872E-04	-0.80050E-06
99	0.69988E-04	-0.79745E-04	-0.43925E-04	-0.60111E-04	0.71124E-04	-0.37970E-03
98	0.18733E-02	0.10679E-02	-0.60013E-02	0.62137E-03	0.10178E-01	0.32147E-03
97	0.36764E-03	-0.66127E-03	-0.79461E-04	-0.83227E-03	0.24840E-03	-0.10321E-01
96	0.32897E-03	-0.15913E-03	-0.55478E-04	-0.12830E-03	-0.77184E-04	0.45832E-04
95	0.11412E-03	-0.86445E-05	-0.98623E-04	-0.32781E-04	0.11053E-03	-0.24913E-03
94	-0.11055E-03	-0.27552E-04	0.19975E-03	-0.71110E-05	-0.29559E-03	0.83636E-06
93	-0.13591E-03	-0.63114E-04	0.21098E-03	-0.11074E-04	-0.28198E-03	0.89893E-04
92	-0.19738E-02	-0.74344E-03	0.23838E-02	-0.83820E-04	-0.28271E-02	-0.63159E-04
91	-0.11740E-02	0.98290E-03	0.30542E-03	0.70103E-03	-0.14327E-03	0.18743E-02
90	0.19351E-05	-0.52043E-05	-0.16602E-05	-0.22543E-05	0.47232E-05	0.14467E-05
89	0.27798E-05	-0.50264E-05	-0.67218E-06	-0.72352E-05	0.21761E-05	-0.96143E-04
88	-0.13878E-04	-0.10434E-04	0.50363E-04	-0.71535E-05	-0.84162E-04	-0.21959E-06
87	-0.90503E-05	0.33278E-04	-0.12705E-04	0.22497E-04	0.16067E-04	0.12784E-03
86	-0.44339E-03	-0.33506E-03	0.19210E-02	-0.27542E-03	-0.33447E-02	-0.96893E-05
85	-0.88826E-04	0.16143E-03	0.25639E-04	0.27859E-03	-0.86487E-04	0.42325E-02
84	-0.16891E-05	-0.12704E-04	-0.34559E-05	-0.41344E-05	0.15791E-04	0.34126E-05
83	0.30569E-04	-0.54367E-04	-0.41672E-05	-0.42376E-04	0.11383E-04	-0.30921E-03
82	-0.15577E-03	-0.87803E-04	0.31470E-03	-0.31641E-04	-0.46641E-03	-0.96282E-05

81	0.94230E-04	-0.10736E-03	-0.59000E-04	-0.80729E-04	0.95489E-04	-0.50916E-03
80	0.0	0.0	0.0	0.0	0.0	0.0
79	0.0	0.0	0.0	0.0	0.0	0.0
78	0.24818E-03	-0.12610E-03	-0.43366E-04	-0.98963E-04	-0.51904E-04	0.35697E-04
77	0.12834E-03	-0.70635E-04	-0.93535E-04	-0.57899E-04	0.11782E-03	-0.23585E-03
76	-0.16196E-03	-0.81599E-04	0.21278E-03	-0.15662E-04	-0.25565E-03	0.45296E-05
75	-0.91108E-04	0.76484E-04	0.29853E-04	0.68306E-04	-0.25195E-04	0.42323E-03
74	-0.15360E-02	-0.95241E-03	0.23097E-02	-0.25366E-03	-0.29305E-02	-0.26568E-05
73	-0.62881E-03	0.71238E-03	0.21231E-03	0.48601E-03	-0.26550E-03	0.19512E-02
72	0.38702E-05	-0.10409E-04	-0.33203E-05	-0.45085E-05	0.94465E-05	0.28935E-05
71	-0.11401E-04	0.20614E-04	0.27568E-05	0.29673E-04	-0.89248E-05	0.39430E-03
70	0.56915E-04	0.42792E-04	-0.20655E-03	0.29338E-04	0.34517E-03	0.90059E-06
69	-0.18070E-04	0.66438E-04	-0.25321E-04	0.44833E-04	0.32010E-04	0.25446E-03
68	0.0	0.0	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0	0.0	0.0	0.0
66	-0.17175E-05	-0.12917E-04	-0.35139E-05	-0.42038E-05	0.16056E-04	0.34699E-05
65	0.31019E-04	-0.55884E-04	-0.33521E-05	-0.40890E-04	0.97578E-05	-0.26322E-03
64	-0.16453E-03	-0.95730E-04	0.31254E-03	-0.32433E-04	-0.45005E-03	-0.76063E-05
63	0.95801E-04	-0.10915E-03	-0.59978E-04	-0.82066E-04	0.97069E-04	-0.51755E-03
62	-0.30933E-03	-0.16948E-03	0.59131E-03	-0.57405E-04	-0.85956E-03	-0.17121E-04
61	-0.62628E-04	0.11009E-03	0.90238E-05	0.80744E-04	-0.22837E-04	0.52117E-03
60	0.22783E-03	-0.11766E-03	-0.40212E-04	-0.91518E-04	-0.45773E-04	0.33251E-04
59	0.11965E-03	-0.79562E-04	-0.84757E-04	-0.60030E-04	0.11146E-03	-0.23553E-03
58	-0.16884E-03	-0.94721E-04	0.22291E-03	-0.19931E-04	-0.26424E-03	0.51488E-05
57	-0.64768E-04	0.13778E-03	-0.28383E-04	0.95116E-04	0.40516E-04	0.49895E-03
56	-0.14192E-02	-0.97302E-03	0.22480E-02	-0.28156E-03	-0.28911E-02	0.77094E-05
55	-0.50125E-03	0.64380E-03	0.17495E-03	0.43269E-03	-0.26027E-03	0.19140E-02
54	0.59486E-05	-0.15998E-04	-0.51035E-05	-0.69298E-05	0.14520E-04	0.44474E-05
53	-0.48497E-05	0.85548E-05	0.32446E-06	0.31071E-05	-0.54486E-06	-0.24472E-04
52	0.24186E-04	0.17740E-04	-0.24294E-04	0.30616E-05	0.20992E-04	-0.48058E-07

51	-0.27757E-04	0.10206E-03	-0.38871E-04	0.68824E-04	0.49133E-04	0.39046E-03
50	0.18749E-02	0.14034E-02	-0.58409E-02	0.82299E-03	0.94196E-02	0.22492E-04
49	0.37559E-03	-0.67615E-03	-0.77960E-04	-0.83245E-03	0.24357E-03	-0.98260E-02
48	-0.21526E-05	-0.15418E-04	-0.43657E-05	-0.49601E-05	0.19566E-04	0.41369E-05
47	0.29093E-04	-0.53993E-04	-0.17212E-05	-0.38430E-04	0.69491E-05	-0.23287E-03
46	-0.16728E-03	-0.10393E-03	0.30984E-03	-0.34622E-04	-0.43759E-03	-0.54367E-05
45	0.83206E-04	-0.85600E-04	-0.59352E-04	-0.65342E-04	0.94217E-04	-0.41661E-03
44	-0.48860E-03	-0.28082E-03	0.92011E-03	-0.94185E-04	-0.13217E-02	-0.22603E-04
43	-0.95003E-04	0.16918E-03	0.11787E-04	0.12287E-03	-0.31771E-04	0.77691E-03
42	0.21504E-03	-0.11234E-03	-0.38173E-04	-0.86828E-04	-0.42037E-04	0.31776E-04
41	0.10958E-03	-0.86406E-04	-0.73690E-04	-0.61364E-04	0.10069E-03	-0.23564E-03
40	-0.17546E-03	-0.10627E-03	0.23527E-03	-0.24031E-04	-0.27825E-03	0.51136E-05
39	-0.51575E-04	0.16647E-03	-0.55390E-04	0.10719E-03	0.70120E-04	0.53016E-03
38	-0.12956E-02	-0.93418E-03	0.21212E-02	-0.28214E-03	-0.27556E-02	0.92692E-05
37	-0.40093E-03	0.57778E-03	0.12556E-03	0.38410E-03	-0.21045E-03	0.17951E-02
36	0.80270E-05	-0.21588E-04	-0.68867E-05	-0.93511E-05	0.19593E-04	0.60013E-05
35	0.31224E-04	-0.55582E-04	-0.40830E-05	-0.42373E-04	0.11152E-04	-0.29427E-03
34	-0.15578E-03	-0.11531E-03	0.30585E-03	-0.41853E-04	-0.43097E-03	-0.70416E-06
33	-0.37354E-04	0.13736E-03	-0.52206E-04	0.92381E-04	0.65956E-04	0.52317E-03
32	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0
30	0.49724E-06	-0.19168E-04	-0.57625E-05	-0.68257E-05	0.22257E-04	0.51745E-05
29	0.28679E-04	-0.53486E-04	-0.13446E-05	-0.37771E-04	0.62310E-05	-0.22444E-03
28	-0.16690E-03	-0.10809E-03	0.30838E-03	-0.36126E-04	-0.43260E-03	-0.43136E-05
27	0.54544E-04	-0.30773E-04	-0.59025E-04	-0.26744E-04	0.89343E-04	-0.18818E-03
26	-0.56531E-03	-0.34515E-03	0.10508E-02	-0.11523E-03	-0.14894E-02	-0.19990E-04
25	-0.10740E-03	0.19255E-03	0.12202E-04	0.13923E-03	-0.34239E-04	0.87236E-03
24	0.35895E-04	-0.38851E-04	-0.10464E-04	-0.21631E-04	0.12424E-04	0.10136E-04
23	0.53490E-04	-0.82766E-04	-0.13143E-04	-0.53768E-04	0.23539E-04	-0.23990E-03
22	-0.18654E-03	-0.12845E-03	0.29588E-03	-0.37277E-04	-0.38069E-03	0.37573E-06

21	-0.53824E-04	0.16526E-03	-0.51019E-04	0.10671E-03	0.63792E-04	0.52941E-03
20	-0.92804E-03	-0.69405E-03	0.16204E-02	-0.22405E-03	-0.21646E-02	0.27835E-05
19	-0.22907E-03	0.38590E-03	0.39430E-04	0.26044E-03	-0.84370E-04	0.13549E-02
18	0.81259E-05	-0.21854E-04	-0.69715E-05	-0.94663E-05	0.19834E-04	0.60753E-05
17	0.32674E-04	-0.57725E-04	-0.41418E-05	-0.41408E-04	0.10788E-04	-0.25363E-03
16	-0.16440E-03	-0.11961E-03	0.30470E-03	-0.40810E-04	-0.42037E-03	-0.92210E-06
15	-0.37811E-04	0.13904E-03	-0.52841E-04	0.93502E-04	0.66757E-04	0.52948E-03
14	-0.22173E-03	-0.16881E-03	0.42139E-03	-0.59201E-04	-0.58380E-03	-0.18432E-06
13	-0.45137E-04	0.81222E-04	0.54433E-05	0.59737E-04	-0.15333E-04	0.38963E-03
12	0.51518E-05	-0.21061E-04	-0.65144E-05	-0.85098E-05	0.20892E-04	0.57332E-05
11	0.31160E-04	-0.56249E-04	-0.28339E-05	-0.39734E-04	0.85708E-05	-0.23522E-03
10	-0.16696E-03	-0.11727E-03	0.30521E-03	-0.39243E-04	-0.42094E-03	-0.18491E-05
9	0.24387E-04	0.28310E-04	-0.59897E-04	0.14758E-04	0.85958E-04	0.56433E-04
8	-0.56668E-03	-0.36725E-03	0.10441E-02	-0.12267E-03	-0.14621E-02	-0.14041E-04
7	-0.10790E-03	0.19323E-03	0.12405E-04	0.13948E-03	-0.34545E-04	0.87042E-03
6	0.77461E-05	-0.22445E-04	-0.70352E-05	-0.95617E-05	0.20525E-04	0.61324E-05
5	0.33085E-04	-0.58467E-04	-0.39643E-05	-0.41246E-04	0.10366E-04	-0.24274E-03
4	-0.16704E-03	-0.11989E-03	0.30430E-03	-0.40116E-04	-0.41755E-03	-0.11465E-05
3	-0.54227E-05	0.82901E-04	-0.57801E-04	0.53498E-04	0.78568E-04	0.28862E-03
2	-0.39576E-03	-0.26945E-03	0.73295E-03	-0.91127E-04	-0.10213E-02	-0.68993E-05
1	-0.77824E-04	0.13839E-03	0.10091E-04	0.10042E-03	-0.26790E-04	0.63438E-03

MODE NUMBER 1 NAT. FREQUENCY 0.256895E 03 RAD/SEC ; 0.408861E 02 HERTZ PERIOD 0.244582E-01 SEC
NORMALIZING FACTOR 0.327338E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	-0.002656099	2	20	2	-0.013534363	2	21	3	0.000697127
4	13	1	0.011231091	4	14	2	0.057229277	4	15	3	0.002138094
7	1	1	-0.002902288	7	2	2	-0.014926597	7	3	3	0.002541911
13	7	1	-0.015312918	13	8	2	-0.043354377	13	9	3	-0.001978624
16	16	1	-0.039341249	16	17	2	-0.062967658	16	18	3	-0.004360151
19	22	1	0.580011904	19	23	2	1.000000000	19	24	3	-0.003108046
21	25	1	-0.288789034	21	26	2	-0.497903049	21	27	3	-0.001013160
24	4	1	0.011474203	24	5	2	0.057276390	24	6	3	-0.000847968
26	10	1	-0.002713591	26	11	2	-0.013545394	26	12	3	-0.000276481

MODE NUMBER 2 NAT. FREQUENCY 0.261061E 03 RAD/SEC ; 0.415491E 02 HERTZ PERIOD 0.240679E-01 SEC
NORMALIZING FACTOR 0.321537E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	0.004909981	2	20	2	-0.007929228	2	21	3	-0.000808699
4	13	1	-0.020565946	4	14	2	0.033212636	4	15	3	-0.002480102
7	1	1	0.005261496	7	2	2	-0.008733671	7	3	3	-0.002662220
13	7	1	0.020022582	13	8	2	-0.030261472	13	9	3	0.004285108
16	16	1	0.032645226	16	17	2	-0.021326907	16	18	3	-0.002288126
19	22	1	-1.000000000	19	23	2	0.570656002	19	24	3	-0.001647909
21	25	1	0.521324456	21	26	2	-0.297497690	21	27	3	-0.000537221
24	4	1	-0.021028664	24	5	2	0.043648042	24	6	3	0.003173982
26	10	1	0.005020451	26	11	2	-0.010420550	26	12	3	0.001034960

MODE NUMBER 3 NAT. FREQUENCY 0.368022E 03 RAD/SEC ; 0.585726E 02 HERTZ PERIOD 0.170728E-01 SEC
NORMALIZING FACTOR 0.247243E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	0.001056991	2	20	2	0.079828620	2	21	3	-0.000580671
4	13	1	-0.003213892	4	14	2	-0.242728472	4	15	3	-0.001776577
7	1	1	0.000476739	7	2	2	0.037214670	7	3	3	-0.002400546
13	7	1	0.007076006	13	8	2	0.090922534	13	9	3	-0.001147963
16	16	1	0.012438871	16	17	2	0.095376074	16	18	3	0.010559477
19	22	1	-0.016795222	19	23	2	-0.382019818	19	24	3	0.008032035
21	25	1	-0.043966979	21	26	2	-1.000000000	21	27	3	0.002624049
24	4	1	-0.003153154	24	5	2	-0.236242771	24	6	3	-0.001572189
26	10	1	0.001037015	26	11	2	0.077695906	26	12	3	-0.000513869

MODE NUMBER 4 NAT. FREQUENCY 0.372520E 03 RAD/SEC ; 0.592884E 02 HERTZ PERIOD 0.168667E-01 SEC
NORMALIZING FACTOR 0.269812E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	0.010323111	2	20	2	-0.007707037	2	21	3	-0.000728223
4	13	1	-0.030846287	4	14	2	0.023029722	4	15	3	-0.002227869
7	1	1	0.004553750	7	2	2	-0.003490781	7	3	3	-0.002421765
13	7	1	0.016036715	13	8	2	-0.010435566	13	9	3	0.003525284
16	16	1	0.027739584	16	17	2	-0.001462831	16	18	3	-0.000883237
19	22	1	-0.474910140	19	23	2	0.004896116	19	24	3	-0.000742622
21	25	1	-1.000000000	21	26	2	0.010307595	21	27	3	-0.000242645
24	4	1	-0.030853078	24	5	2	0.030502431	24	6	3	0.002550799
26	10	1	0.010325395	26	11	2	-0.010207813	26	12	3	0.000833789

MODE NUMBER 5 NAT. FREQUENCY 0.387101E 03 RAD/SEC ; 0.616090E 02 HERTZ PERIOD 0.162314E-01 SEC
NORMALIZING FACTOR 0.115725E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	-0.007621747	2	20	2	-0.312299192	2	21	3	0.002009793
4	13	1	0.021464765	4	14	2	0.879521132	4	15	3	0.006145950
7	1	1	-0.002745408	7	2	2	-0.114213169	7	3	3	0.008141428
13	7	1	-0.022490669	13	8	2	-0.249827266	13	9	3	0.003501031
16	16	1	-0.007587865	16	17	2	-0.236221015	16	18	3	-0.032020699
19	22	1	0.069968760	19	23	2	-0.772601485	19	24	3	-0.024919577
21	25	1	0.090561569	21	26	2	-1.000000000	21	27	3	-0.008145116
24	4	1	0.021047380	24	5	2	0.813963652	24	6	3	0.004245680
26	10	1	-0.007473521	26	11	2	-0.289024889	26	12	3	0.001388386

MODE NUMBER 6 NAT. FREQUENCY 0.428095E 03 RAD/SEC ; 0.681334E 02 HERTZ PERIOD 0.146771E-01 SEC
NORMALIZING FACTOR 0.103215E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	0.430747509	2	20	2	-0.013416078	2	21	3	-0.012044080
4	13	1	-1.000000000	4	14	2	0.031146143	4	15	3	-0.036787063
7	1	1	0.075270951	7	2	2	-0.002189929	7	3	3	-0.040363826
13	7	1	0.185442448	13	8	2	0.000746930	13	9	3	0.048341364
16	16	1	0.174380064	16	17	2	-0.007602297	16	18	3	0.000692553
19	22	1	0.177193761	19	23	2	-0.012560744	19	24	3	-0.001882225
21	25	1	0.112324536	21	26	2	-0.007962666	21	27	3	-0.000615854
24	4	1	-0.951995671	24	5	2	0.002179145	24	6	3	0.037829850
26	10	1	0.410069346	26	11	2	-0.000938753	26	12	3	0.012385495

MODE NUMBER 7 NAT. FREQUENCY 0.458651E 03 RAD/SEC ; 0.729966E 02 HERTZ PERIOD 0.136993E-01 SEC
NORMALIZING FACTOR 0.945371E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	-0.006868545	2	20	2	-0.486035049	2	21	3	-0.000335130
4	13	1	0.013357721	4	14	2	0.945236087	4	15	3	-0.001022645
7	1	1	-0.000389323	7	2	2	-0.021905262	7	3	3	-0.001468134
13	7	1	-0.000035895	13	8	2	0.065444231	13	9	3	-0.001535454
16	16	1	-0.030300718	16	17	2	0.040912148	16	18	3	0.008050255
19	22	1	-0.032664020	19	23	2	0.032474995	19	24	3	0.006293524
21	25	1	-0.015239585	21	26	2	0.015152130	21	27	3	0.002060953
24	4	1	0.011168417	24	5	2	-1.000000000	24	6	3	-0.001608209
26	10	1	-0.005742803	26	11	2	0.514200151	26	12	3	-0.000527042

MODE NUMBER 8 NAT. FREQUENCY 0.475578E 03 RAD/SEC ; 0.756906E 02 HERTZ PERIOD 0.132117E-01 SEC
NORMALIZING FACTOR 0.886357E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	-0.549652040	2	20	2	0.000295516	2	21	3	-0.000571498
4	13	1	0.953198731	4	14	2	-0.000512491	4	15	3	-0.001743053
7	1	1	0.000673543	7	2	2	-0.000001308	7	3	3	-0.001625533
13	7	1	0.009469029	13	8	2	0.000030195	13	9	3	0.002717441
16	16	1	0.009109665	16	17	2	-0.000242673	16	18	3	0.000108337
19	22	1	0.005663790	19	23	2	-0.000240697	19	24	3	-0.000049472
21	25	1	0.002317730	21	26	2	-0.000098502	21	27	3	-0.000016209
24	4	1	-1.000000000	24	5	2	0.000973938	24	6	3	0.001786476
26	10	1	0.576640725	26	11	2	-0.000561612	26	12	3	0.000585757

MODE NUMBER 9 NAT. FREQUENCY 0.640933E 03 RAD/SEC ; 0.102008E 03 HERTZ PERIOD 0.980318E-02 SEC
NORMALIZING FACTOR 0.735706E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	0.017563146	2	20	2	1.000000000	2	21	3	0.001073567
4	13	1	0.005490709	4	14	2	0.312607050	4	15	3	0.003253132
7	1	1	-0.001016502	7	2	2	-0.059404016	7	3	3	0.004327789
13	7	1	-0.011444740	13	8	2	-0.141039252	13	9	3	0.002150777
16	16	1	-0.010393586	16	17	2	-0.139817238	16	18	3	-0.018224608
19	22	1	0.001269354	19	23	2	-0.040185545	19	24	3	-0.014178667
21	25	1	0.000260487	21	26	2	-0.008244280	21	27	3	-0.004673108
24	4	1	0.005389549	24	5	2	0.301806390	24	6	3	0.002686878
26	10	1	0.017239630	26	11	2	0.965412855	26	12	3	0.000886681

MODE NUMBER 10 NAT. FREQUENCY 0.647712E 03 RAD/SEC ; 0.103087E 03 HERTZ PERIOD 0.970059E-02 SEC .
NORMALIZING FACTOR 0.711836E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
2	19	1	-1.000000000	2	20	2	0.024848279	2	21	3	-0.006437372
4	13	1	-0.393941700	4	14	2	0.009788524	4	15	3	-0.019499213
7	1	1	0.039401483	7	2	2	-0.000937936	7	3	3	-0.021193113
13	7	1	0.100268781	13	8	2	-0.000062187	13	9	3	0.025991157
16	16	1	0.098142266	16	17	2	-0.001610878	16	18	3	0.000161182
19	22	1	0.024463631	19	23	2	-0.000893077	19	24	3	-0.001156616
21	25	1	0.004930973	21	26	2	-0.000180196	21	27	3	-0.000381293
24	4	1	-0.377167940	24	5	2	0.003844594	24	6	3	0.020316634
26	10	1	-0.957424581	26	11	2	0.009760149	26	12	3	0.006707214

MODE NO.	FREQUENCY (RAD/SEC)
11	0.65476392E 03
12	0.65969360E 03
13	0.16953149E 04
14	0.18556636E 04
15	0.21525820E 04
16	0.28079480E 04
17	0.33720823E 04
18	0.51397969E 04
19	0.66539023E 04
20	0.69895273E 04
21	0.77370117E 04
22	0.79547539E 04
23	0.95566445E 04
24	0.97935273E 04
25	0.10361852E 05
26	0.15148527E 05
27	0.35961254E 05

MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	0.917561E-04	0.194948E-03	-0.376797E-06
2	-0.155098E-03	0.112445E-03	0.107970E-05
3	-0.128152E-04	-0.430060E-03	-0.417024E-06
4	-0.341442E-03	0.228531E-04	0.749778E-06
5	0.209883E-04	0.887107E-04	0.598227E-06
6	-0.222063E-03	0.246831E-05	0.401907E-05
7	-0.209972E-05	0.245371E-05	-0.174910E-06
8	-0.283089E-05	0.105580E-07	0.246297E-06
9	0.664104E-05	0.388009E-03	0.239746E-06
10	-0.404653E-03	0.716854E-05	0.158140E-05
11	0.217241E-05	-0.468777E-05	-0.792357E-07
12	0.867732E-05	-0.978847E-07	-0.127770E-06
13	-0.428673E-04	-0.756558E-04	-0.743669E-05
14	0.559814E-04	-0.443544E-04	0.373738E-04
15	0.868468E-05	-0.495763E-05	-0.196775E-03
16	0.692766E-05	-0.118460E-04	-0.198987E-05
17	-0.996970E-06	0.170753E-04	-0.352036E-05
18	0.107717E-04	0.381047E-05	-0.113573E-05
19	-0.117889E-05	-0.195780E-07	-0.217976E-04
20	0.171133E-05	-0.392790E-05	-0.174795E-05
21	0.629238E-06	-0.274265E-05	0.504108E-06
22	0.493903E-06	-0.836091E-05	0.430625E-06
23	-0.254897E-05	-0.104818E-06	0.485990E-05
24	0.381266E-05	0.553154E-06	0.198183E-05
25	-0.367558E-05	-0.627867E-07	-0.173013E-07
26	-0.531256E-05	0.446167E-07	-0.368089E-07
27	-0.645938E-07	0.229435E-06	-0.708656E-08

MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.555624E-03	(0.44%)	0.250812E-02	(1.97%)	0.936968E-08	(0.00%)	0.408861E 02
2	0.163944E-02	(1.72%)	0.861715E-03	(2.64%)	0.794488E-07	(0.00%)	0.415491E 02
3	0.222434E-04	(1.74%)	0.250499E-01	(22.27%)	0.235543E-07	(0.00%)	0.585726E 02
4	0.161783E-01	(14.42%)	0.724751E-04	(22.33%)	0.780124E-07	(0.00%)	0.592884E 02
5	0.660091E-04	(14.47%)	0.117924E-02	(23.25%)	0.536266E-07	(0.00%)	0.616090E 02
6	0.903714E-02	(21.55%)	0.111656E-05	(23.26%)	0.296027E-05	(0.00%)	0.681334E 02
7	0.927446E-06	(21.55%)	0.126652E-05	(23.26%)	0.643567E-08	(0.00%)	0.729966E 02
8	0.181255E-05	(21.55%)	0.252122E-10	(23.26%)	0.137203E-07	(0.00%)	0.756906E 02
9	0.181175E-04	(21.57%)	0.618456E-01	(71.73%)	0.236117E-07	(0.00%)	0.102008E 03
10	0.686955E-01	(75.41%)	0.215588E-04	(71.74%)	0.104917E-05	(0.00%)	0.103087E 03
11	0.202326E-05	(75.41%)	0.942112E-05	(71.75%)	0.269160E-08	(0.00%)	0.104209E 03
12	0.327684E-04	(75.44%)	0.416978E-08	(71.75%)	0.710468E-08	(0.00%)	0.104993E 03
13	0.528145E-02	(79.57%)	0.164507E-01	(84.65%)	0.158949E-03	(0.08%)	0.269818E 03
14	0.107916E-01	(88.03%)	0.677441E-02	(89.95%)	0.480987E-02	(2.39%)	0.295338E 03
15	0.349484E-03	(88.31%)	0.113885E-03	(90.04%)	0.179415E 00	(88.50%)	0.342594E 03
16	0.378400E-03	(88.60%)	0.110642E-02	(90.91%)	0.312196E-04	(88.52%)	0.446899E 03
17	0.113021E-04	(88.61%)	0.331538E-02	(93.51%)	0.140919E-03	(88.59%)	0.536683E 03
18	0.306519E-02	(91.01%)	0.383573E-03	(93.81%)	0.340753E-04	(88.60%)	0.818024E 03
19	0.615314E-04	(91.06%)	0.169703E-07	(93.81%)	0.210364E-01	(98.70%)	0.105900E 04
20	0.143075E-03	(91.17%)	0.753734E-03	(94.40%)	0.149264E-03	(98.77%)	0.111242E 04
21	0.237015E-04	(91.19%)	0.450283E-03	(94.75%)	0.152123E-04	(98.78%)	0.123138E 04
22	0.154361E-04	(91.20%)	0.442344E-02	(98.22%)	0.117341E-04	(98.78%)	0.126604E 04
23	0.593392E-03	(91.67%)	0.100343E-05	(98.22%)	0.215707E-02	(99.82%)	0.152099E 04
24	0.139423E-02	(92.76%)	0.293474E-04	(98.24%)	0.376714E-03	(100.00%)	0.155869E 04
25	0.145053E-02	(93.90%)	0.423263E-06	(98.24%)	0.321391E-07	(100.00%)	0.164914E 04
26	0.647661E-02	(98.98%)	0.456811E-06	(98.24%)	0.310918E-06	(100.00%)	0.241096E 04
27	0.539575E-05	(98.98%)	0.680753E-04	(98.30%)	0.649441E-07	(100.00%)	0.572341E 04
SUM OF 27 MODES	0.126291E 00	(98.98%)	0.125421E 00	(98.30%)	0.208341E 00	(100.00%)	
TOTAL LUMPED MASS	0.127593E 00		0.127593E 00		0.208341E 00		

ACCUM=ACCUMULATED PERCENT

```
* CPU SECONDS ** THIS STEP "FRQM" TIME IS    6.71 ** LAST STEP "ORTH" TIME IS    5.92 ** DELTA TIME IS    0.79 *
* ELAPSED SECONDS                          501.4                                484.4                        17.0 *
```

```
START NC3600 NO PRODUCTION NO TAPE  31
WPPSS SCRUBBER DRAIN
GEOMETRY
WPPSS SCRUBBER DRAIN
COORDINATE INCHES
1 0 0 0
3 0 0 -4.5
5 -20 0 -4.5
7 -39 0 -4.5
10 -39 19.5 -4.5
13 -39 22.5 -7.5
15 -39 27.5 -7.5
16 -39 56 -7.5
17 -39 84 -7.5
18 -39 93 -7.5
20 -39 113 -7.5
23 -28.5 113 -7.5
26 -28.5 121 -7.5
28 -28.5 121 -23.5
30 -39 10 -4.5
31 -39 21 -6
32 -33 113 -7.5
33 -28.5 117 -7.5
BOUNDARY
1 ANCHOR
17 ANCHOR
28 ANCHOR
5 YZSTOP
15 ZXSTOP
MATERIAL 304SS
70 28300000 .3 .0000091 18800
150 27900000 .3 .00000925 18800
175 27775000 .3 .00000930 18800
SIF
100 2.1 2.1
BRANCH 1 304SS 25 1
RUN 1 0 1.9 .145 .23 3
ELBOW 3 1.5 2.4 .25 .47 0 100
RUN 0 5 1.9 .145 .23 1
RUN 5 0 1.9 .145 .23 2
ELBOW 7 1.5 2.4 .25 .47 0 100
RUN 0 30 1.9 .145 .23 1
RUN 30 0 1.9 .145 .23 2
ELBOW 10 1.5 2.4 .25 .47 0 100
RUN 0 31 .9 .145 .23 1
RUN 31 0 1.9 .145 .23 2
ELBOW 13 1.5 2.4 .25 .47 0 100
RUN 0 15 1.9 .145 .23 1
RUN 15 16 1.9 .145 .23 0
RUN 16 17 1.9 .145 .23 0
RUN 17 18 1.9 .145 .23 2
RUN 18 0 1.9 .145 .23 3
ELBOW 20 1.5 2.4 .25 .47 0 100
RUN 0 32 .9 .145 .23 1
RUN 32 0 1.9 .145 .23 2
ELBOW 23 1.5 2.4 .25 .47 0 100
RUN 0 33 .9 .145 .23 1
RUN 33 0 1.9 .145 .23 2
ELBOW 26 1.5 2.4 .25 .47 0 100
```

```
RUN 0 28 1.9 .145 .23 3
LOAD 1
DESIGN
DEADWEIGHT -Z 1.0
LOAD 2
VERTICAL +Z
DEADWEIGHT +Z 1.0
LOAD 3
HORIZONTAL +X
DEADWEIGHT +X 1.0
LOAD 4
HORIZONTAL -X
DEADWEIGHT -X 1.0
LOAD 5
HORIZONTAL +Y
DEADWEIGHT +Y 1.0
LOAD 6
HORIZONTAL -Y
DEADWEIGHT -Y 1.0
LOAD 7
THERMAL
THERMAL 1 175 0 0 0 70
MOVEMENT 1 0 0 -.009
SUPERPOSITION
SCRUBBER DRAIN
16 2 1 -4
OBE + SRV XZ
3
1 1.0 2 .96 3 .64
OBE + SRV X-Z
2
1 1.96 3 .64
OBE + SRV YZ
3
1 1.0 2 .96 5 .64
OBE + SRV Y-Z
2
1 1.96 5 .64
OBE + SRV -XZ
3
1 1.0 2 .96 4 .64
OBE + SRV -X-Z
2
1 1.96 4 .64
OBE + SRV -YZ
3
1 1.0 2 .96 6 .64
OBE + SRV -Y-Z
2
1 1.96 6 .64
SSE + SRV + LOCA XZ
3
1 1.0 2 1.5 3 1.0
SSE + SRV + LOCA X-Z
2
1 2.5 3 1.0
SSE + SRV + LOCA YZ
3
1 1.0 2 1.5 5 1.0
SSE + SRV + LOCA Y-Z
```

```
2
1 2.5 5 1.0
SSE + SRV + LOCA -XZ
3
1 1.0 2 1.5 4 1.0
SSE + SRV + LOCA -X-Z
2
1 2.5 4 1.0
SSE + SRV + LOCA -YZ
3
1 1.0 2 1.5 6 1.0
SSE + SRV + LOCA -Y-Z
2
1 2.5 6 1.0
END OF JOB
```

```
     1    31     0     0                                                  PD1
WPPSS SCRUBBER DRAIN
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     5     1     0     0     1                                            P 1
WPPSS SCRUBBER DRAIN                                                      P 2
    31    32     7     0     5     3     7     1     0     1     1     0  P 3
     6     1     1     0     1     0     0                                P 4
     1    32     7     0     0     1     1                                P 5
     1     0.0         0.0         0.0         0                         P 7
     3    -0.43934     0.0        -4.06066     0                         P 7
     5   -20.00000     0.0        -4.50000     0                         P 7
     7   -38.56065     0.43934    -4.50000     0                         P 7
    10   -39.00000    19.45268    -4.61418     0                         P 7
    13   -39.00000    22.54727    -7.38582     0                         P 7
    15   -39.00000    27.50000    -7.50000     0                         P 7
    16   -39.00000    56.00000    -7.50000     0                         P 7
    17   -39.00000    84.00000    -7.50000     0                         P 7
    18   -39.00000    93.00000    -7.50000     0                         P 7
    20   -38.56065   112.56065    -7.50000     0                         P 7
    23   -28.93933   113.43933    -7.50000     0                         P 7
    26   -28.50000   120.56065    -7.93934     0                         P 7
    28   -28.50000   121.00000   -23.50000     0                         P 7
    30   -39.00000    10.00000    -4.50000     0                         P 7
    31   -39.00000    21.00000    -6.00000     0                         P 7
    32   -33.00000   113.00000    -7.50000     0                         P 7
    33   -28.50000   117.00000    -7.50000     0                         P 7
    34     0.0         0.0        -3.00000     0                         P 7
    35    -1.50000     0.0        -4.50000     0                         P 7
    36   -37.50000     0.0        -4.50000     0                         P 7
    37   -39.00000     1.50000    -4.50000     0                         P 7
    38   -39.00000    18.87868    -4.50000     0                         P 7
    39   -39.00000    19.93933    -4.93934     0                         P 7
    40   -39.00000    22.06065    -7.06066     0                         P 7
    41   -39.00000    23.12131    -7.50000     0                         P 7
    42   -39.00000   111.50000    -7.50000     0                         P 7
    43   -37.50000   113.00000    -7.50000     0                         P 7
    44   -30.00000   113.00000    -7.50000     0                         P 7
    45   -28.50000   114.50000    -7.50000     0                         P 7
    46   -28.50000   119.50000    -7.50000     0                         P 7
    47   -28.50000   121.00000    -9.00000     0                         P 7
    60    -1.50000     0.0        -3.00000     0                         P 7
    61   -37.50000     1.50000    -4.50000     0                         P 7
    62   -39.00000    18.87866    -6.00000     0                         P 7
    63   -39.00000    23.12131    -6.00000     0                         P 7
    64   -37.50000   111.50000    -7.50000     0                         P 7
    65   -30.00000   114.50000    -7.50000     0                         P 7
    66   -28.50000   119.50000    -9.00000     0                         P 7
  1  3     1.9000      0.1450     2.0000     0.0         0.0         0.0  P11D
  2  4     2.4000      0.2500     2.0000     0.0         0.0         0.0  P11D
  3  3     0.9000      0.1450     2.0000     0.0         0.0         0.0  P11D
   100    2.099999    2.099999   -1.000000                                P 12.1
   0.230    0.470     0.230
  1  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05 18800.0  0.0  0.0  P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
   25.00000     0.0         0.0         0.0         0.0         0.0      P15
    0.0                                                                   P16A
    1                                                                     P16B
    1   175.00000     0.0         0.0         0.0        70.00000        P16C
```

```
     1      0.0          0.0         -1.00000                                P17
     2      0.0          0.0          1.00000                                P17
     3      1.00000      0.0          0.0                                    P17
     4     -1.00000      0.0          0.0                                    P17
     5      0.0          1.00000      0.0                                    P17
     6      0.0         -1.00000      0.0                                    P17
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
 17  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
 28  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
  5  0 0.0       0.100E 01 0.100E 01 0.0       0.0       0.0                 P18
 15  0 0.100E 01 0.0       0.100E 01 0.0       0.0       0.0                 P18
     1                                                                       P20
     1 0.0       0.0       -0.900E-02 0.0       0.0       0.0                P20A
  1   1  341001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    3    1    0    0    1                                               P21B
  2  34    3  60   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
  3   3   35  60   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
  4  35   51002   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    1    1    0    0    1                                               P21B
  5   5  361002   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    2    1    0    0    1                                               P21B
  6  36    7  61   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
  7   7   37  61   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
  8  37  301001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    1    1    0    0    1                                               P21B
  9  30  381001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    2    1    0    0    1                                               P21B
 10  38   10  62   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 11  10   39  62   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 12  39  311001   1   1   1   3   3   1   1   0   0   0   0  0.0            P21
   1    1    1    0    0    1                                               P21B
 13  31  401001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    2    1    0    0    1                                               P21B
 14  40   13  63   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 15  13   41  63   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 16  41  151001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    1    1    0    0    1                                               P21B
 17  15  161001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    0    1    0    0    1                                               P21B
 18  16  171001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    0    1    0    0    1                                               P21B
 19  17  181001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    2    1    0    0    1                                               P21B
 20  18  421001   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
   1    3    1    0    0    1                                               P21B
 21  42   20  64   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 22  20   43  64   1   2   1   2   2   1   1   0   0   0   0  0.0            P21
   1  100    1    0    0    1                                               P21B
 23  43  321002   1   1   1   3   3   1   1   0   0   0   0  0.0            P21
   1    1    1    0    0    1                                               P21B
 24  32  441002   1   1   1   1   1   1   1   0   0   0   0  0.0            P21
```

```
  1    2    1    0    0    1                                                P21B
 25  44  23  65  1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  100    1    0    0    1                                                P21B
 26  23  45  65  1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  100    1    0    0    1                                                P21B
 27  45  331001  1   1   1   3   3   1   1   0   0   0   0  0.0            P21
  1    1    1    0    0    1                                                P21B
 28  33  461001  1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    2    1    0    0    1                                                P21B
 29  46  26  66  1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  100    1    0    0    1                                                P21B
 30  26  47  66  1   2   1   2   2   1   1   0   0   0   0  0.0            P21
  1  100    1    0    0    1                                                P21B
 31  47  281001  1   1   1   1   1   1   1   0   0   0   0  0.0            P21
  1    3    1    0    0    1                                                P21B
  0                                                                         P22
 1  2  3  4  5  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  P32
 7                                                                          P33
 1 1.000  2 1.000  3 1.000  4 1.000  5 1.000  6 1.000  7 0.0    8 0.0      P34
   7
 1  1                                                                       P37
   7  1     0  0     0  0     0  0     0  0     0  0     0  0     0  0  P38
999999                                                                      P41
DESIGN                                                                      P41
VERTICAL +Z                                                                 P41
HORIZONTAL +X                                                               P41
HORIZONTAL -X                                                               P41
HORIZONTAL +Y                                                               P41
HORIZONTAL -Y                                                               P41
THERMAL                                                                     P41
   11     1     0     0     1                                             P 1
SCRUBBER DRAIN                                                              P 2
   31    32    16     0     2     1    -4                                  P60
   3                                                                        P61
OBE + SRV XZ                                                                P62
 1   1.0000  2   0.9600  3   0.6400
   2                                                                        P61
OBE + SRV X-Z                                                               P62
 1   1.9600  3   0.6400
   3                                                                        P61
OBE + SRV YZ                                                                P62
 1   1.0000  2   0.9600  5   0.6400
   2                                                                        P61
OBE + SRV Y-Z                                                               P62
 1   1.9600  5   0.6400
   3                                                                        P61
OBE + SRV -XZ                                                               P62
 1   1.0000  2   0.9600  4   0.6400
   2                                                                        P61
OBE + SRV -X-Z                                                              P62
 1   1.9600  4   0.6400
   3                                                                        P61
OBE + SRV -YZ                                                               P62
 1   1.0000  2   0.9600  6   0.6400
   2                                                                        P61
OBE + SRV -Y-Z                                                              P62
 1   1.9600  6   0.6400
   3                                                                        P61
SSE + SRV + LOCA XZ                                                         P62
 1   1.0000  2   1.5000  3   1.0000
```

```
     2                                                                P61
SSE + SRV + LOCA X-Z                                                  P62
  1   2.5000  3   1.0000
     3                                                                P61
SSE + SRV + LOCA YZ                                                   P62
  1   1.0000  2   1.5000  5   1.0000
     2                                                                P61
SSE + SRV + LOCA Y-Z                                                  P62
  1   2.5000  5   1.0000
     3                                                                P61
SSE + SRV + LOCA -XZ                                                  P62
  1   1.0000  2   1.5000  4   1.0000
     2                                                                P61
SSE + SRV + LOCA -X-Z                                                 P62
  1   2.5000  4   1.0000
     3                                                                P61
SSE + SRV + LOCA -YZ                                                  P62
  1   1.0000  2   1.5000  6   1.0000
     2                                                                P61
SSE + SRV + LOCA -Y-Z                                                 P62
  1   2.5000  6   1.0000
     0                                                                P68
     0                                                                PD1
     0                                                                 PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.19 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                             1.0                                 0.0                       1.0 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : STRESS OUTPUT FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	31
TOTAL NUMBER OF STRUCTURAL JOINTS	32
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	7
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	0
TOTAL NUMBER OF MECHANICAL LOADS	6
TOTAL NUMBER OF THERMAL LOADS	1
TOTAL NUMBER OF NON-DYNAMIC LOADS	7
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	5
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	1
TOTAL NUMBER OF CROSS-SECTION TYPES	3
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	6
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	32
TOTAL FICTIOUS JOINTS READ IN	7
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
3	-0.439340	0.0	-4.060659
5	-20.000000	0.0	-4.500000
7	-38.560638	0.439340	-4.500000
10	-39.000000	19.452667	-4.614180
13	-39.000000	22.547256	-7.385819
15	-39.000000	27.500000	-7.500000
16	-39.000000	56.000000	-7.500000
17	-39.000000	84.000000	-7.500000
18	-39.000000	93.000000	-7.500000
20	-38.560638	112.560638	-7.500000
23	-28.939316	113.439316	-7.500000
26	-28.500000	120.560638	-7.939340
28	-28.500000	121.000000	-23.500000
30	-39.000000	10.000000	-4.500000
31	-39.000000	21.000000	-6.000000
32	-33.000000	113.000000	-7.500000
33	-28.500000	117.000000	-7.500000
34	0.0	0.0	-3.000000
35	-1.500000	0.0	-4.500000
36	-37.500000	0.0	-4.500000
37	-39.000000	1.500000	-4.500000
38	-39.000000	18.878677	-4.500000
39	-39.000000	19.939316	-4.939340
40	-39.000000	22.060638	-7.060659
41	-39.000000	23.121307	-7.500000
42	-39.000000	111.500000	-7.500000
43	-37.500000	113.000000	-7.500000
44	-30.000000	113.000000	-7.500000
45	-28.500000	114.500000	-7.500000
46	-28.500000	119.500000	-7.500000
47	-28.500000	121.000000	-9.000000
60	-1.500000	0.0	-3.000000
61	-37.500000	1.500000	-4.500000
62	-39.000000	18.878647	-6.000000
63	-39.000000	23.121307	-6.000000
64	-37.500000	111.500000	-7.500000
65	-30.000000	114.500000	-7.500000
66	-28.500000	119.500000	-9.000000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	C	2.400	0.250	.1689E 01	.9889E 00	.9889E 00	.1978E 01	2.0	2.0	1.20	0.0	0.0	1.20	-1.20	0.0	0.0	-1.20
3	S	0.900	0.145	.3439E 00	.2541E-01	.5082E-01	.2541E-01	2.0	2.0	0.45	0.0	0.0	0.45	-0.45	0.0	0.0	-0.45

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	150.00	27900000.00	0.300000	0.000009250	18800.00
1-B	175.00	27774992.00	0.300000	0.000009300	18800.00

PRESSURE DATA

TYPE	PRESSURE
1	25.00

THERMAL DATA

THERMAL LOAD	*LEG *NO.	TB DEG.F	TA DEG.F	DT1 DEG.F	DT2 DEG.F	T0 DEG.F
1	1	175.000	0.0	0.0	0.0	70.000

GRAVITATIONAL VECTOR

TYPE	SYSTEM 1 COMP.	SYSTEM 2 COMP.	SYSTEM 3 COMP.
1	0.0	0.0	-1.000000
2	0.0	0.0	1.000000
3	1.000000	0.0	0.0
4	-1.000000	0.0	0.0
5	0.0	1.000000	0.0
6	0.0	-1.000000	0.0

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	17	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	28	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	5	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	15	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0

JOINT DISPLACEMENT DATA

TYPE	X1	X2	X3	THETA 1	THETA 2	THETA 3
1	0.0	0.0	-.900000E-02	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.30 ** LAST STEP "BEGP" TIME IS    0.19 ** DELTA TIME IS    0.11 *
* ELAPSED SECONDS                             3.0                                 1.0                        2.0 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   32


 BAND-WIDTH =    12  BY D.O.F.          BAND-WIDTH =     2  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.47 ** LAST STEP "DA3D" TIME IS    0.30 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                             7.5                                 3.0                        4.5 *
```

THE FOLLOWING LOADS HAVE GRAVITATIONAL LOAD SPECIFIED

LOAD NO.	GRAV. CODE	LOAD FACTOR
1	1	1.0000
2	2	1.0000
3	3	1.0000
4	4	1.0000
5	5	1.0000
6	6	1.0000

THE FOLLOWING JOINTS HAVE NON-ZERO DISPLACEMENT SPECIFIED

JOINT	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE	LOAD	DISP.CODE
1	7	1								

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.48 ** LAST STEP "JCSO" TIME IS    0.47 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                             7.7                                 7.5                        0.1 *

    CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

    MAXIMUM VALUE ( 0.12999E 09) OCCURS AT THE  62TH DOF
    MINIMUM VALUE ( 0.88971E 04) OCCURS AT THE 105TH DOF
    RATIO OF MAX/MIN= 0.14611E 05

* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    2.30 ** LAST STEP "INPT" TIME IS    0.48 ** DELTA TIME IS    1.82 *
* ELAPSED SECONDS                            17.7                                 7.7                       10.0 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    3.33 ** LAST STEP "EQ3D" TIME IS    2.30 ** DELTA TIME IS    1.03 *
* ELAPSED SECONDS                            32.2                                17.7                       14.5 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
1	1	34	1001	1	1	1	1	3	1	1	1	3.00000	0.23000			1.000000	0.0	0.0
																0.0	0.0	1.000000
																0.0	-1.000000	0.0
2	34	3	60	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD=	1.5000	-1.000000	0.0	0.0
														FLX=	5.0847	0.0	-1.000000	0.0
														ECC=	0.0	0.0	0.0	1.000000
3	3	35	60	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD=	1.5000	-0.707107	0.0	0.707107
														FLX=	5.0848	0.0	-1.000000	0.0
														ECC=	0.0	0.707107	0.0	0.707107
4	35	5	1002	1	1	1	1	1	1	1	1	18.50000	0.23000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
5	5	36	1002	1	1	1	1	2	1	1	1	17.50000	0.23000			0.0	1.000000	0.0
																1.000000	0.0	0.0
																0.0	0.0	-1.000000
6	36	7	61	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	5.0847	0.0	0.0	1.000000
														ECC=	0.0	1.000000	0.0	0.0
7	7	37	61	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD=	1.5000	0.707100	0.707114	0.0
														FLX=	5.0848	0.0	0.0	1.000000
														ECC=	0.0	0.707114	-0.707100	0.0
8	37	30	1001	1	1	1	1	1	1	1	1	8.50000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
9	30	38	1001	1	1	1	1	2	1	1	1	8.87868	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
10	38	10	62	1	2	1	1	100	1	1	2	0.39268	0.47000	RAD=	1.5000	0.0	-0.000020	-1.000000
														FLX=	5.0847	1.000000	0.0	0.0
														ECC=	0.0	0.0	-1.000000	0.000020
11	10	39	62	1	2	1	1	100	1	1	2	0.39269	0.47000	RAD=	1.5000	0.0	-0.382680	-0.923881
														FLX=	5.0848	1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.923881	0.382680
12	39	31	1001	1	1	1	1	1	1	1	3	1.50002	0.23000			1.000000	0.0	0.0
																0.0	-0.707115	0.707099
																0.0	-0.707099	-0.707115
13	31	40	1001	1	1	1	1	2	1	1	1	1.49998	0.23000			1.000000	0.0	0.0
																0.0	-0.707100	0.707114
																0.0	-0.707114	-0.707100

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
14	40	13	63	1	2	1	1	100	1	1	2	0.39268	0.47000	RAD=	1.5000	0.0	0.707110	0.707104
														FLX=	5.0847	-1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707104	0.707110
15	13	41	63	1	2	1	1	100	1	1	2	0.39273	0.47000	RAD=	1.5000	0.0	0.382698	0.923873
														FLX=	5.0847	-1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.923873	0.382698
16	41	15	1001	1	1	1	1	1	1	1	1	4.37869	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
17	15	16	1001	1	1	1	1	0	1	1	1	28.50000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
18	16	17	1001	1	1	1	1	0	1	1	1	28.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
19	17	18	1001	1	1	1	1	2	1	1	1	9.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
20	18	42	1001	1	1	1	1	3	1	1	1	18.50000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
21	42	20	64	1	2	1	1	100	1	1	2	0.78542	0.47000	RAD=	1.5000	1.000000	0.0	0.0
														FLX=	5.0847	0.0	0.0	1.000000
														ECC=	0.0	0.0	-1.000000	0.0
22	20	43	64	1	2	1	1	100	1	1	2	0.78538	0.47000	RAD=	1.5000	0.707107	-0.707107	0.0
														FLX=	5.0849	0.0	0.0	1.000000
														ECC=	0.0	-0.707107	-0.707107	0.0
23	43	32	1002	1	1	1	1	1	1	1	3	4.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
24	32	44	1002	1	1	1	1	2	1	1	1	3.00000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
25	44	23	65	1	2	1	1	100	1	1	2	0.78538	0.47000	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	5.0847	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	0.0	0.0
26	23	45	65	1	2	1	1	100	1	1	2	0.78542	0.47000	RAD=	1.5000	-0.707107	0.707107	0.0
														FLX=	5.0846	0.0	0.0	-1.000000
														ECC=	0.0	-0.707107	-0.707107	0.0

ELM NO.	*** JOINTS END 1	END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
27	45	33	1001	1	1	1	1	1	1	1	3	2.50000	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
28	33	46	1001	1	1	1	1	2	1	1	1	2.50000	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
29	46	26	66	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0847 0.0	0.0 0.0 -1.000000 1.000000 0.0 0.0 0.0 -1.000000 0.0
30	26	47	66	1	2	1	1	100	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0848 0.0	0.0 -0.707099-0.707114 1.000000 0.0 0.0 0.0 -0.707114 0.707099
31	47	28	1001	1	1	1	1	3	1	1	1	14.50000	0.23000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0

MAXIMUM ELEMENT LENGTH OCCURS IN ELEMENT 17 AND EQUALS 0.28500E 02 INCHES
MINIMUM ELEMENT LENGTH OCCURS IN ELEMENT 10 AND EQUALS 0.58902E 00 INCHES
MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 10 AND EQUALS 0.73221E 08
MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT 17 AND EQUALS 0.43328E 04

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* CPU SECONDS ** THIS STEP "EDIT" TIME IS    3.58 ** LAST STEP "SELT" TIME IS    3.33 ** DELTA TIME IS    0.25 *
* ELAPSED SECONDS                            35.9                                32.2                          3.7 *
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RESULTANT JOINT FORCES

LOAD NUMBER 1

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	-0.10644102E 00	0.0	-0.55370086E 00	0.0	-0.16205251E-01	0.0
5	0.0	0.0	0.0	0.0	0.69004196E 00	0.0
7	0.0	0.0	-0.55370224E 00	-0.39422559E-03	0.39663818E-03	0.0
10	0.0	0.11677269E-01	-0.26516348E 00	0.14866840E-02	0.0	0.0
13	0.0	0.11687443E-01	-0.26518023E 00	-0.14914456E-02	0.0	0.0
15	0.0	0.0	0.0	-0.15200618E 02	0.0	0.0
16	0.0	0.0	-0.64974957E 01	0.54164541E 00	0.0	0.0
18	0.0	0.0	-0.31624994E 01	-0.50073080E 01	0.0	0.0
20	0.0	0.0	-0.55369931E 00	0.40078629E-03	0.38897549E-03	0.0
23	0.0	0.0	-0.55371135E 00	-0.40286616E-03	-0.39010029E-03	0.0
26	0.0	0.10644162E 00	-0.55370444E 00	0.16204212E-01	0.0	0.0
30	0.0	0.0	-0.19985466E 01	-0.12612861E 00	0.0	0.0
31	0.0	-0.15046686E-06	-0.34500009E 00	0.20828829E-05	0.0	0.0
32	0.0	0.0	-0.86250067E 00	0.0	-0.21562648E 00	0.0
33	0.0	0.0	-0.57500029E 00	0.79512580E-06	0.0	0.0
34	0.54884888E-02	0.0	-0.67507762E 00	0.0	-0.11457857E-01	0.0
35	0.10095227E 00	0.0	-0.23511295E 01	0.0	-0.65185261E 01	0.0
36	0.0	0.0	-0.22893562E 01	-0.27975230E-03	0.58142529E 01	0.0
37	0.0	0.0	-0.12543478E 01	-0.13291845E 01	0.28029387E-03	0.0
38	0.0	-0.34322295E-01	-0.11512089E 01	0.14983282E 01	0.0	0.0
39	0.0	0.22645134E-01	-0.33086467E 00	-0.20207405E-01	0.0	0.0
40	0.0	0.22645269E-01	-0.33085740E 00	0.20205516E-01	0.0	0.0
41	0.0	-0.34332726E-01	-0.63372678E 00	-0.35487449E 00	0.0	0.0
42	0.0	0.0	-0.24043598E 01	0.65042219E 01	0.27980190E-03	0.0
43	0.0	0.0	-0.79433858E 00	0.28115232E-03	0.33252406E 00	0.0
44	0.0	0.0	-0.62184489E 00	-0.27966523E-03	-0.11690128E 00	0.0
45	0.0	0.0	-0.56436610E 00	-0.64182162E-01	-0.27883449E-03	0.0
46	0.0	-0.10095191E 00	-0.51113135E 00	0.78504205E-01	0.0	0.0
47	0.0	-0.54898784E-02	-0.19975681E 01	0.11459116E-01	0.0	0.0

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	0.10644102E 00	0.0	0.55370086E 00	0.0	0.16205251E-01	0.0
5	0.0	0.0	0.0	0.0	-0.69004196E 00	0.0
7	0.0	0.0	0.55370224E 00	0.39422559E-03	-0.39663818E-03	0.0
10	0.0	-0.11677269E-01	0.26516348E 00	-0.14866840E-02	0.0	0.0
13	0.0	-0.11687443E-01	0.26518023E 00	0.14914456E-02	0.0	0.0
15	0.0	0.0	0.0	0.15200618E 02	0.0	0.0
16	0.0	0.0	0.64974957E 01	-0.54164541E 00	0.0	0.0
18	0.0	0.0	0.31624994E 01	0.50073080E 01	0.0	0.0
20	0.0	0.0	0.55369931E 00	-0.40078629E-03	-0.38897549E-03	0.0
23	0.0	0.0	0.55371135E 00	0.40286616E-03	0.39010029E-03	0.0
26	0.0	-0.10644162E 00	0.55370444E 00	-0.16204212E-01	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 2

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
30	0.0	0.0	0.19985466E 01	0.12612861E 00	0.0	0.0
31	0.0	0.15046686E-06	0.34500009E 00	-0.20828829E-05	0.0	0.0
32	0.0	0.0	0.86250067E 00	0.0	0.21562648E 00	0.0
33	0.0	0.0	0.57500029E 00	-0.79512580E-06	0.0	0.0
34	-0.54884888E-02	0.0	0.67507762E 00	0.0	0.11457857E-01	0.0
35	-0.10095227E 00	0.0	0.23511295E 01	0.0	0.65185261E 01	0.0
36	0.0	0.0	0.22893562E 01	0.27975230E-03	-0.58142529E 01	0.0
37	0.0	0.0	0.12543478E 01	0.13291845E 01	-0.28029387E-03	0.0
38	0.0	0.34322295E-01	0.11512089E 01	-0.14983282E 01	0.0	0.0
39	0.0	-0.22645134E-01	0.33086467E 00	0.20207405E-01	0.0	0.0
40	0.0	-0.22645269E-01	0.33085740E 00	-0.20205516E-01	0.0	0.0
41	0.0	0.34332726E-01	0.63372678E 00	0.35487449E 00	0.0	0.0
42	0.0	0.0	0.24043598E 01	-0.65042219E 01	-0.27980190E-03	0.0
43	0.0	0.0	0.79433858E 00	-0.28115232E-03	-0.33252406E 00	0.0
44	0.0	0.0	0.62184489E 00	0.27966523E-03	0.11690128E 00	0.0
45	0.0	0.0	0.56436610E 00	0.64182162E-01	0.27883449E-03	0.0
46	0.0	0.10095191E 00	0.51113135E 00	-0.78504205E-01	0.0	0.0
47	0.0	0.54898784E-02	0.19975681E 01	-0.11459116E-01	0.0	0.0

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	0.55370593E 00	0.0	0.10644299E 00	0.0	0.16203269E-01	0.0
5	0.41399994E 01	0.0	0.0	0.0	0.0	0.0
7	0.55369878E 00	-0.10643864E 00	0.0	0.0	0.0	-0.16204406E-01
10	0.27684343E 00	0.0	0.0	0.0	-0.16338716E-04	0.55764913E-05
13	0.27685887E 00	0.0	0.0	0.0	0.14719300E-04	-0.96849644E-05
15	0.0	0.0	0.0	0.0	0.0	-0.15200613E 02
16	0.64974957E 01	0.0	0.0	0.0	0.0	0.54165590E 00
18	0.31624994E 01	0.0	0.0	0.0	0.0	-0.50073042E 01
20	0.55370641E 00	0.10644448E 00	0.0	0.0	0.0	0.16206637E-01
23	0.55371338E 00	0.10644937E 00	0.0	0.0	0.0	-0.16210597E-01
26	0.55370295E 00	0.0	0.0	0.0	-0.39484957E-03	0.39631128E-03
30	0.19985466E 01	0.0	0.0	0.0	0.0	-0.12612557E 00
31	0.34500027E 00	0.0	0.0	0.0	0.79918505E-06	0.20895586E-05
32	0.86250049E 00	0.0	0.0	0.0	0.0	0.0
33	0.57500029E 00	0.0	0.0	0.0	0.0	0.79512580E-06
34	0.56863129E 00	0.0	-0.10095286E 00	0.0	0.13121277E 00	0.0
35	0.24575710E 01	0.0	-0.54903962E-02	0.0	0.11458624E-01	0.0
36	0.23425770E 01	0.54884888E-02	0.0	0.0	0.0	-0.11457857E-01
37	0.12011271E 01	0.10094994E 00	0.0	0.0	0.0	-0.13435040E 01
38	0.11594677E 01	0.0	0.0	0.0	-0.88662819E-05	0.14972677E 01
39	0.31092620E 00	0.0	0.0	0.0	-0.20835411E-01	-0.20823821E-01
40	0.31091857E 00	0.0	0.0	0.0	0.20835545E-01	0.20822890E-01
41	0.64198750E 00	0.0	0.0	0.0	0.83248024E-05	-0.35381156E 00
42	0.23511353E 01	-0.10095602E 00	0.0	0.0	0.0	0.65185375E 01

RESULTANT JOINT FORCES

LOAD NUMBER 3

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
43	0.84755659E 00	-0.54886602E-02	0.0	0.0	0.0	0.11458132E-01
44	0.67506629E 00	-0.54890886E-02	0.0	0.0	0.0	-0.11457101E-01
45	0.51114267E 00	-0.10096002E 00	0.0	0.0	0.0	-0.78499556E-01
46	0.56435275E 00	0.0	0.0	0.0	-0.27972437E-03	0.64189792E-01
47	0.19443455E 01	0.0	0.0	0.0	-0.39741774E 01	0.28071017E-03

LOAD NUMBER 4

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	-0.55370593E 00	0.0	-0.10644299E 00	0.0	-0.16203269E-01	0.0
5	-0.41399994E 01	0.0	0.0	0.0	0.0	0.0
7	-0.55369878E 00	0.10643864E 00	0.0	0.0	0.0	0.16204406E-01
10	-0.27684343E 00	0.0	0.0	0.0	0.16338716E-04	-0.55764913E-05
13	-0.27685887E 00	0.0	0.0	0.0	-0.14719300E-04	0.96849644E-05
15	0.0	0.0	0.0	0.0	0.0	0.15200613E 02
16	-0.64974957E 01	0.0	0.0	0.0	0.0	-0.54165590E 00
18	-0.31624994E 01	0.0	0.0	0.0	0.0	0.50073042E 01
20	-0.55370641E 00	-0.10644448E 00	0.0	0.0	0.0	-0.16206637E-01
23	-0.55371338E 00	-0.10644937E 00	0.0	0.0	0.0	0.16210597E-01
26	-0.55370295E 00	0.0	0.0	0.0	0.39484957E-03	-0.39631128E-03
30	-0.19985466E 01	0.0	0.0	0.0	0.0	0.12612557E 00
31	-0.34500027E 00	0.0	0.0	0.0	-0.79918505E-06	-0.20895586E-05
32	-0.86250049E 00	0.0	0.0	0.0	0.0	0.0
33	-0.57500029E 00	0.0	0.0	0.0	0.0	-0.79512580E-06
34	-0.56863129E 00	0.0	0.10095286E 00	0.0	-0.13121277E 00	0.0
35	-0.24575710E 01	0.0	0.54903962E-02	0.0	-0.11458624E-01	0.0
36	-0.23425770E 01	-0.54884888E-02	0.0	0.0	0.0	0.11457857E-01
37	-0.12011271E 01	-0.10094994E 00	0.0	0.0	0.0	0.13435040E 01
38	-0.11594677E 01	0.0	0.0	0.0	0.88662819E-05	-0.14972677E 01
39	-0.31092620E 00	0.0	0.0	0.0	0.20835411E-01	0.20823821E-01
40	-0.31091857E 00	0.0	0.0	0.0	-0.20835545E-01	-0.20822890E-01
41	-0.64198750E 00	0.0	0.0	0.0	-0.83248024E-05	0.35381156E 00
42	-0.23511353E 01	0.10095602E 00	0.0	0.0	0.0	-0.65185375E 01
43	-0.84755659E 00	0.54886602E-02	0.0	0.0	0.0	-0.11458132E-01
44	-0.67506629E 00	0.54890886E-02	0.0	0.0	0.0	0.11457101E-01
45	-0.51114267E 00	0.10096002E 00	0.0	0.0	0.0	0.78499556E-01
46	-0.56435275E 00	0.0	0.0	0.0	0.27972437E-03	-0.64189792E-01
47	-0.19443455E 01	0.0	0.0	0.0	0.39741774E 01	-0.28071017E-03

RESULTANT JOINT FORCES

LOAD NUMBER 5

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	0.0	0.55370510E 00	0.0	-0.39623375E-03	0.0	-0.39532245E-03
5	0.0	0.0	0.0	0.0	0.0	0.69004196E 00
7	-0.10644162E 00	0.55370289E 00	0.0	0.0	0.0	0.16203292E-01
10	0.0	0.28852433E 00	-0.11680327E-01	0.35923754E-02	0.0	0.0
13	0.0	0.28853667E 00	-0.11680610E-01	-0.35909726E-02	0.0	0.0
15	0.0	0.37810478E 01	0.0	0.0	0.0	0.0
16	0.0	0.64974985E 01	0.0	0.0	0.0	0.0
18	0.0	0.31624985E 01	0.0	0.0	0.0	0.0
20	0.10643309E 00	0.55369020E 00	0.0	0.0	0.0	0.16200732E-01
23	0.10644120E 00	0.55370617E 00	0.0	0.0	0.0	-0.16200580E-01
26	0.0	0.55370384E 00	-0.10644269E 00	0.16204007E-01	0.0	0.0
30	0.0	0.19985466E 01	0.0	0.0	0.0	0.0
31	0.0	0.34500009E 00	0.11000526E-06	-0.78647281E-06	0.0	0.0
32	0.0	0.86250067E 00	0.0	0.0	0.0	-0.21562809E 00
33	0.0	0.57499987E 00	0.0	0.0	0.0	0.0
34	0.0	0.62185293E 00	0.0	-0.11689794E 00	0.0	-0.27975230E-03
35	0.0	0.24043512E 01	0.0	-0.28023147E-03	0.0	-0.65042105E 01
36	0.10095286E 00	0.22361345E 01	0.0	0.0	0.0	0.58285675E 01
37	0.54890290E-02	0.13075695E 01	0.0	0.0	0.0	0.11458971E-01
38	0.0	0.11677256E 01	0.55515096E-02	0.19439361E-02	0.0	0.0
39	0.0	0.29098505E 00	0.61286613E-02	0.22955872E-01	0.0	0.0
40	0.0	0.29098183E 00	0.61266758E-02	-0.22954892E-01	0.0	0.0
41	0.0	0.65024614E 00	0.55538975E-02	-0.19439328E-02	0.0	0.0
42	-0.54878667E-02	0.24575882E 01	0.0	0.0	0.0	0.11458501E-01
43	-0.10094500E 00	0.74111974E 00	0.0	0.0	0.0	0.34683985E 00
44	-0.10094965E 00	0.56862706E 00	0.0	0.0	0.0	-0.13121462E 00
45	-0.54917932E-02	0.61758953E 00	0.0	0.0	0.0	-0.11458799E-01
46	0.0	0.61757427E 00	0.54895207E-02	0.11457939E-01	0.0	0.0
47	0.0	0.18911228E 01	0.10095298E 00	0.39884853E 01	0.0	0.0

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
3	0.0	-0.55370510E 00	0.0	0.39623375E-03	0.0	0.39532245E-03
5	0.0	0.0	0.0	0.0	0.0	-0.69004196E 00
7	0.10644162E 00	-0.55370289E 00	0.0	0.0	0.0	-0.16203292E-01
10	0.0	-0.28852433E 00	0.11680327E-01	-0.35923754E-02	0.0	0.0
13	0.0	-0.28853667E 00	0.11680610E-01	0.35909726E-02	0.0	0.0
15	0.0	-0.37810478E 01	0.0	0.0	0.0	0.0
16	0.0	-0.64974985E 01	0.0	0.0	0.0	0.0
18	0.0	-0.31624985E 01	0.0	0.0	0.0	0.0
20	-0.10643309E 00	-0.55369020E 00	0.0	0.0	0.0	-0.16200732E-01
23	-0.10644120E 00	-0.55370617E 00	0.0	0.0	0.0	0.16200580E-01
26	0.0	-0.55370384E 00	0.10644269E 00	-0.16204007E-01	0.0	0.0
30	0.0	-0.19985466E 01	0.0	0.0	0.0	0.0
31	0.0	-0.34500009E 00	-0.11000526E-06	0.78647281E-06	0.0	0.0

RESULTANT JOINT FORCES

LOAD NUMBER 6

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
32	0.0	-0.86250067E 00	0.0	0.0	0.0	0.21562809E 00
33	0.0	-0.57499987E 00	0.0	0.0	0.0	0.0
34	0.0	-0.62185293E 00	0.0	0.11689794E 00	0.0	0.27975230E-03
35	0.0	-0.24043512E 01	0.0	0.28023147E-03	0.0	0.65042105E 01
36	-0.10095286E 00	-0.22361345E 01	0.0	0.0	0.0	-0.58285675E 01
37	-0.54890290E-02	-0.13075695E 01	0.0	0.0	0.0	-0.11458971E-01
38	0.0	-0.11677256E 01	-0.55515096E-02	-0.19439361E-02	0.0	0.0
39	0.0	-0.29098505E 00	-0.61286613E-02	-0.22955872E-01	0.0	0.0
40	0.0	-0.29098183E 00	-0.61266758E-02	0.22954892E-01	0.0	0.0
41	0.0	-0.65024614E 00	-0.55538975E-02	0.19439328E-02	0.0	0.0
42	0.54878667E-02	-0.24575882E 01	0.0	0.0	0.0	-0.11458501E-01
43	0.10094500E 00	-0.74111974E 00	0.0	0.0	0.0	-0.34683985E 00
44	0.10094965E 00	-0.56862706E 00	0.0	0.0	0.0	0.13121462E 00
45	0.54917932E-02	-0.61758953E 00	0.0	0.0	0.0	0.11458799E-01
46	0.0	-0.61757427E 00	-0.54895207E-02	-0.11457939E-01	0.0	0.0
47	0.0	-0.18911228E 01	-0.10095298E 00	-0.39884853E 01	0.0	0.0

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
1	0.0	0.0	-0.89999996E-02	0.0	0.0	0.0
3	0.19807453E 05	0.0	-0.19807840E 05	0.0	0.57128906E-01	0.0
5	0.15625000E-01	0.0	0.0	0.0	0.0	0.0
7	-0.19807500E 05	-0.19807328E 05	0.0	0.0	0.0	-0.84228516E-01
10	0.0	0.64450078E 04	0.15560051E 05	0.61035156E-01	0.0	0.0
13	0.0	-0.64450391E 04	-0.15561289E 05	-0.17968750E 00	0.0	0.0
15	0.0	-0.78125000E-02	0.0	0.0	0.0	0.0
18	0.0	0.78125000E-02	0.0	0.0	0.0	0.0
20	-0.19807523E 05	0.19806836E 05	0.0	0.0	0.0	-0.33740234E 00
23	0.19809070E 05	-0.19807355E 05	0.0	0.0	0.0	-0.24560547E 00
26	0.0	0.19807043E 05	0.19807727E 05	-0.28320313E-01	0.0	0.0
31	0.0	-0.87360859E 04	0.87365391E 04	0.0	0.0	0.0
32	-0.12355016E 05	0.0	0.0	0.0	0.0	0.0
33	0.0	-0.12355023E 05	0.0	0.0	0.0	0.0
34	0.14006148E 05	0.0	-0.54483754E 05	0.0	-0.27787827E 04	0.0
35	-0.12130563E 05	0.0	-0.14006074E 05	0.0	0.27787832E 04	0.0
36	0.12130875E 05	-0.14006148E 05	0.0	0.0	0.0	0.27787827E 04
37	-0.14006418E 05	0.12130426E 05	0.0	0.0	0.0	-0.27787561E 04
38	0.0	-0.20653648E 05	0.84216758E 04	0.82879370E 03	0.0	0.0
39	0.0	0.29295688E 05	-0.17385883E 05	-0.82888965E 03	0.0	0.0
40	0.0	-0.20559199E 05	0.86501484E 04	-0.82881470E 03	0.0	0.0
41	0.0	0.20653266E 05	-0.84212344E 04	0.82903418E 03	0.0	0.0
42	-0.14006340E 05	-0.12130387E 05	0.0	0.0	0.0	0.27788950E 04
43	0.24485816E 05	0.14006578E 05	0.0	0.0	0.0	-0.27786179E 04
44	-0.12131520E 05	-0.14005953E 05	0.0	0.0	0.0	-0.27786602E 04
45	0.14005484E 05	0.24485273E 05	0.0	0.0	0.0	0.27789658E 04

RESULTANT JOINT FORCES

LOAD NUMBER 7

JOINT NO.	F1 LBS.	F2 LBS.	F3 LBS.	M1 IN-LBS	M2 IN-LBS	M3 IN-LBS
46	0.0	-0.12130566E 05	0.14006047E 05	0.27787725E 04	0.0	0.0
47	0.0	0.14006570E 05	-0.12130715E 05	-0.27788018E 04	0.0	0.0

```
* CPU SECONDS ** THIS STEP "SLVR" TIME IS    4.92 ** LAST STEP "EDIT" TIME IS    3.58 ** DELTA TIME IS    1.34 *
* ELAPSED SECONDS                            75.8                                35.9                      39.9 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    4.95 ** LAST STEP "SLVR" TIME IS    4.92 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                            76.8                                75.8                       1.0 *
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WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** DESIGN

RESULTING DISPLACEMENTS FOR LOAD NUMBER 1
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	-0.000010553	0.000009322	0.000002327	0.000004871	0.000005874	-0.000000331
5	-0.000013541	0.0	0.0	0.000030110	-0.000036080	0.000003042
7	-0.000016564	-0.000100410	-0.001325575	0.000054308	-0.000082548	0.000006796
10	-0.000137958	-0.000096136	-0.000132486	0.000063915	-0.000066503	0.000006385
13	0.000005686	-0.000001268	-0.000023593	0.000015178	-0.000050827	0.000002554
15	0.0	0.000000365	0.0	-0.000009671	-0.000047021	0.000001987
16	-0.000013912	0.000000181	-0.000798200	0.000003294	-0.000023302	-0.000000494
17	0.0	0.0	0.0	0.0	0.0	0.0
18	-0.000039374	-0.000000626	-0.000238712	-0.000043112	-0.000015597	0.000007368
20	-0.000176474	-0.000001429	-0.001136679	-0.000037115	-0.000049167	0.000000558
23	-0.000166299	-0.000184315	-0.000383561	0.000049046	-0.000084751	-0.000023534
26	-0.000086693	-0.000179505	-0.000019386	0.000033314	-0.000015306	-0.000003434
28	0.0	0.0	0.0	0.0	0.0	0.0
30	-0.000082610	-0.000103470	-0.000777023	0.000066693	-0.000074286	0.000006868
31	-0.000061685	-0.000028815	-0.000054178	0.000022116	-0.000052226	0.000002748
32	-0.000176744	-0.000082094	-0.000759226	0.000044439	-0.000087381	-0.000025341
33	-0.000109679	-0.000194917	-0.000163623	0.000042652	-0.000021653	-0.000005373
34	-0.000005523	0.000004942	0.000000033	0.000003204	0.000003646	0.000000105
35	-0.000013494	0.000012257	0.000009874	0.000005603	0.000007883	-0.000000716
36	-0.000013585	-0.000093236	-0.001260687	0.000053292	-0.000083860	0.000006697
37	-0.000023822	-0.000103415	-0.001303017	0.000056464	-0.000081575	0.000006860
38	-0.000141900	-0.000103527	-0.000169844	0.000065445	-0.000066673	0.000006376
39	-0.000119519	-0.000075574	-0.000101600	0.000062177	-0.000066230	0.000006527
40	-0.000009662	-0.000006835	-0.000031890	0.000018074	-0.000051088	0.000002428
41	0.000010010	0.000000393	-0.000015477	0.000012000	-0.000050665	0.000002538
42	-0.000174794	-0.000001913	-0.001117273	-0.000039698	-0.000047659	0.000002458
43	-0.000176425	-0.000001992	-0.001098983	-0.000035716	-0.000051660	-0.000001192
44	-0.000176836	-0.000158558	-0.000496141	0.000048821	-0.000086145	-0.000024643
45	-0.000142065	-0.000194512	-0.000293696	0.000049506	-0.000084007	-0.000022276
46	-0.000097863	-0.000195091	-0.000058326	0.000038512	-0.000016540	-0.000004480
47	-0.000070525	-0.000147449	-0.000005405	0.000027349	-0.000012808	-0.000002648

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	0.	0.	-9.	-0.	11.	1.57	82.	68.	150.
			34	-0.	1.	-0.	9.	0.	-10.	1.57	82.	66.	148.
2	BEND	1	34	-0.	0.	-1.	9.	10.	-0.	1.57	60.	26.	86.
			3	1.	-0.	1.	-6.	-10.	6.	1.57	60.	25.	85.
3	BEND	1	3	-1.	0.	-1.	6.	10.	-6.	1.57	60.	25.	85.
			35	2.	-0.	-0.	0.	-8.	9.	1.57	60.	23.	83.
4	TAN	1	35	-0.	0.	2.	-8.	-9.	0.	1.57	82.	59.	140.
			5	0.	-0.	-6.	-62.	9.	-3.	1.00	82.	193.	275.
5	TAN	1	5	0.	0.	-6.	62.	-9.	3.	1.00	82.	193.	275.
			36	-0.	-0.	2.	4.	9.	-1.	1.57	82.	46.	128.
6	BEND	1	36	0.	2.	0.	-4.	-1.	-9.	1.57	60.	18.	78.
			7	-0.	-1.	0.	10.	0.	3.	1.57	60.	21.	81.
7	BEND	1	7	0.	1.	-0.	-10.	-0.	-3.	1.57	60.	21.	81.
			37	-0.	-1.	0.	10.	0.	-6.	1.57	60.	23.	83.
8	TAN	1	37	0.	-0.	-1.	-10.	6.	0.	1.57	82.	57.	139.
			30	-0.	0.	-1.	8.	-6.	0.	1.00	82.	29.	111.
9	TAN	1	30	0.	-0.	1.	-8.	6.	-0.	1.00	82.	29.	111.
			38	-0.	0.	-3.	-13.	-6.	1.	1.57	82.	69.	151.
10	BEND	1	38	3.	0.	-0.	-1.	13.	6.	1.57	60.	27.	87.
			10	-3.	-0.	2.	-1.	-15.	-6.	1.57	60.	31.	91.
11	BEND	1	10	3.	0.	-2.	1.	15.	6.	1.57	60.	31.	91.
			39	-3.	-0.	3.	-3.	-17.	-5.	1.57	60.	34.	94.
12	TAN	1	39	0.	-3.	3.	17.	5.	3.	1.57	39.	495.	534.
			31	-0.	3.	-3.	-21.	-5.	-3.	1.00	39.	385.	423.
13	TAN	1	31	0.	-3.	3.	21.	5.	3.	1.00	82.	67.	148.
			40	-0.	3.	-3.	-25.	-5.	-3.	1.57	82.	126.	208.
14	BEND	1	40	-3.	-0.	-3.	-3.	-25.	5.	1.57	60.	50.	110.
			13	4.	0.	2.	1.	28.	-5.	1.57	60.	54.	114.
15	BEND	1	13	-4.	-0.	-2.	-1.	-28.	5.	1.57	60.	54.	114.
			41	5.	0.	0.	-1.	31.	-6.	1.57	60.	59.	119.

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	-0.	5.	31.	6.	-1.	1.57	82.	150.	232.
			15	-0.	0.	-6.	-55.	-6.	1.	1.00	82.	170.	252.
17	TAN	1	15	-0.	-0.	-6.	55.	6.	-1.	1.00	82.	170.	252.
			16	0.	0.	-0.	32.	-6.	0.	1.00	82.	100.	182.
18	TAN	1	16	-0.	-0.	0.	-32.	6.	-0.	1.00	82.	100.	182.
			17	0.	0.	-7.	-64.	-6.	-1.	1.00	82.	197.	279.
19	TAN	1	17	1.	-2.	-6.	65.	-11.	10.	1.00	82.	204.	286.
			18	-1.	2.	4.	-21.	11.	-4.	1.57	82.	116.	198.
20	TAN	1	18	1.	-2.	-4.	21.	-11.	4.	1.57	82.	116.	198.
			42	-1.	2.	-0.	11.	11.	9.	1.57	82.	87.	169.
21	BEND	1	42	1.	-0.	-2.	-11.	9.	-11.	1.57	60.	34.	94.
			20	1.	1.	2.	15.	-9.	1.	1.57	60.	33.	93.
22	BEND	1	20	-1.	-1.	-2.	-15.	9.	-1.	1.57	60.	33.	93.
			43	2.	2.	1.	10.	-7.	-10.	1.57	60.	30.	90.
23	TAN	1	43	2.	-1.	-2.	10.	10.	7.	1.57	39.	434.	473.
			32	-2.	1.	3.	-1.	-10.	-0.	1.00	39.	172.	211.
24	TAN	1	32	2.	-1.	-3.	1.	10.	0.	1.00	82.	30.	112.
			44	-2.	1.	3.	8.	-10.	4.	1.57	82.	64.	146.
25	BEND	1	44	2.	3.	-1.	-8.	4.	10.	1.57	60.	25.	85.
			23	-1.	-4.	2.	3.	-6.	-14.	1.57	60.	29.	89.
26	BEND	1	23	1.	4.	-2.	-3.	6.	14.	1.57	60.	29.	89.
			45	1.	-4.	2.	-4.	-6.	-14.	1.57	60.	29.	89.
27	TAN	1	45	1.	-2.	4.	-4.	14.	6.	1.57	39.	422.	461.
			33	-1.	2.	-5.	-8.	-14.	-4.	1.00	39.	286.	325.
28	TAN	1	33	1.	-2.	5.	8.	14.	4.	1.00	82.	49.	131.
			46	-1.	2.	-6.	-21.	-14.	-2.	1.57	82.	121.	203.
29	BEND	1	46	6.	1.	-2.	2.	21.	14.	1.57	60.	48.	108.
			26	-3.	-1.	5.	-10.	-26.	-8.	1.57	60.	56.	116.
30	BEND	1	26	3.	1.	-5.	10.	26.	8.	1.57	60.	56.	116.
			47	2.	-1.	7.	-13.	-27.	1.	1.57	60.	58.	118.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: DESIGN

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	1.	-7.	-2.	27.	-1.	13.	1.57	82.	146.	228.
			28	-1.	10.	2.	-5.	1.	-3.	1.57	82.	28.	110.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: DESIGN

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	44	-0.000176836	-0.000158558	-0.000496141
2	46	-0.000097863	-0.000195091	-0.000058326
3	7	-0.000016564	-0.000100410	-0.001325575

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	495.	12	534.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-0.	0.	-9.	-11.	-0.
5	0.	0.	12.	-0.	0.	-0.
15	-0.	0.	12.	0.	-0.	0.
17	1.	1.	13.	1.	17.	-10.
28	-1.	-2.	10.	-5.	3.	1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 1
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 1
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** VERTICAL +Z

RESULTING DISPLACEMENTS FOR LOAD NUMBER 2
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.000010553	-0.000009322	-0.000002327	-0.000004871	-0.000005874	0.000000331
5	0.000013541	0.0	0.0	-0.000030110	0.000036080	-0.000003042
7	0.000016564	0.000100410	0.001325575	-0.000054308	0.000082548	-0.000006796
10	0.000137958	0.000096136	0.000132486	-0.000063915	0.000066503	-0.000006385
13	-0.000005686	0.000001268	0.000023593	-0.000015178	0.000050827	-0.000002554
15	0.0	-0.000000365	0.0	0.000009671	0.000047021	-0.000001987
16	0.000013912	-0.000000181	0.000798200	-0.000003294	0.000023302	0.000000494
17	0.0	0.0	0.0	0.0	0.0	0.0
18	0.000039374	0.000000626	0.000238712	0.000043112	0.000015597	-0.000007368
20	0.000176474	0.000001429	0.001136679	0.000037115	0.000049167	-0.000000558
23	0.000166299	0.000184315	0.000383561	-0.000049046	0.000084751	0.000023534
26	0.000086693	0.000179505	0.000019386	-0.000033314	0.000015306	0.000003434
28	0.0	0.0	0.0	0.0	0.0	0.0
30	0.000082610	0.000103470	0.000777023	-0.000066693	0.000074286	-0.000006868
31	0.000061685	0.000028815	0.000054178	-0.000022116	0.000052226	-0.000002748
32	0.000176744	0.000082094	0.000759226	-0.000044439	0.000087381	0.000025341
33	0.000109679	0.000194917	0.000163623	-0.000042652	0.000021653	0.000005373
34	0.000005523	-0.000004942	-0.000000033	-0.000003204	-0.000003646	-0.000000105
35	0.000013494	-0.000012257	-0.000009874	-0.000005603	-0.000007883	0.000000716
36	0.000013585	0.000093236	0.001260687	-0.000053292	0.000083860	-0.000006697
37	0.000023822	0.000103415	0.001303017	-0.000056464	0.000081575	-0.000006860
38	0.000141900	0.000103527	0.000169844	-0.000065445	0.000066673	-0.000006376
39	0.000119519	0.000075574	0.000101600	-0.000062177	0.000066230	-0.000006527
40	0.000009662	0.000006835	0.000031890	-0.000018074	0.000051088	-0.000002428
41	-0.000010010	-0.000000393	0.000015477	-0.000012000	0.000050665	-0.000002538
42	0.000174794	0.000001913	0.001117273	0.000039698	0.000047659	-0.000002458
43	0.000176425	0.000001992	0.001098983	0.000035716	0.000051660	0.000001192
44	0.000176836	0.000158558	0.000496141	-0.000048821	0.000086145	0.000024643
45	0.000142065	0.000194512	0.000293696	-0.000049506	0.000084007	0.000022276
46	0.000097863	0.000195091	0.000058326	-0.000038512	0.000016540	0.000004480
47	0.000070525	0.000147449	0.000005405	-0.000027349	0.000012808	0.000002648

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	-0.	-0.	9.	0.	-11.	1.57	82.	68.	150.
			34	0.	-1.	0.	-9.	-0.	10.	1.57	82.	66.	148.
2	BEND	1	34	0.	-0.	1.	-9.	-10.	0.	1.57	60.	26.	86.
			3	-1.	0.	-1.	6.	10.	-6.	1.57	60.	25.	85.
3	BEND	1	3	1.	-0.	1.	-6.	-10.	6.	1.57	60.	25.	85.
			35	-2.	0.	0.	-0.	8.	-9.	1.57	60.	23.	83.
4	TAN	1	35	0.	-0.	-2.	8.	9.	-0.	1.57	82.	59.	140.
			5	-0.	0.	6.	62.	-9.	3.	1.00	82.	193.	275.
5	TAN	1	5	-0.	-0.	6.	-62.	9.	-3.	1.00	82.	193.	275.
			36	0.	0.	-2.	-4.	-9.	1.	1.57	82.	46.	128.
6	BEND	1	36	-0.	-2.	-0.	4.	1.	9.	1.57	60.	18.	78.
			7	0.	1.	-0.	-10.	-0.	-3.	1.57	60.	21.	81.
7	BEND	1	7	-0.	-1.	0.	10.	0.	3.	1.57	60.	21.	81.
			37	0.	1.	-0.	-10.	-0.	6.	1.57	60.	23.	83.
8	TAN	1	37	-0.	0.	1.	10.	-6.	-0.	1.57	82.	57.	139.
			30	0.	-0.	1.	-8.	6.	-0.	1.00	82.	29.	111.
9	TAN	1	30	-0.	0.	-1.	8.	-6.	0.	1.00	82.	29.	111.
			38	0.	-0.	3.	13.	6.	-1.	1.57	82.	69.	151.
10	BEND	1	38	-3.	-0.	0.	1.	-13.	-6.	1.57	60.	27.	87.
			10	3.	0.	-2.	1.	15.	6.	1.57	60.	31.	91.
11	BEND	1	10	-3.	-0.	2.	-1.	-15.	-6.	1.57	60.	31.	91.
			39	3.	0.	-3.	3.	17.	5.	1.57	60.	34.	94.
12	TAN	1	39	-0.	3.	-3.	-17.	-5.	-3.	1.57	39.	495.	534.
			31	0.	-3.	3.	21.	5.	3.	1.00	39.	385.	423.
13	TAN	1	31	-0.	3.	-3.	-21.	-5.	-3.	1.00	82.	67.	148.
			40	0.	-3.	3.	25.	5.	3.	1.57	82.	126.	208.
14	BEND	1	40	3.	0.	3.	3.	25.	-5.	1.57	60.	50.	110.
			13	-4.	-0.	-2.	-1.	-28.	5.	1.57	60.	54.	114.
15	BEND	1	13	4.	0.	2.	1.	28.	-5.	1.57	60.	54.	114.
			41	-5.	-0.	-0.	1.	-31.	6.	1.57	60.	59.	119.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	-0.	0.	-5.	-31.	-6.	1.	1.57	82.	150.	232.
			15	0.	-0.	6.	55.	6.	-1.	1.00	82.	170.	252.
17	TAN	1	15	0.	0.	6.	-55.	-6.	1.	1.00	82.	170.	252.
			16	-0.	-0.	0.	-32.	6.	-0.	1.00	82.	100.	182.
18	TAN	1	16	0.	0.	-0.	32.	-6.	0.	1.00	82.	100.	182.
			17	-0.	-0.	7.	64.	6.	1.	1.00	82.	197.	279.
19	TAN	1	17	-1.	2.	6.	-65.	11.	-10.	1.00	82.	204.	286.
			18	1.	-2.	-4.	21.	-11.	4.	1.57	82.	116.	198.
20	TAN	1	18	-1.	2.	4.	-21.	11.	-4.	1.57	82.	116.	198.
			42	1.	-2.	0.	-11.	-11.	-9.	1.57	82.	87.	169.
21	BEND	1	42	-1.	0.	2.	11.	-9.	11.	1.57	60.	34.	94.
			20	-1.	-1.	-2.	-15.	9.	-1.	1.57	60.	33.	93.
22	BEND	1	20	1.	1.	2.	15.	-9.	1.	1.57	60.	33.	93.
			43	-2.	-2.	-1.	-10.	7.	10.	1.57	60.	30.	90.
23	TAN	1	43	-2.	1.	2.	-10.	-10.	-7.	1.57	39.	434.	473.
			32	2.	-1.	-3.	1.	10.	0.	1.00	39.	172.	211.
24	TAN	1	32	-2.	1.	3.	-1.	-10.	-0.	1.00	82.	30.	112.
			44	2.	-1.	-3.	-8.	10.	-4.	1.57	82.	64.	146.
25	BEND	1	44	-2.	-3.	1.	8.	-4.	-10.	1.57	60.	25.	85.
			23	1.	4.	-2.	-3.	6.	14.	1.57	60.	29.	89.
26	BEND	1	23	-1.	-4.	2.	3.	-6.	-14.	1.57	60.	29.	89.
			45	-1.	4.	-2.	4.	6.	14.	1.57	60.	29.	89.
27	TAN	1	45	-1.	2.	-4.	4.	-14.	-6.	1.57	39.	422.	461.
			33	1.	-2.	5.	8.	14.	4.	1.00	39.	286.	325.
28	TAN	1	33	-1.	2.	-5.	-8.	-14.	-4.	1.00	82.	49.	131.
			46	1.	-2.	6.	21.	14.	2.	1.57	82.	121.	203.
29	BEND	1	46	-6.	-1.	2.	-2.	-21.	-14.	1.57	60.	48.	108.
			26	3.	1.	-5.	10.	26.	8.	1.57	60.	56.	116.
30	BEND	1	26	-3.	-1.	5.	-10.	-26.	-8.	1.57	60.	56.	116.
			47	-2.	1.	-7.	13.	27.	-1.	1.57	60.	58.	118.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	-1.	7.	2.	-27.	1.	-13.	1.57	82.	146.	228.
			28	1.	-10.	-2.	5.	-1.	3.	1.57	82.	28.	110.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: VERTICAL +Z

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	44	0.000176836	0.000158558	0.000496141
2	46	0.000097863	0.000195091	0.000058326
3	7	0.000016564	0.000100410	0.001325575

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	495.	12	534.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-0.	0.	-0.	9.	11.	0.
5	-0.	-0.	-12.	0.	-0.	0.
15	0.	-0.	-12.	-0.	0.	-0.
17	-1.	-1.	-13.	-1.	-17.	10.
28	1.	2.	-10.	5.	-3.	-1.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 2
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 2
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS SCRUBBER DRAIN
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AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 3
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.000036650	-0.000001434	-0.000004431	-0.000000752	-0.000009160	0.000000046
5	0.000048307	0.0	0.0	-0.000004665	0.000006360	-0.000000447
7	0.000052735	0.000017338	0.000193033	-0.000008089	0.000016014	-0.000001390
10	-0.000041139	0.000017058	0.000039463	-0.000008009	0.000031200	0.000007972
13	-0.000124128	0.000000542	0.000020849	-0.000004752	0.000040263	-0.000019552
15	0.0	0.000000004	0.0	-0.000003609	0.000037003	-0.000036038
16	0.000982766	0.000000002	-0.000025266	0.000000898	0.000018338	0.000009852
17	0.0	0.0	0.0	0.0	0.0	0.0
18	0.000277429	-0.000000180	0.000047404	0.000009700	0.000004888	-0.000051027
20	0.001438530	-0.000023531	0.000338131	0.000017279	0.000015271	-0.000051476
23	0.001444279	-0.000004325	-0.000011250	0.000009938	0.000052561	0.000035661
26	0.001045667	0.000012252	-0.000000600	0.000001019	0.000092329	0.000048999
28	0.0	0.0	0.0	0.0	0.0	0.0
30	0.000040872	0.000017979	0.000119717	-0.000008646	0.000023607	0.000005343
31	-0.000093001	0.000007486	0.000028582	-0.000005164	0.000040821	-0.000015626
32	0.001459966	-0.000130612	0.000188640	0.000010743	0.000048780	0.000027789
33	0.001275806	0.000011742	-0.000008011	0.000002645	0.000089645	0.000053741
34	0.000025474	-0.000000761	0.000000047	-0.000000494	-0.000008998	-0.000000021
35	0.000040937	-0.000001881	-0.000013582	-0.000000865	-0.000007382	0.000000104
36	0.000052015	0.000015778	0.000180146	-0.000008259	0.000015052	-0.000001367
37	0.000054267	0.000017980	0.000191628	-0.000008034	0.000016424	-0.000001057
38	-0.000032699	0.000017978	0.000044104	-0.000008130	0.000031110	0.000008455
39	-0.000055255	0.000014473	0.000035589	-0.000007880	0.000031207	0.000007582
40	-0.000119823	0.000002120	0.000023206	-0.000004917	0.000040998	-0.000018140
41	-0.000117210	0.000000004	0.000018163	-0.000004579	0.000039871	-0.000021456
42	0.001382609	-0.000000550	0.000326217	0.000017536	0.000014935	-0.000053882
43	0.001460767	-0.000076815	0.000329119	0.000017018	0.000016059	-0.000049089
44	0.001459620	-0.000040499	0.000039210	0.000010400	0.000051104	0.000032572
45	0.001404544	0.000011858	-0.000024275	0.000009316	0.000053283	0.000038217
46	0.001140435	0.000011692	-0.000002154	0.000001800	0.000092626	0.000051682
47	0.000926112	0.000012858	-0.000000267	0.000000244	0.000091701	0.000047424

WPPSS SCRUBBER DRAIN
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AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-13.	-0.	-0.	1.	0.	-45.	1.57	82.	216.	297.
			34	12.	0.	0.	-1.	-0.	7.	1.57	82.	36.	118.
2	BEND	1	34	12.	-0.	-0.	-1.	-7.	0.	1.57	60.	14.	74.
			3	-8.	0.	8.	1.	-5.	-1.	1.57	60.	10.	70.
3	BEND	1	3	8.	-0.	-8.	-1.	5.	1.	1.57	60.	10.	70.
			35	0.	0.	11.	-0.	-10.	-1.	1.57	60.	19.	79.
4	TAN	1	35	0.	-11.	0.	-10.	1.	-0.	1.57	82.	47.	129.
			5	-0.	7.	-0.	3.	-1.	0.	1.00	82.	11.	92.
5	TAN	1	5	0.	-7.	-0.	-3.	1.	-0.	1.00	82.	11.	92.
			36	-0.	3.	0.	5.	-1.	0.	1.57	82.	27.	109.
6	BEND	1	36	0.	0.	-3.	-5.	0.	1.	1.57	60.	11.	71.
			7	2.	-0.	2.	3.	1.	-5.	1.57	60.	11.	71.
7	BEND	1	7	-2.	0.	-2.	-3.	-1.	5.	1.57	60.	11.	71.
			37	2.	-0.	0.	-1.	3.	-6.	1.57	60.	12.	72.
8	TAN	1	37	-2.	-0.	-0.	1.	6.	3.	1.57	82.	30.	112.
			30	-0.	0.	0.	-0.	-6.	-8.	1.00	82.	29.	111.
9	TAN	1	30	0.	-0.	-0.	0.	6.	8.	1.00	82.	29.	111.
			38	-2.	0.	0.	1.	-6.	5.	1.57	82.	36.	117.
10	BEND	1	38	-0.	2.	-0.	-5.	-1.	6.	1.57	60.	14.	74.
			10	0.	-3.	-0.	4.	1.	-7.	1.57	60.	16.	76.
11	BEND	1	10	-0.	3.	0.	-4.	-1.	7.	1.57	60.	16.	76.
			39	0.	-3.	-0.	2.	1.	-8.	1.57	60.	17.	77.
12	TAN	1	39	3.	0.	-0.	-1.	8.	-2.	1.57	39.	245.	283.
			31	-3.	-0.	0.	1.	-8.	7.	1.00	39.	194.	233.
13	TAN	1	31	3.	0.	-0.	-1.	8.	-7.	1.00	82.	34.	116.
			40	-4.	-0.	0.	1.	-8.	12.	1.57	82.	72.	154.
14	BEND.	1	40	0.	-4.	0.	12.	1.	8.	1.57	60.	28.	88.
			13	-0.	4.	-0.	-17.	-2.	-3.	1.57	60.	32.	92.
15	BEND	1	13	0.	-4.	0.	17.	2.	3.	1.57	60.	32.	92.
			41	-0.	4.	0.	-19.	-2.	4.	1.57	60.	37.	97.

WPPSS SCRUBBER DRAIN
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AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	4.	-0.	-0.	-2.	-4.	-19.	1.57	82.	93.	175.
			15	-5.	0.	0.	2.	4.	39.	1.00	82.	122.	203.
17	TAN	1	15	-6.	-0.	0.	-2.	-4.	-39.	1.00	82.	122.	203.
			16	-1.	0.	-0.	1.	4.	-36.	1.00	82.	111.	193.
18	TAN	1	16	1.	-0.	0.	-1.	-4.	36.	1.00	82.	111.	193.
			17	-7.	0.	-0.	-1.	4.	72.	1.00	82.	221.	303.
19	TAN	1	17	-6.	-0.	0.	-11.	4.	-74.	1.00	82.	229.	311.
			18	4.	0.	-0.	7.	-4.	27.	1.57	82.	136.	218.
20	TAN	1	18	-4.	-0.	0.	-7.	4.	-27.	1.57	82.	136.	218.
			42	-0.	0.	-0.	-0.	-4.	-11.	1.57	82.	56.	138.
21	BEND	1	42	0.	-0.	-0.	0.	-11.	4.	1.57	60.	22.	82.
			20	-0.	0.	1.	-3.	11.	-2.	1.57	60.	22.	82.
22	BEND	1	20	0.	-0.	-1.	3.	-11.	2.	1.57	60.	22.	82.
			43	0.	0.	1.	-4.	11.	1.	1.57	60.	23.	83.
23	TAN	1	43	0.	-1.	-0.	-4.	-1.	-11.	1.57	39.	331.	369.
			32	-0.	2.	0.	6.	1.	13.	1.00	39.	255.	294.
24	TAN	1	32	0.	-2.	-0.	-6.	-1.	-13.	1.00	82.	44.	126.
			44	-0.	3.	0.	7.	1.	14.	1.57	82.	78.	160.
25	BEND	1	44	0.	0.	-3.	-7.	14.	-1.	1.57	60.	31.	91.
			23	2.	-0.	3.	6.	-13.	-5.	1.57	60.	30.	90.
26	BEND	1	23	-2.	0.	-3.	-6.	13.	5.	1.57	60.	30.	90.
			45	4.	-0.	0.	1.	-10.	-8.	1.57	60.	24.	84.
27	TAN	1	45	4.	-0.	0.	1.	8.	10.	1.57	39.	350.	388.
			33	-5.	0.	-0.	-2.	-8.	1.	1.00	39.	147.	186.
28	TAN	1	33	5.	-0.	0.	2.	8.	-1.	1.00	82.	26.	107.
			46	-5.	0.	-0.	-3.	-8.	13.	1.57	82.	77.	158.
29	BEND	1	46	0.	5.	-0.	-13.	3.	8.	1.57	60.	30.	90.
			26	0.	-6.	1.	10.	-4.	-17.	1.57	60.	39.	99.
30	BEND	1	26	-0.	6.	-1.	-10.	4.	17.	1.57	60.	39.	99.
			47	0.	-6.	0.	1.	-3.	-22.	1.57	60.	42.	102.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	6.	-0.	-0.	3.	22.	-1.	1.57	82.	106.	188.
			28	-10.	0.	0.	3.	-22.	116.	1.57	82.	570.	652.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: HORIZONTAL +X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	43	0.001460767	-0.000076815	0.000329119
2	32	0.001459966	-0.000130612	0.000188640
3	20	0.001438530	-0.000023531	0.000338131

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	31	570.	31	652.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-13.	0.	-0.	1.	45.	0.
5	-0.	-0.	0.	0.	-0.	0.
15	-11.	0.	-0.	-0.	0.	0.
17	-13.	0.	-0.	-12.	-8.	2.
28	-10.	-0.	0.	3.	-116.	-22.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 3
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 3
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -X

RESULTING DISPLACEMENTS FOR LOAD NUMBER 4
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	-0.000036650	0.000001434	0.000004431	0.000000752	0.000009160	-0.000000046
5	-0.000048307	0.0	0.0	0.000004665	-0.000006360	0.000000447
7	-0.000052735	-0.000017338	-0.000193033	0.000008089	-0.000016014	0.000001390
10	0.000041139	-0.000017058	-0.000039463	0.000008009	-0.000031200	-0.000007972
13	0.000124128	-0.000000542	-0.000020849	0.000004752	-0.000040263	0.000019552
15	0.0	-0.000000004	0.0	0.000003609	-0.000037003	0.000036038
16	-0.000982766	-0.000000002	0.000025266	-0.000000898	-0.000018338	-0.000009852
17	0.0	0.0	0.0	0.0	0.0	0.0
18	-0.000277429	0.000000180	-0.000047404	-0.000009700	-0.000004888	0.000051027
20	-0.001438530	0.000023531	-0.000338131	-0.000017279	-0.000015271	0.000051476
23	-0.001444279	0.000004325	0.000011250	-0.000009938	-0.000052561	-0.000035661
26	-0.001045667	-0.000012252	0.000000600	-0.000001019	-0.000092329	-0.000048999
28	0.0	0.0	0.0	0.0	0.0	0.0
30	-0.000040872	-0.000017979	-0.000119717	0.000008646	-0.000023607	-0.000005343
31	0.000093001	-0.000007486	-0.000028582	0.000005164	-0.000040821	0.000015626
32	-0.001459966	0.000130612	-0.000188640	-0.000010743	-0.000048780	-0.000027789
33	-0.001275806	-0.000011742	0.000008011	-0.000002645	-0.000089645	-0.000053741
34	-0.000025474	0.000000761	-0.000000047	0.000000494	0.000008998	0.000000021
35	-0.000040937	0.000001881	0.000013582	0.000000865	0.000007382	-0.000000104
36	-0.000052015	-0.000015778	-0.000180146	0.000008259	-0.000015052	0.000001367
37	-0.000054267	-0.000017980	-0.000191628	0.000008034	-0.000016424	0.000001057
38	0.000032699	-0.000017978	-0.000044104	0.000008130	-0.000031110	-0.000008455
39	0.000055255	-0.000014473	-0.000035589	0.000007880	-0.000031207	-0.000007582
40	0.000119823	-0.000002120	-0.000023206	0.000004917	-0.000040998	0.000018140
41	0.000117210	-0.000000004	-0.000018163	0.000004579	-0.000039871	0.000021456
42	-0.001382609	0.000000550	-0.000326217	-0.000017536	-0.000014935	0.000053882
43	-0.001460767	0.000076815	-0.000329119	-0.000017018	-0.000016059	0.000049089
44	-0.001459620	0.000040499	-0.000039210	-0.000010400	-0.000051104	-0.000032572
45	-0.001404544	-0.000011858	0.000024275	-0.000009316	-0.000053283	-0.000038217
46	-0.001140435	-0.000011692	0.000002154	-0.000001800	-0.000092626	-0.000051682
47	-0.000926112	-0.000012858	0.000000267	-0.000000244	-0.000091701	-0.000047424

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	13.	0.	0.	-1.	-0.	45.	1.57	82.	216.	297.
			34	-12.	-0.	-0.	1.	0.	-7.	1.57	82.	36.	118.
2	BEND	1	34	-12.	0.	0.	1.	7.	-0.	1.57	60.	14.	74.
			3	8.	-0.	-8.	-1.	5.	1.	1.57	60.	10.	70.
3	BEND	1	3	-8.	0.	8.	1.	-5.	-1.	1.57	60.	10.	70.
			35	-0.	-0.	-11.	0.	10.	1.	1.57	60.	19.	79.
4	TAN	1	35	-0.	11.	-0.	10.	-1.	0.	1.57	82.	47.	129.
			5	0.	-7.	0.	-3.	1.	-0.	1.00	82.	11.	92.
5	TAN	1	5	-0.	7.	0.	3.	-1.	0.	1.00	82.	11.	92.
			36	0.	-3.	-0.	-5.	1.	-0.	1.57	82.	27.	109.
6	BEND	1	36	-0.	-0.	3.	5.	-0.	-1.	1.57	60.	11.	71.
			7	-2.	0.	-2.	-3.	-1.	5.	1.57	60.	11.	71.
7	BEND	1	7	2.	-0.	2.	3.	1.	-5.	1.57	60.	11.	71.
			37	-2.	0.	-0.	1.	-3.	6.	1.57	60.	12.	72.
8	TAN	1	37	2.	0.	0.	-1.	-6.	-3.	1.57	82.	30.	112.
			30	0.	-0.	-0.	0.	6.	8.	1.00	82.	29.	111.
9	TAN	1	30	-0.	0.	0.	-0.	-6.	-8.	1.00	82.	29.	111.
			38	2.	-0.	-0.	-1.	6.	-5.	1.57	82.	36.	117.
10	BEND	1	38	0.	-2.	0.	5.	1.	-6.	1.57	60.	14.	74.
			10	-0.	3.	0.	-4.	-1.	7.	1.57	60.	16.	76.
11	BEND	1	10	0.	-3.	-0.	4.	1.	-7.	1.57	60.	16.	76.
			39	-0.	3.	0.	-2.	-1.	8.	1.57	60.	17.	77.
12	TAN	1	39	-3.	-0.	0.	1.	-8.	2.	1.57	39.	245.	283.
			31	3.	0.	-0.	-1.	8.	-7.	1.00	39.	194.	233.
13	TAN	1	31	-3.	-0.	0.	1.	-8.	7.	1.00	82.	34.	116.
			40	4.	0.	-0.	-1.	8.	-12.	1.57	82.	72.	154.
14	BEND	1	40	-0.	4.	-0.	-12.	-1.	-8.	1.57	60.	28.	88.
			13	0.	-4.	0.	17.	2.	3.	1.57	60.	32.	92.
15	BEND	1	13	-0.	4.	-0.	-17.	-2.	-3.	1.57	60.	32.	92.
			41	0.	-4.	-0.	19.	2.	-4.	1.57	60.	37.	97.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	-4.	0.	0.	2.	4.	19.	1.57	82.	93.	175.
			15	5.	-0.	-0.	-2.	-4.	-39.	1.00	82.	122.	203.
17	TAN	1	15	6.	0.	-0.	2.	4.	39.	1.00	82.	122.	203.
			16	1.	-0.	0.	-1.	-4.	36.	1.00	82.	111.	193.
18	TAN	1	16	-1.	0.	-0.	1.	4.	-36.	1.00	82.	111.	193.
			17	7.	-0.	0.	1.	-4.	-72.	1.00	82.	221.	303.
19	TAN	1	17	6.	0.	-0.	11.	-4.	74.	1.00	82.	229.	311.
			18	-4.	-0.	0.	-7.	4.	-27.	1.57	82.	136.	218.
20	TAN	1	18	4.	0.	-0.	7.	-4.	27.	1.57	82.	136.	218.
			42	0.	-0.	0.	0.	4.	11.	1.57	82.	56.	138.
21	BEND	1	42	-0.	0.	0.	-0.	11.	-4.	1.57	60.	22.	82.
			20	0.	-0.	-1.	3.	-11.	2.	1.57	60.	22.	82.
22	BEND	1	20	-0.	0.	1.	-3.	11.	-2.	1.57	60.	22.	82.
			43	-0.	-0.	-1.	4.	-11.	-1.	1.57	60.	23.	83.
23	TAN	1	43	-0.	1.	0.	4.	1.	11.	1.57	39.	331.	369.
			32	0.	-2.	-0.	-6.	-1.	-13.	1.00	39.	255.	294.
24	TAN	1	32	-0.	2.	0.	6.	1.	13.	1.00	82.	44.	126.
			44	0.	-3.	-0.	-7.	-1.	-14.	1.57	82.	78.	160.
25	BEND	1	44	-0.	-0.	3.	7.	-14.	1.	1.57	60.	31.	91.
			23	-2.	0.	-3.	-6.	13.	5.	1.57	60.	30.	90.
26	BEND	1	23	2.	-0.	3.	6.	-13.	-5.	1.57	60.	30.	90.
			45	-4.	0.	-0.	-1.	10.	8.	1.57	60.	24.	84.
27	TAN	1	45	-4.	0.	-0.	-1.	-8.	-10.	1.57	39.	350.	388.
			33	5.	-0.	0.	2.	8.	-1.	1.00	39.	147.	186.
28	TAN	1	33	-5.	0.	-0.	-2.	-8.	1.	1.00	82.	26.	107.
			46	5.	-0.	0.	3.	8.	-13.	1.57	82.	77.	158.
29	BEND	1	46	-0.	-5.	0.	13.	-3.	-8.	1.57	60.	30.	90.
			26	-0.	6.	-1.	-10.	4.	17.	1.57	60.	39.	99.
30	BEND	1	26	0.	-6.	1.	10.	-4.	-17.	1.57	60.	39.	99.
			47	-0.	6.	-0.	-1.	3.	22.	1.57	60.	42.	102.

LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	-6.	0.	0.	-3.	-22.	1.	1.57	82.	106.	188.
			28	10.	-0.	-0.	-3.	22.	-116.	1.57	82.	570.	652.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: HORIZONTAL -X

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	43	-0.001460767	0.000076815	-0.000329119
2	32	-0.001459966	0.000130612	-0.000188640
3	20	-0.001438530	0.000023531	-0.000338131

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	31	570.	31	652.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	x M O M E N T S (IN-LBS) M1	M2	M3
1	13.	-0.	0.	-1.	-45.	-0.
5	0.	0.	-0.	-0.	0.	-0.
15	11.	-0.	0.	0.	-0.	-0.
17	13.	-0.	0.	12.	8.	-2.
28	10.	0.	-0.	-3.	116.	22.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 4
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 4
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL +Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 5
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.000002132	0.000009677	-0.000000553	0.000002679	-0.000001206	-0.000001371
5	0.000002718	0.0	0.0	0.000001360	0.000005422	-0.000002685
7	0.000003567	0.000101873	0.000204629	0.000000006	0.000013268	-0.000001951
10	0.000025676	0.000097982	0.000134319	-0.000011725	0.000010922	-0.000000824
13	0.000000797	0.000043134	0.000076247	-0.000018554	0.000008475	-0.000000059
15	0.0	0.000039278	0.0	-0.000012976	0.000007841	-0.000000024
16	0.000000168	0.000023598	-0.000090832	0.000003228	0.000003886	0.000000006
17	0.0	0.0	0.0	0.0	0.0	0.0
18	0.000027978	0.000003955	0.000014058	0.000002716	-0.000002456	-0.000004502
20	0.000008422	0.000015446	0.000079979	0.000002067	-0.000007545	0.000014384
23	-0.000015017	0.000370145	0.000192648	-0.000018470	-0.000014427	0.000038258
26	-0.000132131	0.000373212	0.000013568	-0.000030863	-0.000012954	0.000007144
28	0.0	0.0	0.0	0.0	0.0	0.0
30	0.000017692	0.000101419	0.000199064	-0.000003322	0.000012077	-0.000001188
31	0.000012609	0.000072052	0.000107642	-0.000020059	0.000008702	-0.000000094
32	0.000001976	0.000203213	0.000141558	-0.000017214	-0.000014462	0.000041992
33	-0.000108926	0.000386729	0.000119709	-0.000029102	-0.000012908	0.000009459
34	0.000001093	0.000006159	-0.000000069	0.000002307	-0.000000745	-0.000001140
35	0.000002739	0.000012625	-0.000002109	0.000002714	-0.000001583	-0.000001491
36	0.000002698	0.000099710	0.000190409	0.000000079	0.000013372	-0.000002425
37	0.000005440	0.000102611	0.000210395	-0.000000210	0.000013160	-0.000001742
38	0.000026451	0.000099374	0.000140795	-0.000010729	0.000010946	-0.000000835
39	0.000022533	0.000093829	0.000128270	-0.000012592	0.000010884	-0.000000838
40	0.000003537	0.000049542	0.000085651	-0.000019457	0.000008519	-0.000000038
41	-0.000000136	0.000040942	0.000065854	-0.000017492	0.000008448	-0.000000059
42	0.000021922	0.000009449	0.000074303	0.000002375	-0.000007506	0.000011132
43	0.000001579	0.000032673	0.000088976	0.000001958	-0.000007732	0.000017118
44	0.000002090	0.000328354	0.000185295	-0.000018262	-0.000014568	0.000040163
45	-0.000054428	0.000386667	0.000179140	-0.000018956	-0.000014277	0.000036299
46	-0.000129968	0.000386692	0.000045880	-0.000030080	-0.000012795	0.000007870
47	-0.000121347	0.000339953	-0.000000131	-0.000031466	-0.000012914	0.000006911

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	3.	-11.	3.	-2.	1.57	82.	55.	137.
			34	-0.	-1.	-2.	3.	-3.	2.	1.57	82.	20.	102.
2	BEND	1	34	-0.	2.	1.	3.	-2.	3.	1.57	60.	8.	68.
			3	-0.	-2.	-0.	-1.	2.	-1.	1.57	60.	5.	65.
3	BEND	1	3	0.	2.	0.	1.	-2.	1.	1.57	60.	5.	65.
			35	-1.	-1.	-0.	0.	1.	-0.	1.57	60.	3.	63.
4	TAN	1	35	-1.	0.	-1.	1.	0.	0.	1.57	82.	7.	89.
			5	-3.	-0.	1.	8.	-0.	14.	1.00	82.	50.	132.
5	TAN	1	5	-3.	0.	0.	-8.	0.	-14.	1.00	82.	50.	132.
			36	-1.	-0.	-0.	-0.	-0.	-3.	1.57	82.	14.	96.
6	BEND	1	36	1.	-0.	0.	0.	-3.	0.	1.57	60.	6.	66.
			7	-1.	0.	1.	-1.	1.	-0.	1.57	60.	3.	63.
7	BEND	1	7	1.	-0.	-1.	1.	-1.	0.	1.57	60.	3.	63.
			37	-0.	0.	2.	-1.	1.	1.	1.57	60.	3.	63.
8	TAN	1	37	0.	-2.	0.	1.	-1.	1.	1.57	82.	8.	90.
			30	-0.	4.	-0.	-5.	1.	-0.	1.00	82.	16.	98.
9	TAN	1	30	0.	-4.	0.	5.	-1.	0.	1.00	82.	16.	98.
			38	-0.	6.	-0.	-9.	1.	-0.	1.57	82.	45.	127.
10	BEND	1	38	0.	0.	-6.	0.	9.	-1.	1.57	60.	18.	78.
			10	2.	-0.	6.	0.	-9.	1.	1.57	60.	17.	77.
11	BEND	1	10	-2.	0.	-6.	-0.	9.	-1.	1.57	60.	17.	77.
			39	4.	-0.	5.	0.	-7.	1.	1.57	60.	13.	73.
12	TAN	1	39	0.	-5.	-4.	7.	-1.	-0.	1.57	39.	193.	232.
			31	-0.	5.	5.	-0.	1.	0.	1.00	39.	16.	55.
13	TAN	1	31	0.	-5.	-5.	0.	-1.	-0.	1.00	82.	3.	85.
			40	-0.	6.	5.	7.	1.	1.	1.57	82.	34.	116.
14	BEND	1	40	5.	-0.	-6.	1.	7.	-1.	1.57	60.	14.	74.
			13	-3.	0.	7.	-0.	-9.	1.	1.57	60.	18.	78.
15	BEND	1	13	3.	-0.	-7.	0.	9.	-1.	1.57	60.	18.	78.
			41	0.	0.	8.	0.	-10.	1.	1.57	60.	19.	79.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	-8.	0.	-10.	-1.	0.	1.57	82.	48.	130.
			15	-0.	9.	-0.	8.	1.	-0.	1.00	82.	24.	106.
17	TAN	1	15	0.	-9.	0.	-8.	-1.	0.	1.00	82.	24.	106.
			16	-0.	15.	-0.	2.	1.	-0.	1.00	82.	7.	88.
18	TAN	1	16	0.	-15.	0.	-2.	-1.	0.	1.00	82.	7.	88.
			17	-0.	22.	-0.	-4.	1.	0.	1.00	82.	12.	94.
19	TAN	1	17	-1.	11.	0.	-3.	-2.	-8.	1.00	82.	28.	109.
			18	1.	-9.	-0.	2.	2.	1.	1.57	82.	12.	94.
20	TAN	1	18	-1.	9.	0.	-2.	-2.	-1.	1.57	82.	12.	94.
			42	1.	-4.	-0.	-2.	2.	-15.	1.57	82.	74.	156.
21	BEND	1	42	-1.	-0.	4.	2.	-15.	-2.	1.57	60.	29.	89.
			20	-2.	0.	-3.	-0.	14.	3.	1.57	60.	28.	88.
22	BEND	1	20	2.	-0.	3.	0.	-14.	-3.	1.57	60.	28.	88.
			43	-3.	0.	-1.	2.	11.	2.	1.57	60.	21.	81.
23	TAN	1	43	-3.	1.	-0.	2.	-2.	-11.	1.57	39.	308.	347.
			32	2.	-1.	0.	-1.	2.	-2.	1.00	39.	56.	95.
24	TAN	1	32	-2.	1.	-0.	1.	-2.	2.	1.00	82.	10.	92.
			44	2.	-1.	0.	-0.	2.	-8.	1.57	82.	40.	122.
25	BEND	1	44	-2.	0.	1.	0.	-8.	-2.	1.57	60.	16.	76.
			23	0.	-0.	-1.	2.	9.	2.	1.57	60.	18.	78.
26	BEND	1	23	-0.	0.	1.	-2.	-9.	-2.	1.57	60.	18.	78.
			45	-1.	-0.	-1.	3.	9.	-0.	1.57	60.	17.	77.
27	TAN	1	45	-1.	1.	0.	3.	0.	-9.	1.57	39.	252.	290.
			33	1.	0.	-0.	-3.	-0.	7.	1.00	39.	128.	167.
28	TAN	1	33	-1.	-0.	0.	3.	0.	-7.	1.00	82.	22.	104.
			46	1.	1.	-0.	-4.	-0.	4.	1.57	82.	28.	110.
29	BEND	1	46	0.	-1.	-1.	-4.	4.	0.	1.57	60.	11.	71.
			26	1.	1.	1.	2.	-3.	-3.	1.57	60.	9.	69.
30	BEND	1	26	-1.	-1.	-1.	-2.	3.	3.	1.57	60.	9.	69.
			47	2.	1.	0.	-2.	-2.	-3.	1.57	60.	8.	68.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	-1.	-0.	-2.	2.	3.	2.	1.57	82.	19.	101.
			28	1.	0.	5.	47.	-3.	-14.	1.57	82.	239.	320.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: HORIZONTAL +Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	26	-0.000132131	0.000373212	0.000013568
2	33	-0.000108926	0.000386729	0.000119709
3	37	0.000005440	0.000102611	0.000210395

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	23	308.	23	347.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-3.	1.	-11.	2.	3.
5	0.	-6.	-1.	0.	-0.	0.
15	-0.	0.	0.	-0.	0.	-0.
17	-1.	-33.	0.	-7.	1.	8.
28	1.	-5.	0.	47.	14.	-3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 5
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 5
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
** HORIZONTAL -Y

RESULTING DISPLACEMENTS FOR LOAD NUMBER 6
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	0.0	0.0	0.0	0.0
3	-0.000002132	-0.000009677	0.000000553	-0.000002679	0.000001206	0.000001371
5	-0.000002718	0.0	0.0	-0.000001360	-0.000005422	0.000002685
7	-0.000003567	-0.000101873	-0.000204629	-0.000000006	-0.000013268	0.000001951
10	-0.000025676	-0.000097982	-0.000134319	0.000011725	-0.000010922	0.000000824
13	-0.000000797	-0.000043134	-0.000076247	0.000018554	-0.000008475	0.000000059
15	0.0	-0.000039278	0.0	0.000012976	-0.000007841	0.000000024
16	-0.000000168	-0.000023598	0.000090832	-0.000003228	-0.000003886	-0.000000006
17	0.0	0.0	0.0	0.0	0.0	0.0
18	-0.000027978	-0.000003955	-0.000014058	-0.000002716	0.000002456	0.000004502
20	-0.000008422	-0.000015446	-0.000079979	-0.000002067	0.000007545	-0.000014384
23	0.000015017	-0.000370145	-0.000192648	0.000018470	0.000014427	-0.000038258
26	0.000132131	-0.000373212	-0.000013568	0.000030863	0.000012954	-0.000007144
28	0.0	0.0	0.0	0.0	0.0	0.0
30	-0.000017692	-0.000101419	-0.000199064	0.000003322	-0.000012077	0.000001188
31	-0.000012609	-0.000072052	-0.000107642	0.000020059	-0.000008702	0.000000094
32	-0.000001976	-0.000203213	-0.000141558	0.000017214	0.000014462	-0.000041992
33	0.000108926	-0.000386729	-0.000119709	0.000029102	0.000012908	-0.000009459
34	-0.000001093	-0.000006159	0.000000069	-0.000002307	0.000000745	0.000001140
35	-0.000002739	-0.000012625	0.000002109	-0.000002714	0.000001583	0.000001491
36	-0.000002698	-0.000099710	-0.000190409	-0.000000079	-0.000013372	0.000002425
37	-0.000005440	-0.000102611	-0.000210395	0.000000210	-0.000013160	0.000001742
38	-0.000026451	-0.000099374	-0.000140795	0.000010729	-0.000010946	0.000000835
39	-0.000022533	-0.000093829	-0.000128270	0.000012592	-0.000010884	0.000000838
40	-0.000003537	-0.000049542	-0.000085651	0.000019457	-0.000008519	0.000000038
41	0.000000136	-0.000040942	-0.000065854	0.000017492	-0.000008448	0.000000059
42	-0.000021922	-0.000009449	-0.000074303	-0.000002375	0.000007506	-0.000011132
43	-0.000001579	-0.000032673	-0.000088976	-0.000001958	0.000007732	-0.000017118
44	-0.000002090	-0.000328354	-0.000185295	0.000018262	0.000014568	-0.000040163
45	0.000054428	-0.000386667	-0.000179140	0.000018956	0.000014277	-0.000036299
46	0.000129968	-0.000386692	-0.000045880	0.000030080	0.000012795	-0.000007870
47	0.000121347	-0.000339953	0.000000131	0.000031466	0.000012914	-0.000006911

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-0.	-1.	-3.	11.	-3.	2.	1.57	82.	55.	137.
			34	0.	1.	2.	-3.	3.	-2.	1.57	82.	20.	102.
2	BEND	1	34	0.	-2.	-1.	-3.	2.	-3.	1.57	60.	8.	68.
			3	0.	2.	0.	1.	-2.	1.	1.57	60.	5.	65.
3	BEND	1	3	-0.	-2.	-0.	-1.	2.	-1.	1.57	60.	5.	65.
			35	1.	1.	0.	-0.	-1.	0.	1.57	60.	3.	63.
4	TAN	1	35	1.	-0.	1.	-1.	-0.	-0.	1.57	82.	7.	89.
			5	3.	0.	-1.	-8.	0.	-14.	1.00	82.	50.	132.
5	TAN	1	5	3.	-0.	-0.	8.	-0.	14.	1.00	82.	50.	132.
			36	1.	0.	0.	0.	0.	3.	1.57	82.	14.	96.
6	BEND	1	36	-1.	0.	-0.	-0.	3.	-0.	1.57	60.	6.	66.
			7	1.	-0.	-1.	1.	-1.	0.	1.57	60.	3.	63.
7	BEND	1	7	-1.	0.	1.	-1.	1.	-0.	1.57	60.	3.	63.
			37	0.	-0.	-2.	1.	-1.	-1.	1.57	60.	3.	63.
8	TAN	1	37	-0.	2.	-0.	-1.	1.	-1.	1.57	82.	8.	90.
			30	0.	-4.	0.	5.	-1.	0.	1.00	82.	16.	98.
9	TAN	1	30	-0.	4.	-0.	-5.	1.	-0.	1.00	82.	16.	98.
			38	0.	-6.	0.	9.	-1.	0.	1.57	82.	45.	127.
10	BEND	1	38	-0.	-0.	6.	-0.	-9.	1.	1.57	60.	18.	78.
			10	-2.	0.	-6.	-0.	9.	-1.	1.57	60.	17.	77.
11	BEND	1	10	2.	-0.	6.	0.	-9.	1.	1.57	60.	17.	77.
			39	-4.	0.	-5.	-0.	7.	-1.	1.57	60.	13.	73.
12	TAN	1	39	-0.	5.	4.	-7.	1.	0.	1.57	39.	193.	232.
			31	0.	-5.	-5.	0.	-1.	-0.	1.00	39.	16.	55.
13	TAN	1	31	-0.	5.	5.	-0.	1.	0.	1.00	82.	3.	85.
			40	0.	-6.	-5.	-7.	-1.	-1.	1.57	82.	34.	116.
14	BEND	1	40	-5.	0.	6.	-1.	-7.	1.	1.57	60.	14.	74.
			13	3.	-0.	-7.	0.	9.	-1.	1.57	60.	18.	78.
15	BEND	1	13	-3.	0.	7.	-0.	-9.	1.	1.57	60.	18.	78.
			41	-0.	-0.	-8.	-0.	10.	-1.	1.57	60.	19.	79.

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	-0.	8.	-0.	10.	1.	-0.	1.57	82.	48.	130.
			15	0.	-9.	0.	-8.	-1.	0.	1.00	82.	24.	106.
17	TAN	1	15	-0.	9.	-0.	8.	1.	-0.	1.00	82.	24.	106.
			16	0.	-15.	0.	-2.	-1.	0.	1.00	82.	7.	88.
18	TAN	1	16	-0.	15.	-0.	2.	1.	-0.	1.00	82.	7.	88.
			17	0.	-22.	0.	4.	-1.	-0.	1.00	82.	12.	94.
19	TAN	1	17	1.	-11.	-0.	3.	2.	8.	1.00	82.	28.	109.
			18	-1.	9.	0.	-2.	-2.	-1.	1.57	82.	12.	94.
20	TAN	1	18	1.	-9.	-0.	2.	2.	1.	1.57	82.	12.	94.
			42	-1.	4.	0.	2.	-2.	15.	1.57	82.	74.	156.
21	BEND	1	42	1.	0.	-4.	-2.	15.	2.	1.57	60.	29.	89.
			20	2.	-0.	3.	0.	-14.	-3.	1.57	60.	28.	88.
22	BEND	1	20	-2.	0.	-3.	-0.	14.	3.	1.57	60.	28.	88.
			43	3.	-0.	1.	-2.	-11.	-2.	1.57	60.	21.	81.
23	TAN	1	43	3.	-1.	0.	-2.	2.	11.	1.57	39.	308.	347.
			32	-2.	1.	-0.	1.	-2.	2.	1.00	39.	56.	95.
24	TAN	1	32	2.	-1.	0.	-1.	2.	-2.	1.00	82.	10.	92.
			44	-2.	1.	-0.	0.	-2.	8.	1.57	82.	40.	122.
25	BEND	1	44	2.	-0.	-1.	-0.	8.	2.	1.57	60.	16.	76.
			23	-0.	0.	1.	-2.	-9.	-2.	1.57	60.	18.	78.
26	BEND	1	23	0.	-0.	-1.	2.	9.	2.	1.57	60.	18.	78.
			45	1.	0.	1.	-3.	-9.	0.	1.57	60.	17.	77.
27	TAN	1	45	1.	-1.	-0.	-3.	-0.	9.	1.57	39.	252.	290.
			33	-1.	-0.	0.	3.	0.	-7.	1.00	39.	128.	167.
28	TAN	1	33	1.	0.	-0.	-3.	-0.	7.	1.00	82.	22.	104.
			46	-1.	-1.	0.	4.	0.	-4.	1.57	82.	28.	110.
29	BEND	1	46	-0.	1.	1.	4.	-4.	-0.	1.57	60.	11.	71.
			26	-1.	-1.	-1.	-2.	3.	3.	1.57	60.	9.	69.
30	BEND	1	26	1.	1.	1.	2.	-3.	-3.	1.57	60.	9.	69.
			47	-2.	-1.	-0.	2.	2.	3.	1.57	60.	8.	68.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	1.	0.	2.	-2.	-3.	-2.	1.57	82.	19.	101.
			28	-1.	-0.	-5.	-47.	3.	14.	1.57	82.	239.	320.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: HORIZONTAL -Y

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	26	0.000132131	-0.000373212	-0.000013568
2	33	0.000108926	-0.000386729	-0.000119709
3	37	-0.000005440	-0.000102611	-0.000210395

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	23	308.	23	347.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	-0.	3.	-1.	11.	-2.	-3.
5	-0.	6.	1.	-0.	0.	-0.
15	0.	-0.	-0.	0.	-0.	0.
17	1.	33.	-0.	7.	-1.	-8.
28	-1.	5.	-0.	-47.	-14.	3.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 6
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 6
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

RESULTING DISPLACEMENTS FOR LOAD NUMBER 7
(IN GLOBAL COORDINATE SYSTEM)

JNT NO.	DISPLACEMENT 1 INCHES	DISPLACEMENT 2 INCHES	DISPLACEMENT 3 INCHES	ROTATION 1 RADIANS	ROTATION 2 RADIANS	ROTATION 3 RADIANS
1	0.0	0.0	-0.009000000	0.0	0.0	0.0
3	-0.000352686	0.001123921	-0.012925565	0.000314615	0.000130085	-0.000559381
5	-0.019367728	0.0	0.0	0.000188004	0.000955228	0.002631394
7	-0.038523044	-0.075783968	0.015776746	0.000001851	0.000537815	0.002403806
10	-0.022734467	-0.058568873	0.010684695	-0.000730564	-0.000631231	-0.002419461
13	-0.011741415	-0.058778420	0.004550550	-0.001077940	-0.001230349	-0.002495050
15	0.0	-0.054148078	0.0	-0.000755980	-0.001133241	-0.002034089
16	0.014238466	-0.026834447	-0.005291801	0.000188032	-0.000561606	0.000505932
17	0.0	0.0	0.0	0.0	0.0	0.0
18	-0.002983769	0.008732427	0.002649253	0.000534431	-0.000143468	0.000549024
20	-0.011461448	0.027675085	0.018244520	0.000828558	-0.000440703	-0.000145715
23	-0.001015170	0.010756470	0.023237459	-0.000440070	-0.000415803	-0.002222684
26	0.006094679	0.016088113	0.015801020	-0.001392318	0.000500115	-0.000366972
28	0.0	0.0	0.0	0.0	0.0	0.0
30	-0.041526064	-0.067551315	0.015023924	-0.000237750	-0.000045656	-0.001153686
31	-0.017448619	-0.058611691	0.007726781	-0.001168538	-0.001231671	-0.002547028
32	-0.005967647	0.019964747	0.021532640	-0.000355312	-0.000484264	-0.002391087
33	0.004791342	0.013233840	0.020861462	-0.001242959	0.000409869	-0.000506104
34	0.000134668	0.000578056	-0.011925522	0.000230661	0.000029379	-0.000468374
35	-0.001456976	0.001978834	-0.013149135	0.000356875	0.000257710	-0.000709279
36	-0.036310341	-0.073195755	0.015154812	0.000028260	0.000616436	0.003158448
37	-0.041050993	-0.075697482	0.015987638	-0.000035794	0.000497965	0.001611710
38	-0.024195384	-0.059042245	0.011201430	-0.000673281	-0.000613496	-0.002380332
39	-0.021327179	-0.058351442	0.009991411	-0.000779551	-0.000658761	-0.002451090
40	-0.013376839	-0.058882214	0.005413719	-0.001130665	-0.001244373	-0.002520622
41	-0.010168094	-0.058344498	0.003835420	-0.001016907	-0.001221065	-0.002454583
42	-0.011949111	0.026682422	0.017160606	0.000845231	-0.000438375	0.000022942
43	-0.010335520	0.027847208	0.019081526	0.000821246	-0.000448631	-0.000300157
44	-0.003045714	0.012757890	0.022961792	-0.000419626	-0.000451373	-0.002324592
45	0.001704955	0.010828797	0.022930328	-0.000480494	-0.000392941	-0.002106563
46	0.005902134	0.015659515	0.017671362	-0.001324832	0.000475695	-0.000415520
47	0.005694911	0.014996223	0.014141835	-0.001440538	0.000531405	-0.000345894

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7. LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	-185.	-29.	241.	-1023.	1034.	-194.	2.10	82.	9445.	9527.
			34	185.	29.	-241.	301.	-1034.	-362.	2.10	82.	7313.	7395.
2	BEND	1	34	185.	241.	-29.	301.	362.	1034.	2.10	60.	2895.	2955.
			3	-110.	-241.	152.	-688.	-546.	-624.	2.10	60.	2746.	2806.
3	BEND	1	3	110.	241.	-152.	688.	546.	624.	2.10	60.	2746.	2806.
			35	29.	-241.	185.	-673.	-596.	-60.	2.10	60.	2296.	2356.
4	TAN	1	35	-241.	-185.	29.	-596.	60.	-673.	2.10	82.	5800.	5882.
			5	241.	185.	-29.	53.	-60.	-3781.	1.00	82.	11594.	11676.
5	TAN	1	5	403.	-185.	25.	-53.	60.	3781.	1.00	82.	11594.	11676.
			36	-403.	185.	-25.	-386.	-60.	3263.	2.10	82.	21154.	21236.
6	BEND	1	36	403.	-25.	-185.	386.	3263.	60.	2.10	60.	8374.	8434.
			7	-154.	25.	416.	-342.	-3608.	241.	2.10	60.	9256.	9316.
7	BEND	1	7	154.	-25.	-416.	342.	3608.	-241.	2.10	60.	9256.	9316.
			37	185.	25.	402.	-98.	-3588.	423.	2.10	60.	9211.	9271.
8	TAN	1	37	-185.	-403.	25.	98.	-423.	-3588.	2.10	82.	23269.	23351.
			30	185.	403.	-25.	-311.	423.	2012.	1.00	82.	6376.	6457.
9	TAN	1	30	-185.	-403.	25.	311.	-423.	-2012.	1.00	82.	6376.	6457.
			38	185.	403.	-25.	-533.	423.	366.	2.10	82.	4978.	5060.
10	BEND	1	38	25.	-185.	-403.	-366.	533.	-423.	2.10	60.	1970.	2030.
			10	131.	185.	381.	394.	-502.	272.	2.10	60.	1768.	1828.
11	BEND	1	10	-131.	-185.	-381.	-394.	502.	-272.	2.10	60.	1768.	1828.
			39	267.	185.	302.	362.	-383.	122.	2.10	60.	1378.	1438.
12	TAN	1	39	-185.	-302.	-267.	383.	-122.	-362.	2.10	39.	20113.	20152.
			31	185.	302.	267.	17.	122.	83.	1.00	39.	2636.	2675.
13	TAN	1	31	-185.	-302.	-267.	-17.	-122.	-83.	1.00	82.	456.	538.
			40	185.	302.	267.	417.	122.	-195.	2.10	82.	3068.	3150.
14	BEND	1	40	267.	185.	-302.	-195.	417.	-122.	2.10	60.	1214.	1274.
			13	-131.	-185.	381.	333.	-536.	17.	2.10	60.	1609.	1669.
15	BEND	1	13	131.	185.	-381.	-333.	536.	-17.	2.10	60.	1609.	1669.
			41	25.	-185.	402.	421.	-568.	-133.	2.10	60.	1832.	1892.

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	-185.	-402.	25.	-568.	133.	421.	2.10	82.	4628.	4710.
			15	185.	402.	-25.	458.	-133.	-1233.	1.00	82.	4051.	4133.
17	TAN	1	15	33.	-402.	12.	-458.	133.	1233.	1.00	82.	4051.	4133.
			16	-33.	402.	-12.	112.	-133.	-302.	1.00	82.	1067.	1149.
18	TAN	1	16	33.	-402.	12.	-112.	133.	302.	1.00	82.	1067.	1149.
			17	-33.	402.	-12.	-228.	-133.	613.	1.00	82.	2045.	2127.
19	TAN	1	17	56.	-138.	27.	-631.	-106.	777.	1.00	82.	3086.	3168.
			18	-56.	138.	-27.	391.	106.	-273.	2.10	82.	3146.	3227.
20	TAN	1	18	56.	-138.	27.	-391.	-106.	273.	2.10	82.	3146.	3227.
			42	-56.	138.	-27.	-102.	106.	763.	2.10	82.	5000.	5082.
21	BEND	1	42	56.	-27.	-138.	102.	763.	-106.	2.10	60.	1979.	2039.
			20	58.	27.	137.	-26.	-761.	158.	2.10	60.	1983.	2043.
22	BEND	1	20	-58.	-27.	-137.	26.	761.	-158.	2.10	60.	1983.	2043.
			43	138.	27.	56.	66.	-639.	142.	2.10	60.	1677.	1737.
23	TAN	1	43	138.	-56.	-27.	66.	-142.	639.	2.10	39.	24471.	24510.
			32	-138.	56.	27.	54.	142.	-17.	1.00	39.	2708.	2747.
24	TAN	1	32	138.	-56.	-27.	-54.	-142.	17.	1.00	82.	469.	551.
			44	-138.	56.	27.	134.	142.	398.	2.10	82.	2856.	2938.
25	BEND	1	44	138.	27.	-56.	-134.	398.	-142.	2.10	60.	1131.	1191.
			23	-58.	-27.	137.	224.	-520.	-6.	2.10	60.	1443.	1503.
26	BEND	1	23	58.	27.	-137.	-224.	520.	6.	2.10	60.	1443.	1503.
			45	56.	-27.	138.	182.	-522.	-174.	2.10	60.	1477.	1537.
27	TAN	1	45	56.	-138.	27.	182.	174.	522.	2.10	39.	21549.	21588.
			33	-56.	138.	-27.	-249.	-174.	-382.	1.00	39.	8639.	8678.
28	TAN	1	33	56.	-138.	27.	249.	174.	382.	1.00	82.	1495.	1577.
			46	-56.	138.	-27.	-315.	-174.	-242.	2.10	82.	2793.	2875.
29	BEND	1	46	27.	56.	-138.	242.	315.	174.	2.10	60.	1106.	1166.
			26	79.	-56.	117.	-235.	-283.	23.	2.10	60.	939.	999.
30	BEND	1	26	-79.	56.	-117.	235.	283.	-23.	2.10	60.	939.	999.
			47	138.	-56.	27.	-90.	-148.	158.	2.10	60.	597.	657.

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: THERMAL

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	56.	-27.	-138.	148.	-158.	90.	2.10	82.	1509.	1591.
			28	-56.	27.	138.	1858.	158.	721.	2.10	82.	12871.	12953.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: THERMAL

LOCATIONS OF MAXIMUM DISPLACEMENTS

DIRECTION NUMBER	JOINT NUMBER	DISPLACEMENT 1 (INCHES)	DISPLACEMENT 2 (INCHES)	DISPLACEMENT 3 (INCHES)
1	30	-0.041526064	-0.067551315	0.015023924
2	7	-0.038523044	-0.075783968	0.015776746
3	23	-0.001015170	0.010756470	0.023237459

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	23	24471.	23	24510.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	-185.	-241.	-29.	-1023.	194.	1034.
5	-0.	643.	4.	0.	-0.	-0.
15	218.	0.	13.	-0.	-0.	-0.
17	23.	-264.	-15.	-859.	238.	-1390.
28	-56.	-138.	27.	1858.	-721.	158.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 7
FOR END FORCE SUPERPOSITION: LOGICAL UNIT 1 FILE NUMBER 7
FOR DISPLACEMENT SUPERPOSITION: LOGICAL UNIT 4

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* CPU SECONDS ** THIS STEP "ST3D" TIME IS    7.31 ** LAST STEP "UPDT" TIME IS    4.95 ** DELTA TIME IS    2.36 *
* ELAPSED SECONDS                           127.1                                76.8                      50.3 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    7.32 ** LAST STEP "ST3D" TIME IS    7.31 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                           127.2                               127.1                       0.1 *
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SUPERPOSITION OF LOADINGS

NUMBER OF ELEMENTS 31
NUMBER OF JOINTS 32
NUMBER OF LOADING CASES 16

LOADS COMBINED FOR SUPERPOSITION

LOADING CASE	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR	LOAD	LOAD FACTOR
1	1	1.0000	2	0.9600	3	0.6400				
2	1	1.9600	3	0.6400						
3	1	1.0000	2	0.9600	5	0.6400				
4	1	1.9600	5	0.6400						
5	1	1.0000	2	0.9600	4	0.6400				
6	1	1.9600	4	0.6400						
7	1	1.0000	2	0.9600	6	0.6400				
8	1	1.9600	6	0.6400						
9	1	1.0000	2	1.5000	3	1.0000				
10	1	2.5000	3	1.0000						
11	1	1.0000	2	1.5000	5	1.0000				
12	1	2.5000	5	1.0000						
13	1	1.0000	2	1.5000	4	1.0000				
14	1	2.5000	4	1.0000						
15	1	1.0000	2	1.5000	6	1.0000				
16	1	2.5000	6	1.0000						

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* CPU SECONDS ** THIS STEP "COMB" TIME IS    7.48 ** LAST STEP "BEGP" TIME IS    7.32 ** DELTA TIME IS    0.16 *
* ELAPSED SECONDS                          135.8                                127.2                      8.6 *
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WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	8.	0.	0.	19.	0.	49.	1.57	82.	255.	337.
			34	8.	1.	0.	18.	0.	25.	1.57	82.	150.	232.
2	BEND	1	34	8.	0.	1.	18.	25.	0.	1.57	60.	60.	120.
			3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
3	BEND	1	3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
			35	4.	0.	7.	1.	23.	18.	1.57	60.	55.	115.
4	TAN	1	35	0.	7.	4.	23.	18.	1.	1.57	82.	140.	221.
			5	0.	4.	12.	124.	18.	6.	1.00	82.	385.	467.
5	TAN	1	5	0.	4.	11.	124.	18.	6.	1.00	82.	385.	467.
			36	0.	2.	4.	11.	18.	1.	1.57	82.	101.	183.
6	BEND	1	36	0.	4.	2.	11.	1.	18.	1.57	60.	40.	100.
			7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
7	BEND	1	7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
			37	1.	1.	0.	21.	2.	15.	1.57	60.	49.	109.
8	TAN	1	37	1.	0.	1.	21.	15.	2.	1.57	82.	124.	206.
			30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
9	TAN	1	30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
			38	2.	0.	7.	26.	15.	4.	1.57	82.	147.	229.
10	BEND	1	38	7.	2.	0.	4.	26.	15.	1.57	60.	58.	118.
			10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
11	BEND	1	10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
			39	5.	2.	6.	8.	34.	14.	1.57	60.	72.	132.
12	TAN	1	39	2.	6.	5.	34.	14.	8.	1.57	39.	1046.	1085.
			31	2.	6.	6.	42.	14.	11.	1.00	39.	809.	848.
13	TAN	1	31	2.	6.	6.	42.	14.	11.	1.00	82.	140.	222.
			40	2.	7.	6.	51.	14.	14.	1.57	82.	264.	346.
14	BEND	1	40	6.	2.	7.	14.	51.	14.	1.57	60.	105.	165.
			13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
15	BEND	1	13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
			41	10.	3.	0.	14.	61.	14.	1.57	60.	122.	182.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	3.	0.	10.	61.	14.	14.	1.57	82.	309.	391.
			15	3.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
17	TAN	1	15	4.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
			16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
18	TAN	1	16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
			17	5.	0.	13.	126.	14.	47.	1.00	82.	416.	497.
19	TAN	1	17	5.	3.	12.	134.	25.	67.	1.00	82.	466.	547.
			18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
20	TAN	1	18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
			42	1.	3.	1.	21.	25.	24.	1.57	82.	196.	278.
21	BEND	1	42	1.	1.	3.	21.	24.	25.	1.57	60.	78.	138.
			20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
22	BEND	1	20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
			43	3.	3.	2.	22.	21.	19.	1.57	60.	69.	129.
23	TAN	1	43	3.	2.	3.	22.	19.	21.	1.57	39.	1010.	1049.
			32	3.	3.	5.	5.	19.	9.	1.00	39.	390.	429.
24	TAN	1	32	3.	3.	5.	5.	19.	9.	1.00	82.	67.	149.
			44	3.	3.	7.	20.	19.	18.	1.57	82.	161.	243.
25	BEND	1	44	3.	7.	3.	20.	18.	19.	1.57	60.	64.	124.
			23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
26	BEND	1	23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
			45	4.	9.	3.	8.	17.	32.	1.57	60.	71.	131.
27	TAN	1	45	4.	3.	9.	8.	32.	17.	1.57	39.	1029.	1068.
			33	4.	3.	10.	17.	32.	8.	1.00	39.	652.	691.
28	TAN	1	33	4.	3.	10.	17.	32.	8.	1.00	82.	113.	195.
			46	5.	3.	11.	43.	32.	13.	1.57	82.	266.	347.
29	BEND	1	46	11.	5.	3.	13.	43.	32.	1.57	60.	105.	165.
			26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
30	BEND	1	26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
			47	3.	5.	13.	25.	56.	16.	1.57	60.	121.	181.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	5.	13.	3.	56.	16.	25.	1.57	82.	306.	388.
			28	7.	20.	3.	12.	16.	80.	1.57	82.	396.	478.

SUMMARY OF RESULTS FOR LOAD NUMBER 1 LOAD TITLE: OBE + SRV XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 1 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 1 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1046.	12	1085.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	8.	-0.	0.	19.	-49.	0.
5	9.	1.	-23.	36.	249.	-13.
15	7.	-1.	-25.	220.	-27.	-55.
17	10.	-4.	-25.	260.	-38.	-114.
28	7.	-3.	20.	12.	-80.	16.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 8

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	8.	0.	0.	19.	0.	49.	1.57	82.	255.	337.
			34	8.	1.	0.	18.	0.	25.	1.57	82.	150.	232.
2	BEND	1	34	8.	0.	1.	18.	25.	0.	1.57	60.	60.	120.
			3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
3	BEND	1	3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
			35	4.	0.	7.	1.	23.	18.	1.57	60.	55.	115.
4	TAN	1	35	0.	7.	4.	23.	18.	1.	1.57	82.	140.	221.
			5	0.	4.	12.	124.	18.	6.	1.00	82.	385.	467.
5	TAN	1	5	0.	4.	11.	124.	18.	6.	1.00	82.	385.	467.
			36	0.	2.	4.	11.	18.	1.	1.57	82.	101.	183.
6	BEND	1	36	0.	4.	2.	11.	1.	18.	1.57	60.	40.	100.
			7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
7	BEND	1	7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
			37	1.	1.	0.	21.	2.	15.	1.57	60.	49.	109.
8	TAN	1	37	1.	0.	1.	21.	15.	2.	1.57	82.	124.	206.
			30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
9	TAN	1	30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
			38	2.	0.	7.	26.	15.	4.	1.57	82.	147.	229.
10	BEND	1	38	7.	2.	0.	4.	26.	15.	1.57	60.	58.	118.
			10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
11	BEND	1	10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
			39	5.	2.	6.	8.	34.	14.	1.57	60.	72.	132.
12	TAN	1	39	2.	6.	5.	34.	14.	8.	1.57	39.	1046.	1085.
			31	2.	6.	6.	42.	14.	11.	1.00	39.	809.	847.
13	TAN	1	31	2.	6.	6.	42.	14.	11.	1.00	82.	140.	222.
			40	2.	7.	6.	51.	14.	14.	1.57	82.	264.	346.
14	BEND	1	40	6.	2.	7.	14.	51.	14.	1.57	60.	105.	165.
			13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
15	BEND	1	13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
			41	10.	3.	0.	14.	61.	14.	1.57	60.	122.	182.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	3.	0.	10.	61.	14.	14.	1.57	82.	309.	391.
			15	3.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
17	TAN	1	15	4.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
			16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
18	TAN	1	16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
			17	5.	0.	13.	126.	14.	47.	1.00	82.	416.	497.
19	TAN	1	17	5.	3.	12.	134.	25.	67.	1.00	82.	466.	547.
			18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
20	TAN	1	18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
			42	1.	3.	1.	21.	25.	24.	1.57	82.	196.	278.
21	BEND	1	42	1.	1.	3.	21.	24.	25.	1.57	60.	78.	138.
			20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
22	BEND	1	20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
			43	3.	3.	2.	22.	21.	19.	1.57	60.	69.	129.
23	TAN	1	43	3.	2.	3.	22.	19.	21.	1.57	39.	1010.	1049.
			32	3.	3.	5.	5.	19.	9.	1.00	39.	390.	429.
24	TAN	1	32	3.	3.	5.	5.	19.	9.	1.00	82.	67.	149.
			44	3.	3.	7.	20.	19.	18.	1.57	82.	161.	243.
25	BEND	1	44	3.	7.	3.	20.	18.	19.	1.57	60.	64.	124.
			23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
26	BEND	1	23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
			45	4.	9.	3.	8.	17.	32.	1.57	60.	71.	131.
27	TAN	1	45	4.	3.	9.	8.	32.	17.	1.57	39.	1029.	1068.
			33	4.	3.	10.	17.	32.	8.	1.00	39.	652.	691.
28	TAN	1	33	4.	3.	10.	17.	32.	8.	1.00	82.	113.	195.
			46	5.	3.	11.	43.	32.	13.	1.57	82.	266.	347.
29	BEND	1	46	11.	5.	3.	13.	43.	32.	1.57	60.	105.	165.
			26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
30	BEND	1	26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
			47	3.	5.	13.	25.	56.	16.	1.57	60.	121.	181.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	5.	13.	3.	56.	16.	25.	1.57	82.	306.	388.
			28	7.	20.	3.	12.	16.	80.	1.57	82.	396.	478.

SUMMARY OF RESULTS FOR LOAD NUMBER 2 LOAD TITLE: OBE + SRV X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 2 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 2 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1046.	12	1085.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	8.	-0.	0.	19.	-49.	0.
5	9.	1.	-23.	36.	249.	-13.
15	7.	-1.	-25.	220.	-27.	-55.
17	10.	-4.	-25.	260.	-38.	-114.
28	7.	-3.	20.	12.	-80.	16.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 9

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	2.	25.	2.	22.	1.57	82.	163.	245.
			34	0.	1.	2.	19.	2.	22.	1.57	82.	141.	222.
2	BEND	1	34	0.	2.	1.	19.	22.	2.	1.57	60.	56.	116.
			3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
3	BEND	1	3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
			35	4.	1.	0.	1.	17.	18.	1.57	60.	47.	107.
4	TAN	1	35	1.	0.	4.	17.	18.	1.	1.57	82.	119.	201.
			5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
5	TAN	1	5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
			36	1.	0.	4.	7.	18.	3.	1.57	82.	92.	174.
6	BEND	1	36	1.	4.	0.	7.	3.	18.	1.57	60.	37.	97.
			7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
7	BEND	1	7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
			37	0.	2.	2.	21.	1.	12.	1.57	60.	46.	106.
8	TAN	1	37	0.	2.	2.	21.	12.	1.	1.57	82.	116.	198.
			30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
9	TAN	1	30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
			38	0.	4.	7.	31.	12.	2.	1.57	82.	162.	244.
10	BEND	1	38	7.	0.	4.	2.	31.	12.	1.57	60.	64.	124.
			10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
11	BEND	1	10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
			39	8.	0.	9.	7.	37.	9.	1.57	60.	75.	135.
12	TAN	1	39	0.	9.	8.	37.	9.	7.	1.57	39.	1091.	1130.
			31	0.	9.	9.	41.	9.	7.	1.00	39.	757.	796.
13	TAN	1	31	0.	9.	9.	41.	9.	7.	1.00	82.	131.	213.
			40	0.	10.	9.	54.	9.	7.	1.57	82.	269.	351.
14	BEND	1	40	9.	0.	10.	7.	54.	9.	1.57	60.	106.	166.
			13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
15	BEND	1	13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
			41	10.	0.	5.	2.	66.	11.	1.57	60.	129.	189.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	5.	10.	66.	11.	2.	1.57	82.	325.	407.
			15	0.	6.	12.	113.	11.	2.	1.00	82.	350.	432.
17	TAN	1	15	0.	6.	13.	113.	11.	2.	1.00	82.	350.	432.
			16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
18	TAN	1	16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
			17	0.	14.	13.	128.	11.	1.	1.00	82.	394.	476.
19	TAN	1	17	2.	10.	12.	129.	24.	25.	1.00	82.	410.	492.
			18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
20	TAN	1	18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
			42	2.	6.	1.	23.	24.	26.	1.57	82.	203.	285.
21	BEND	1	42	2.	1.	6.	23.	26.	24.	1.57	60.	80.	140.
			20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
22	BEND	1	20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
			43	5.	3.	2.	20.	21.	20.	1.57	60.	68.	128.
23	TAN	1	43	5.	2.	3.	20.	20.	21.	1.57	39.	993.	1032.
			32	5.	2.	5.	2.	20.	2.	1.00	39.	365.	403.
24	TAN	1	32	5.	2.	5.	2.	20.	2.	1.00	82.	63.	145.
			44	4.	2.	6.	16.	20.	14.	1.57	82.	141.	223.
25	BEND	1	44	4.	6.	2.	16.	14.	20.	1.57	60.	56.	116.
			23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
26	BEND	1	23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
			45	2.	9.	3.	9.	17.	27.	1.57	60.	62.	122.
27	TAN	1	45	2.	3.	9.	9.	27.	17.	1.57	39.	912.	951.
			33	2.	3.	10.	17.	27.	12.	1.00	39.	603.	641.
28	TAN	1	33	2.	3.	10.	17.	27.	12.	1.00	82.	104.	186.
			46	2.	3.	11.	43.	27.	7.	1.57	82.	248.	330.
29	BEND	1	46	11.	2.	3.	7.	43.	27.	1.57	60.	98.	158.
			26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
30	BEND	1	26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
			47	4.	2.	13.	26.	55.	4.	1.57	60.	116.	176.

LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	2.	13.	4.	55.	4.	26.	1.57	82.	294.	375.
			28	2.	20.	6.	40.	4.	14.	1.57	82.	207.	289.

SUMMARY OF RESULTS FOR LOAD NUMBER 3 LOAD TITLE: OBE + SRV YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 3 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 3 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1091.	12	1130.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-2.	1.	25.	-22.	2.
5	0.	4.	-24.	35.	255.	-30.
15	0.	-12.	-25.	227.	-23.	-5.
17	2.	-24.	-25.	257.	-35.	-26.
28	2.	-6.	20.	40.	-14.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 10

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	2.	25.	2.	22.	1.57	82.	163.	245.
			34	0.	1.	2.	19.	2.	22.	1.57	82.	141.	222.
2	BEND	1	34	0.	2.	1.	19.	22.	2.	1.57	60.	56.	116.
			3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
3	BEND	1	3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
			35	4.	1.	0.	1.	17.	18.	1.57	60.	47.	107.
4	TAN	1	35	1.	0.	4.	17.	18.	1.	1.57	82.	119.	201.
			5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
5	TAN	1	5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
			36	1.	0.	4.	7.	18.	3.	1.57	82.	92.	174.
6	BEND	1	36	1.	4.	0.	7.	3.	18.	1.57	60.	37.	97.
			7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
7	BEND	1	7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
			37	0.	2.	2.	21.	1.	12.	1.57	60.	46.	106.
8	TAN	1	37	0.	2.	2.	21.	12.	1.	1.57	82.	116.	198.
			30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
9	TAN	1	30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
			38	0.	4.	7.	31.	12.	2.	1.57	82.	162.	244.
10	BEND	1	38	7.	0.	4.	2.	31.	12.	1.57	60.	64.	124.
			10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
11	BEND	1	10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
			39	8.	0.	9.	7.	37.	9.	1.57	60.	75.	135.
12	TAN	1	39	0.	9.	8.	37.	9.	7.	1.57	39.	1091.	1130.
			31	0.	9.	9.	41.	9.	7.	1.00	39.	757.	796.
13	TAN	1	31	0.	9.	9.	41.	9.	7.	1.00	82.	131.	213.
			40	0.	10.	9.	54.	9.	7.	1.57	82.	269.	351.
14	BEND	1	40	9.	0.	10.	7.	54.	9.	1.57	60.	106.	166.
			13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
15	BEND	1	13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
			41	10.	0.	5.	2.	66.	11.	1.57	60.	129.	189.

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	5.	10.	66.	11.	2.	1.57	82.	325.	407.
			15	0.	6.	12.	113.	11.	2.	1.00	82.	350.	432.
17	TAN	1	15	0.	6.	13.	113.	11.	2.	1.00	82.	350.	432.
			16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
18	TAN	1	16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
			17	0.	14.	13.	128.	11.	1.	1.00	82.	394.	476.
19	TAN	1	17	2.	10.	12.	129.	24.	25.	1.00	82.	410.	492.
			18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
20	TAN	1	18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
			42	2.	6.	1.	23.	24.	26.	1.57	82.	203.	285.
21	BEND	1	42	2.	1.	6.	23.	26.	24.	1.57	60.	80.	140.
			20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
22	BEND	1	20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
			43	5.	3.	2.	20.	21.	20.	1.57	60.	68.	128.
23	TAN	1	43	5.	2.	3.	20.	20.	21.	1.57	39.	993.	1032.
			32	5.	2.	5.	2.	20.	2.	1.00	39.	365.	403.
24	TAN	1	32	5.	2.	5.	2.	20.	2.	1.00	82.	63.	145.
			44	4.	2.	6.	16.	20.	14.	1.57	82.	141.	223.
25	BEND	1	44	4.	6.	2.	16.	14.	20.	1.57	60.	56.	116.
			23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
26	BEND	1	23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
			45	2.	9.	3.	9.	17.	27.	1.57	60.	62.	122.
27	TAN	1	45	2.	3.	9.	9.	27.	17.	1.57	39.	912.	951.
			33	2.	3.	10.	17.	27.	12.	1.00	39.	603.	641.
28	TAN	1	33	2.	3.	10.	17.	27.	12.	1.00	82.	104.	186.
			46	2.	3.	11.	43.	27.	7.	1.57	82.	248.	330.
29	BEND	1	46	11.	2.	3.	7.	43.	27.	1.57	60.	98.	158.
			26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
30	BEND	1	26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
			47	4.	2.	13.	26.	55.	4.	1.57	60.	116.	176.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	2.	13.	4.	55.	4.	26.	1.57	82.	294.	375.
			28	2.	20.	6.	40.	4.	14.	1.57	82.	207.	289.

SUMMARY OF RESULTS FOR LOAD NUMBER 4 LOAD TITLE: OBE + SRV Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 4 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 4 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1091.	12	1130.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-2.	1.	25.	-22.	2.
5	0.	4.	-24.	35.	255.	-30.
15	0.	-12.	-25.	227.	-23.	-5.
17	2.	-24.	-25.	257.	-35.	-26.
28	2.	-6.	20.	40.	-14.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 11

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	8.	0.	0.	19.	0.	49.	1.57	82.	255.	337.
			34	8.	1.	0.	18.	0.	25.	1.57	82.	150.	232.
2	BEND	1	34	8.	0.	1.	18.	25.	0.	1.57	60.	60.	120.
			3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
3	BEND	1	3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
			35	4.	0.	7.	1.	23.	18.	1.57	60.	55.	115.
4	TAN	1	35	0.	7.	4.	23.	18.	1.	1.57	82.	140.	221.
			5	0.	4.	12.	124.	18.	6.	1.00	82.	385.	467.
5	TAN	1	5	0.	4.	11.	124.	18.	6.	1.00	82.	385.	467.
			36	0.	2.	4.	11.	18.	1.	1.57	82.	101.	183.
6	BEND	1	36	0.	4.	2.	11.	1.	18.	1.57	60.	40.	100.
			7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
7	BEND	1	7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
			37	1.	1.	0.	21.	2.	15.	1.57	60.	49.	109.
8	TAN	1	37	1.	0.	1.	21.	15.	2.	1.57	82.	124.	206.
			30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
9	TAN	1	30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
			38	2.	0.	7.	26.	15.	4.	1.57	82.	147.	229.
10	BEND	1	38	7.	2.	0.	4.	26.	15.	1.57	60.	58.	118.
			10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
11	BEND	1	10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
			39	5.	2.	6.	8.	34.	14.	1.57	60.	72.	132.
12	TAN	1	39	2.	6.	5.	34.	14.	8.	1.57	39.	1046.	1085.
			31	2.	6.	6.	42.	14.	11.	1.00	39.	809.	848.
13	TAN	1	31	2.	6.	6.	42.	14.	11.	1.00	82.	140.	222.
			40	2.	7.	6.	51.	14.	14.	1.57	82.	264.	346.
14	BEND	1	40	6.	2.	7.	14.	51.	14.	1.57	60.	105.	165.
			13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
15	BEND	1	13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
			41	10.	3.	0.	14.	61.	14.	1.57	60.	122.	182.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	3.	0.	10.	61.	14.	14.	1.57	82.	309.	391.
			15	3.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
17	TAN	1	15	4.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
			16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
18	TAN	1	16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
			17	5.	0.	13.	126.	14.	47.	1.00	82.	416.	497.
19	TAN	1	17	5.	3.	12.	134.	25.	67.	1.00	82.	466.	547.
			18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
20	TAN	1	18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
			42	1.	3.	1.	21.	25.	24.	1.57	82.	196.	278.
21	BEND	1	42	1.	1.	3.	21.	24.	25.	1.57	60.	78.	138.
			20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
22	BEND	1	20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
			43	3.	3.	2.	22.	21.	19.	1.57	60.	69.	129.
23	TAN	1	43	3.	2.	3.	22.	19.	21.	1.57	39.	1010.	1049.
			32	3.	3.	5.	5.	19.	9.	1.00	39.	390.	429.
24	TAN	1	32	3.	3.	5.	5.	19.	9.	1.00	82.	67.	149.
			44	3.	3.	7.	20.	19.	18.	1.57	82.	161.	243.
25	BEND	1	44	3.	7.	3.	20.	18.	19.	1.57	60.	64.	124.
			23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
26	BEND	1	23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
			45	4.	9.	3.	8.	17.	32.	1.57	60.	71.	131.
27	TAN	1	45	4.	3.	9.	8.	32.	17.	1.57	39.	1029.	1068.
			33	4.	3.	10.	17.	32.	8.	1.00	39.	652.	691.
28	TAN	1	33	4.	3.	10.	17.	32.	8.	1.00	82.	113.	195.
			46	5.	3.	11.	43.	32.	13.	1.57	82.	266.	347.
29	BEND	1	46	11.	5.	3.	13.	43.	32.	1.57	60.	105.	165.
			26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
30	BEND	1	26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
			47	3.	5.	13.	25.	56.	16.	1.57	60.	121.	181.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	5.	13.	3.	56.	16.	25.	1.57	82.	306.	388.
			28	7.	20.	3.	12.	16.	80.	1.57	82.	396.	478.

SUMMARY OF RESULTS FOR LOAD NUMBER 5 LOAD TITLE: OBE + SRV -XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 5 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 5 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1046.	12	1085.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	8.	-0.	0.	19.	-49.	0.
5	9.	1.	-23.	36.	249.	-13.
15	7.	-1.	-25.	220.	-27.	-55.
17	10.	-4.	-25.	260.	-38.	-114.
28	7.	-3.	20.	12.	-80.	16.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 12

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	8.	0.	0.	19.	0.	49.	1.57	82.	255.	337.
			34	8.	1.	0.	18.	0.	25.	1.57	82.	150.	232.
2	BEND	1	34	8.	0.	1.	18.	25.	0.	1.57	60.	60.	120.
			3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
3	BEND	1	3	7.	0.	7.	12.	23.	13.	1.57	60.	55.	115.
			35	4.	0.	7.	1.	23.	18.	1.57	60.	55.	115.
4	TAN	1	35	0.	7.	4.	23.	18.	1.	1.57	82.	140.	221.
			5	0.	4.	12.	124.	18.	6.	1.00	82.	385.	467.
5	TAN	1	5	0.	4.	11.	124.	18.	6.	1.00	82.	385.	467.
			36	0.	2.	4.	11.	18.	1.	1.57	82.	101.	183.
6	BEND	1	36	0.	4.	2.	11.	1.	18.	1.57	60.	40.	100.
			7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
7	BEND	1	7	1.	2.	1.	22.	1.	9.	1.57	60.	46.	106.
			37	1.	1.	0.	21.	2.	15.	1.57	60.	49.	109.
8	TAN	1	37	1.	0.	1.	21.	15.	2.	1.57	82.	124.	206.
			30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
9	TAN	1	30	0.	0.	3.	15.	15.	5.	1.00	82.	66.	148.
			38	2.	0.	7.	26.	15.	4.	1.57	82.	147.	229.
10	BEND	1	38	7.	2.	0.	4.	26.	15.	1.57	60.	58.	118.
			10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
11	BEND	1	10	7.	2.	3.	5.	30.	15.	1.57	60.	66.	126.
			39	5.	2.	6.	8.	34.	14.	1.57	60.	72.	132.
12	TAN	1	39	2.	6.	5.	34.	14.	8.	1.57	39.	1046.	1085.
			31	2.	6.	6.	42.	14.	11.	1.00	39.	809.	847.
13	TAN	1	31	2.	6.	6.	42.	14.	11.	1.00	82.	140.	222.
			40	2.	7.	6.	51.	14.	14.	1.57	82.	264.	346.
14	BEND	1	40	6.	2.	7.	14.	51.	14.	1.57	60.	105.	165.
			13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
15	BEND	1	13	9.	3.	4.	13.	55.	12.	1.57	60.	111.	171.
			41	10.	3.	0.	14.	61.	14.	1.57	60.	122.	182.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	3.	0.	10.	61.	14.	14.	1.57	82.	309.	391.
			15	3.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
17	TAN	1	15	4.	0.	12.	110.	14.	28.	1.00	82.	350.	432.
			16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
18	TAN	1	16	0.	0.	0.	63.	14.	24.	1.00	82.	211.	293.
			17	5.	0.	13.	126.	14.	47.	1.00	82.	416.	497.
19	TAN	1	17	5.	3.	12.	134.	25.	67.	1.00	82.	466.	547.
			18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
20	TAN	1	18	4.	3.	8.	46.	25.	25.	1.57	82.	278.	360.
			42	1.	3.	1.	21.	25.	24.	1.57	82.	196.	278.
21	BEND	1	42	1.	1.	3.	21.	24.	25.	1.57	60.	78.	138.
			20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
22	BEND	1	20	1.	2.	4.	32.	24.	3.	1.57	60.	76.	136.
			43	3.	3.	2.	22.	21.	19.	1.57	60.	69.	129.
23	TAN	1	43	3.	2.	3.	22.	19.	21.	1.57	39.	1010.	1049.
			32	3.	3.	5.	5.	19.	9.	1.00	39.	390.	429.
24	TAN	1	32	3.	3.	5.	5.	19.	9.	1.00	82.	67.	149.
			44	3.	3.	7.	20.	19.	18.	1.57	82.	161.	243.
25	BEND	1	44	3.	7.	3.	20.	18.	19.	1.57	60.	64.	124.
			23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
26	BEND	1	23	3.	8.	5.	9.	20.	31.	1.57	60.	72.	132.
			45	4.	9.	3.	8.	17.	32.	1.57	60.	71.	131.
27	TAN	1	45	4.	3.	9.	8.	32.	17.	1.57	39.	1029.	1068.
			33	4.	3.	10.	17.	32.	8.	1.00	39.	652.	691.
28	TAN	1	33	4.	3.	10.	17.	32.	8.	1.00	82.	113.	195.
			46	5.	3.	11.	43.	32.	13.	1.57	82.	266.	347.
29	BEND	1	46	11.	5.	3.	13.	43.	32.	1.57	60.	105.	165.
			26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
30	BEND	1	26	6.	5.	11.	27.	54.	27.	1.57	60.	126.	186.
			47	3.	5.	13.	25.	56.	16.	1.57	60.	121.	181.

LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	5.	13.	3.	56.	16.	25.	1.57	82.	306.	388.
			28	7.	20.	3.	12.	16.	80.	1.57	82.	396.	478.

SUMMARY OF RESULTS FOR LOAD NUMBER 6 LOAD TITLE: OBE + SRV -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 6 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 6 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1046.	12	1085.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	8.	-0.	0.	19.	-49.	0.
5	9.	1.	-23.	36.	249.	-13.
15	7.	-1.	-25.	220.	-27.	-55.
17	10.	-4.	-25.	260.	-38.	-114.
28	7.	-3.	20.	12.	-80.	16.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 13

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	2.	25.	2.	22.	2.10	82.	217.	299.
			34	0.	1.	2.	19.	2.	22.	2.10	82.	187.	269.
2	BEND	1	34	0.	2.	1.	19.	22.	2.	2.10	60.	74.	134.
			3	2.	1.	2.	13.	21.	13.	2.10	60.	70.	130.
3	BEND	1	3	2.	1.	2.	13.	21.	13.	2.10	60.	70.	130.
			35	4.	1.	0.	1.	17.	18.	2.10	60.	63.	123.
4	TAN	1	35	1.	0.	4.	17.	18.	1.	2.10	82.	159.	240.
			5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
5	TAN	1	5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
			36	1.	0.	4.	7.	18.	3.	2.10	82.	123.	205.
6	BEND	1	36	1.	4.	0.	7.	3.	18.	2.10	60.	49.	109.
			7	1.	3.	1.	21.	2.	6.	2.10	60.	55.	115.
7	BEND	1	7	1.	3.	1.	21.	2.	6.	2.10	60.	55.	115.
			37	0.	2.	2.	21.	1.	12.	2.10	60.	61.	121.
8	TAN	1	37	0.	2.	2.	21.	12.	1.	2.10	82.	155.	237.
			30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
9	TAN	1	30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
			38	0.	4.	7.	31.	12.	2.	2.10	82.	216.	298.
10	BEND	1	38	7.	0.	4.	2.	31.	12.	2.10	60.	86.	146.
			10	8.	0.	7.	3.	35.	11.	2.10	60.	94.	154.
11	BEND	1	10	8.	0.	7.	3.	35.	11.	2.10	60.	94.	154.
			39	8.	0.	9.	7.	37.	9.	2.10	60.	100.	160.
12	TAN	1	39	0.	9.	8.	37.	9.	7.	2.10	39.	1455.	1494.
			31	0.	9.	9.	41.	9.	7.	1.00	39.	757.	796.
13	TAN	1	31	0.	9.	9.	41.	9.	7.	1.00	82.	131.	213.
			40	0.	10.	9.	54.	9.	7.	2.10	82.	359.	440.
14	BEND	1	40	9.	0.	10.	7.	54.	9.	2.10	60.	142.	202.
			13	10.	0.	9.	3.	60.	11.	2.10	60.	157.	217.
15	BEND	1	13	10.	0.	9.	3.	60.	11.	2.10	60.	157.	217.
			41	10.	0.	5.	2.	66.	11.	2.10	60.	172.	232.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	5.	10.	66.	11.	2.	2.10	82.	433.	515.
			15	0.	6.	12.	113.	11.	2.	1.00	82.	350.	432.
17	TAN	1	15	0.	6.	13.	113.	11.	2.	1.00	82.	350.	432.
			16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
18	TAN	1	16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
			17	0.	14.	13.	128.	11.	1.	1.00	82.	394.	476.
19	TAN	1	17	2.	10.	12.	129.	24.	25.	1.00	82.	410.	492.
			18	2.	9.	8.	42.	24.	8.	2.10	82.	314.	396.
20	TAN	1	18	2.	9.	8.	42.	24.	8.	2.10	82.	314.	396.
			42	2.	6.	1.	23.	24.	26.	2.10	82.	271.	353.
21	BEND	1	42	2.	1.	6.	23.	26.	24.	2.10	60.	107.	167.
			20	3.	2.	5.	30.	26.	3.	2.10	60.	101.	161.
22	BEND	1	20	3.	2.	5.	30.	26.	3.	2.10	60.	101.	161.
			43	5.	3.	2.	20.	21.	20.	2.10	60.	91.	151.
23	TAN	1	43	5.	2.	3.	20.	20.	21.	2.10	39.	1325.	1363.
			32	5.	2.	5.	2.	20.	2.	1.00	39.	365.	403.
24	TAN	1	32	5.	2.	5.	2.	20.	2.	1.00	82.	63.	145.
			44	4.	2.	6.	16.	20.	14.	2.10	82.	188.	270.
25	BEND	1	44	4.	6.	2.	16.	14.	20.	2.10	60.	74.	134.
			23	1.	8.	4.	6.	17.	29.	2.10	60.	86.	146.
26	BEND	1	23	1.	8.	4.	6.	17.	29.	2.10	60.	86.	146.
			45	2.	9.	3.	9.	17.	27.	2.10	60.	83.	143.
27	TAN	1	45	2.	3.	9.	9.	27.	17.	2.10	39.	1216.	1255.
			33	2.	3.	10.	17.	27.	12.	1.00	39.	603.	641.
28	TAN	1	33	2.	3.	10.	17.	27.	12.	1.00	82.	104.	186.
			46	2.	3.	11.	43.	27.	7.	2.10	82.	331.	413.
29	BEND	1	46	11.	2.	3.	7.	43.	27.	2.10	60.	131.	191.
			26	7.	2.	11.	22.	54.	18.	2.10	60.	155.	215.
30	BEND	1	26	7.	2.	11.	22.	54.	18.	2.10	60.	155.	215.
			47	4.	2.	13.	26.	55.	4.	2.10	60.	155.	215.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	2.	13.	4.	55.	4.	26.	2.10	82.	391.	473.
			28	2.	20.	6.	40.	4.	14.	2.10	82.	275.	357.

SUMMARY OF RESULTS FOR LOAD NUMBER 7 LOAD TITLE: OBE + SRV -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 7 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 7 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1455.	12	1494.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-2.	1.	25.	-22.	2.
5	0.	4.	-24.	35.	255.	-30.
15	0.	-12.	-25.	227.	-23.	-5.
17	2.	-24.	-25.	257.	-35.	-26.
28	2.	-6.	20.	40.	-14.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 14

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	2.	25.	2.	22.	1.57	82.	163.	245.
			34	0.	1.	2.	19.	2.	22.	1.57	82.	141.	222.
2	BEND	1	34	0.	2.	1.	19.	22.	2.	1.57	60.	56.	116.
			3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
3	BEND	1	3	2.	1.	2.	13.	21.	13.	1.57	60.	53.	113.
			35	4.	1.	0.	1.	17.	18.	1.57	60.	47.	107.
4	TAN	1	35	1.	0.	4.	17.	18.	1.	1.57	82.	119.	201.
			5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
5	TAN	1	5	2.	0.	12.	127.	18.	15.	1.00	82.	397.	479.
			36	1.	0.	4.	7.	18.	3.	1.57	82.	92.	174.
6	BEND	1	36	1.	4.	0.	7.	3.	18.	1.57	60.	37.	97.
			7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
7	BEND	1	7	1.	3.	1.	21.	2.	6.	1.57	60.	41.	101.
			37	0.	2.	2.	21.	1.	12.	1.57	60.	46.	106.
8	TAN	1	37	0.	2.	2.	21.	12.	1.	1.57	82.	116.	198.
			30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
9	TAN	1	30	0.	3.	3.	18.	12.	1.	1.00	82.	66.	148.
			38	0.	4.	7.	31.	12.	2.	1.57	82.	162.	244.
10	BEND	1	38	7.	0.	4.	2.	31.	12.	1.57	60.	64.	124.
			10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
11	BEND	1	10	8.	0.	7.	3.	35.	11.	1.57	60.	71.	131.
			39	8.	0.	9.	7.	37.	9.	1.57	60.	75.	135.
12	TAN	1	39	0.	9.	8.	37.	9.	7.	1.57	39.	1091.	1130.
			31	0.	9.	9.	41.	9.	7.	1.00	39.	757.	796.
13	TAN	1	31	0.	9.	9.	41.	9.	7.	1.00	82.	131.	213.
			40	0.	10.	9.	54.	9.	7.	1.57	82.	269.	351.
14	BEND	1	40	9.	0.	10.	7.	54.	9.	1.57	60.	106.	166.
			13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
15	BEND	1	13	10.	0.	9.	3.	60.	11.	1.57	60.	117.	177.
			41	10.	0.	5.	2.	66.	11.	1.57	60.	129.	189.

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	5.	10.	66.	11.	2.	1.57	82.	325.	407.
			15	0.	6.	12.	113.	11.	2.	1.00	82.	350.	432.
17	TAN	1	15	0.	6.	13.	113.	11.	2.	1.00	82.	350.	432.
			16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
18	TAN	1	16	0.	10.	1.	64.	11.	1.	1.00	82.	199.	281.
			17	0.	14.	13.	128.	11.	1.	1.00	82.	394.	476.
19	TAN	1	17	2.	10.	12.	129.	24.	25.	1.00	82.	410.	492.
			18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
20	TAN	1	18	2.	9.	8.	42.	24.	8.	1.57	82.	236.	318.
			42	2.	6.	1.	23.	24.	26.	1.57	82.	203.	285.
21	BEND	1	42	2.	1.	6.	23.	26.	24.	1.57	60.	80.	140.
			20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
22	BEND	1	20	3.	2.	5.	30.	26.	3.	1.57	60.	76.	136.
			43	5.	3.	2.	20.	21.	20.	1.57	60.	68.	128.
23	TAN	1	43	5.	2.	3.	20.	20.	21.	1.57	39.	993.	1032.
			32	5.	2.	5.	2.	20.	2.	1.00	39.	365.	403.
24	TAN	1	32	5.	2.	5.	2.	20.	2.	1.00	82.	63.	145.
			44	4.	2.	6.	16.	20.	14.	1.57	82.	141.	223.
25	BEND	1	44	4.	6.	2.	16.	14.	20.	1.57	60.	56.	116.
			23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
26	BEND	1	23	1.	8.	4.	6.	17.	29.	1.57	60.	65.	125.
			45	2.	9.	3.	9.	17.	27.	1.57	60.	62.	122.
27	TAN	1	45	2.	3.	9.	9.	27.	17.	1.57	39.	912.	951.
			33	2.	3.	10.	17.	27.	12.	1.00	39.	603.	641.
28	TAN	1	33	2.	3.	10.	17.	27.	12.	1.00	82.	104.	186.
			46	2.	3.	11.	43.	27.	7.	1.57	82.	248.	330.
29	BEND	1	46	11.	2.	3.	7.	43.	27.	1.57	60.	98.	158.
			26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
30	BEND	1	26	7.	2.	11.	22.	54.	18.	1.57	60.	116.	176.
			47	4.	2.	13.	26.	55.	4.	1.57	60.	116.	176.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	2.	13.	4.	55.	4.	26.	1.57	82.	294.	375.
			28	2.	20.	6.	40.	4.	14.	1.57	82.	207.	289.

SUMMARY OF RESULTS FOR LOAD NUMBER 8 LOAD TITLE: OBE + SRV -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 8 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 8 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1091.	12	1130.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-2.	1.	25.	-22.	2.
5	0.	4.	-24.	35.	255.	-30.
15	0.	-12.	-25.	227.	-23.	-5.
17	2.	-24.	-25.	257.	-35.	-26.
28	2.	-6.	20.	40.	-14.	4.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 15

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	13.	1.	0.	25.	1.	71.	1.57	82.	363.	445.
			34	12.	2.	0.	24.	1.	33.	1.57	82.	198.	280.
2	BEND	1	34	12.	0.	2.	24.	33.	1.	1.57	60.	78.	138.
			3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
3	BEND	1	3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
			35	5.	0.	11.	1.	31.	23.	1.57	60.	73.	133.
4	TAN	1	35	0.	11.	5.	31.	23.	1.	1.57	82.	185.	267.
			5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
5	TAN	1	5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
			36	0.	3.	5.	15.	23.	2.	1.57	82.	133.	215.
6	BEND	1	36	0.	5.	3.	15.	2.	23.	1.57	60.	53.	113.
			7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
7	BEND	1	7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
			37	2.	2.	0.	27.	3.	20.	1.57	60.	64.	124.
8	TAN	1	37	2.	0.	2.	27.	20.	3.	1.57	82.	163.	244.
			30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
9	TAN	1	30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
			38	3.	0.	8.	34.	20.	6.	1.57	82.	191.	273.
10	BEND	1	38	8.	3.	0.	6.	34.	20.	1.57	60.	76.	136.
			10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
11	BEND	1	10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
			39	7.	3.	7.	11.	43.	20.	1.57	60.	93.	153.
12	TAN	1	39	3.	7.	7.	43.	20.	11.	1.57	39.	1359.	1398.
			31	3.	8.	7.	54.	20.	15.	1.00	39.	1050.	1089.
13	TAN	1	31	3.	8.	7.	54.	20.	15.	1.00	82.	182.	264.
			40	4.	8.	8.	65.	20.	20.	1.57	82.	343.	425.
14	BEND	1	40	8.	4.	8.	20.	65.	20.	1.57	60.	136.	196.
			13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
15	BEND	1	13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
			41	13.	4.	0.	21.	78.	18.	1.57	60.	159.	219.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	4.	0.	13.	78.	18.	21.	1.57	82.	400.	482.
			15	5.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
17	TAN	1	15	6.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
			16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
18	TAN	1	16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
			17	7.	0.	17.	161.	18.	74.	1.00	82.	546.	628.
19	TAN	1	17	8.	4.	15.	173.	32.	99.	1.00	82.	619.	701.
			18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
20	TAN	1	18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
			42	2.	4.	1.	27.	32.	33.	1.57	82.	258.	340.
21	BEND	1	42	2.	1.	4.	27.	33.	32.	1.57	60.	102.	162.
			20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
22	BEND	1	20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
			43	4.	4.	3.	29.	29.	25.	1.57	60.	92.	152.
23	TAN	1	43	4.	3.	4.	29.	25.	29.	1.57	39.	1337.	1376.
			32	4.	4.	7.	8.	25.	14.	1.00	39.	523.	562.
24	TAN	1	32	4.	4.	7.	8.	25.	14.	1.00	82.	90.	172.
			44	4.	5.	9.	27.	25.	25,	1.57	82.	216.	298.
25	BEND	1	44	4.	9.	5.	27.	25.	25.	1.57	60.	86.	146.
			23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
26	BEND	1	23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
			45	6.	11.	4.	11.	24.	42.	1.57	60.	94.	154.
27	TAN	1	45	6.	4.	11.	11.	42.	24.	1.57	39.	1372.	1411.
			33	6.	4.	13.	22.	42.	11.	1.00	39.	858.	897.
28	TAN	1	33	6.	4.	13.	22.	42.	11.	1.00	82.	149.	230.
			46	7.	4.	14.	56.	42.	19.	1.57	82.	348.	430.
29	BEND	1	46	14.	7.	4.	19.	56.	42.	1.57	60.	138.	198.
			26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
30	BEND	1	26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
			47	4.	8.	17.	32.	72.	25.	1.57	60.	158.	218.

LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	8.	17.	4.	72.	25.	32.	1.57	82.	399.	481.
			28	11.	25.	4.	16.	25.	123.	1.57	82.	609.	691.

SUMMARY OF RESULTS FOR LOAD NUMBER 9 LOAD TITLE: SSE + SRV + LOCA XZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 9 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 9 + PRESSURE) ELEMENT	STRESS (PSI)
1	27	1372.	27	1411.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	13.	-0.	1.	25.	-71.	1.
5	14.	1.	-30.	47.	318.	-16.
15	11.	-1.	-31.	281.	-36.	-85.
17	15.	-5.	-32.	334.	-50.	-173.
28	11.	-4.	25.	16.	-123.	25.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 16

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	13.	1.	0.	25.	1.	71.	1.57	82.	363.	445.
			34	12.	2.	0.	24.	1.	33.	1.57	82.	198.	280.
2	BEND	1	34	12.	0.	2.	24.	33.	1.	1.57	60.	78.	138.
			3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
3	BEND	1	3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
			35	5.	0.	11.	1.	31.	23.	1.57	60.	73.	133.
4	TAN	1	35	0.	11.	5.	31.	23.	1.	1.57	82.	185.	267.
			5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
5	TAN	1	5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
			36	0.	3.	5.	15.	23.	2.	1.57	82.	133.	215.
6	BEND	1	36	0.	5.	3.	15.	2.	23.	1.57	60.	53.	113.
			7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
7	BEND	1	7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
			37	2.	2.	0.	27.	3.	20.	1.57	60.	64.	124.
8	TAN	1	37	2.	0.	2.	27.	20.	3.	1.57	82.	163.	244.
			30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
9	TAN	1	30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
			38	3.	0.	8.	34.	20.	6.	1.57	82.	191.	273.
10	BEND	1	38	8.	3.	0.	6.	34.	20.	1.57	60.	76.	136.
			10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
11	BEND	1	10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
			39	7.	3.	7.	11.	43.	20.	1.57	60.	93.	153.
12	TAN	1	39	3.	7.	7.	43.	20.	11.	1.57	39.	1359.	1398.
			31	3.	8.	7.	54.	20.	15.	1.00	39.	1050.	1089.
13	TAN	1	31	3.	8.	7.	54.	20.	15.	1.00	82.	182.	264.
			40	4.	8.	8.	65.	20.	20.	1.57	82.	343.	425.
14	BEND	1	40	8.	4.	8.	20.	65.	20.	1.57	60.	136.	196.
			13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
15	BEND	1	13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
			41	13.	4.	0.	21.	78.	18.	1.57	60.	159.	219.

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	4.	0.	13.	78.	18.	21.	1.57	82.	400.	482.
			15	5.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
17	TAN	1	15	6.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
			16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
18	TAN	1	16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
			17	7.	0.	17.	161.	18.	74.	1.00	82.	546.	628.
19	TAN	1	17	8.	4.	15.	173.	32.	99.	1.00	82.	619.	701.
			18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
20	TAN	1	18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
			42	2.	4.	1.	27.	32.	33.	1.57	82.	258.	340.
21	BEND	1	42	2.	1.	4.	27.	33.	32.	1.57	60.	102.	162.
			20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
22	BEND	1	20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
			43	4.	4.	3.	29.	29.	25.	1.57	60.	92.	152.
23	TAN	1	43	4.	3.	4.	29.	25.	29.	1.57	39.	1337.	1376..
			32	4.	4.	7.	8.	25.	14.	1.00	39.	523.	562.
24	TAN	1	32	4.	4.	7.	8.	25.	14.	1.00	82.	90.	172.
			44	4.	5.	9.	27.	25.	25.	1.57	82.	216.	298.
25	BEND	1	44	4.	9.	5.	27.	25.	25.	1.57	60.	86.	146.
			23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
26	BEND	1	23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
			45	6.	11.	4.	11.	24.	42.	1.57	60.	94.	154.
27	TAN	1	45	6.	4.	11.	11.	42.	24.	1.57	39.	1372.	1411.
			33	6.	4.	13.	22.	42.	11.	1.00	39.	858.	897.
28	TAN	1	33	6.	4.	13.	22.	42.	11.	1.00	82.	149.	230.
			46	7.	4.	14.	56.	42.	19.	1.57	82.	348.	430.
29	BEND	1	46	14.	7.	4.	19.	56.	42.	1.57	60.	138.	198.
			26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
30	BEND	1	26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
			47	4.	8.	17.	32.	72.	25.	1.57	60.	158.	218.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	8.	17.	4.	72.	25.	32.	1.57	82.	399.	481.
			28	11.	25.	4.	16.	25.	123.	1.57	82.	609.	691.

SUMMARY OF RESULTS FOR LOAD NUMBER 10 LOAD TITLE: SSE + SRV + LOCA X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 10 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 10 + PRESSURE) ELEMENT	STRESS (PSI)
1	27	1372.	27	1411.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	13.	-0.	1.	25.	-71.	1.
5	14.	1.	-30.	47.	318.	-16.
15	11.	-1.	-31.	281.	-36.	-85.
17	15.	-5.	-32.	334.	-50.	-173.
28	11.	-4.	25.	16.	-123.	25.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 17

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	3.	35.	3.	28.	1.57	82.	216.	298.
			34	0.	2.	3.	25.	3.	28.	1.57	82.	182.	264.
2	BEND	1	34	0.	3.	2.	25.	28.	3.	1.57	60.	72.	132.
			3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
3	BEND	1	3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
			35	5.	2.	0.	1.	22.	22.	1.57	60.	61.	121.
4	TAN	1	35	2.	0.	5.	22.	22.	1.	1.57	82.	153.	235.
			5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
5	TAN	1	5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
			36	1.	0.	5.	9.	22.	4.	1.57	82.	119.	201.
6	BEND	1	36	1.	5.	0.	9.	4.	22.	1.57	60.	47.	107.
			7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
7	BEND	1	7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
			37	0.	2.	2.	27.	1.	15.	1.57	60.	59.	119.
8	TAN	1	37	0.	2.	2.	27.	15.	1.	1.57	82.	150.	232.
			30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
9	TAN	1	30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
			38	0.	6.	9.	42.	15.	2.	1.57	82.	215.	297.
10	BEND	1	38	9.	0.	6.	2.	42.	15.	1.57	60.	85.	145.
			10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
11	BEND	1	10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
			39	11.	0.	12.	9.	49.	12.	1.57	60.	98.	158.
12	TAN	1	39	0.	12.	11.	49.	12.	9.	1.57	39.	1427.	1466.
			31	0.	13.	12.	52.	12.	9.	1.00	39.	967.	1006.
13	TAN	1	31	0.	13.	12.	52.	12.	9.	1.00	82.	167.	249.
			40	0.	14.	13.	71.	12.	9.	1.57	82.	349.	431.
14	BEND	1	40	13.	0.	14.	9.	71.	12.	1.57	60.	138.	198.
			13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
15	BEND	1	13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
			41	13.	0.	8.	3.	86.	15.	1.57	60.	168.	228.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	8.	13.	86.	15.	3.	1.57	82.	423.	505.
			15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
17	TAN	1	15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
			16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
18	TAN	1	16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
			17	0.	22.	17.	164.	15.	2.	1.00	82.	505.	587.
19	TAN	1	17	3.	15.	15.	165.	30.	33.	1.00	82.	525.	607.
			18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
20	TAN	1	18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
			42	3.	8.	1.	29.	30.	36.	1.57	82.	269.	351.
21	BEND	1	42	3.	1.	8.	29.	36.	30.	1.57	60.	107.	167.
			20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
22	BEND	1	20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
			43	7.	4.	3.	26.	29.	26.	1.57	60.	90.	150.
23	TAN	1	43	7.	3.	4.	26.	26.	29.	1.57	39.	1311.	1350.
			32	6.	3.	7.	2.	26.	3.	1.00	39.	473.	512.
24	TAN	1	32	6.	3.	7.	2.	26.	3.	1.00	82.	82.	164.
			44	5.	3.	8.	20.	26.	19.	1.57	82.	185.	267.
25	BEND	1	44	5.	8.	3.	20.	19.	26.	1.57	60.	73.	133.
			23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
26	BEND	1	23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
			45	3.	11.	4.	12.	23.	34.	1.57	60.	82.	142.
27	TAN	1	45	3.	4.	11.	12.	34.	23.	1.57	39.	1191.	1230.
			33	3.	4.	13.	23.	34.	16.	1.00	39.	782.	821.
28	TAN	1	33	3.	4.	13.	23.	34.	16.	1.00	82.	135.	217.
			46	3.	4.	14.	56.	34.	10.	1.57	82.	320.	402.
29	BEND	1	46	14.	3.	4.	10.	56.	34.	1.57	60.	127.	187.
			26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
30	BEND	1	26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
			47	6.	3.	17.	33.	71.	6.	1.57	60.	149.	209.

LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	3.	17.	6.	71.	6.	33.	1.57	82.	377.	459.
			28	3.	25.	9.	60.	6.	20.	1.57	82.	307.	389.

SUMMARY OF RESULTS FOR LOAD NUMBER 11 LOAD TITLE: SSE + SRV + LOCA YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 11 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 11 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1427.	12	1466.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-3.	1.	35.	-28.	3.
5	0.	7.	-30.	45.	328.	-44.
15	0.	-19.	-32.	292.	-29.	-6.
17	3.	-37.	-32.	329.	-45.	-35.
28	3.	-9.	25.	60.	-20.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 18

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	3.	35.	3.	28.	1.57	82.	216.	298.
			34	0.	2.	3.	25.	3.	28.	1.57	82.	182.	264.
2	BEND	1	34	0.	3.	2.	25.	28.	3.	1.57	60.	72.	132.
			3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
3	BEND	1	3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
			35	5.	2.	0.	1.	22.	22.	1.57	60.	61.	121.
4	TAN	1	35	2.	0.	5.	22.	22.	1.	1.57	82.	153.	235.
			5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
5	TAN	1	5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
			36	1.	0.	5.	9.	22.	4.	1.57	82.	119.	201.
6	BEND	1	36	1.	5.	0.	9.	4.	22.	1.57	60.	47.	107.
			7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
7	BEND	1	7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
			37	0.	2.	2.	27.	1.	15.	1.57	60.	59.	119.
8	TAN	1	37	0.	2.	2.	27.	15.	1.	1.57	82.	150.	232.
			30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
9	TAN	1	30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
			38	0.	6.	9.	42.	15.	2.	1.57	82.	215.	297.
10	BEND	1	38	9.	0.	6.	2.	42.	15.	1.57	60.	85.	145.
			10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
11	BEND	1	10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
			39	11.	0.	12.	9.	49.	12.	1.57	60.	98.	158.
12	TAN	1	39	0.	12.	11.	49.	12.	9.	1.57	39.	1427.	1466.
			31	0.	13.	12.	52.	12.	9.	1.00	39.	967.	1006.
13	TAN	1	31	0.	13.	12.	52.	12.	9.	1.00	82.	167.	249.
			40	0.	14.	13.	71.	12.	9.	1.57	82.	349.	431.
14	BEND	1	40	13.	0.	14.	9.	71.	12.	1.57	60.	138.	198.
			13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
15	BEND	1	13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
			41	13.	0.	8.	3.	86.	15.	1.57	60.	168.	228.

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	8.	13.	86.	15.	3.	1.57	82.	423.	505.
			15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
17	TAN	1	15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
			16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
18	TAN	1	16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
			17	0.	22.	17.	164.	15.	2.	1.00	82.	505.	587.
19	TAN	1	17	3.	15.	15.	165.	30.	33.	1.00	82.	525.	607.
			18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
20	TAN	1	18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
			42	3.	8.	1.	29.	30.	36.	1.57	82.	269.	351.
21	BEND	1	42	3.	1.	8.	29.	36.	30.	1.57	60.	107.	167.
			20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
22	BEND	1	20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
			43	7.	4.	3.	26.	29.	26.	1.57	60.	90.	150.
23	TAN	1	43	7.	3.	4.	26.	26.	29.	1.57	39.	1311.	1350.
			32	6.	3.	7.	2.	26.	3.	1.00	39.	473.	512.
24	TAN	1	32	6.	3.	7.	2.	26.	3.	1.00	82.	82.	164.
			44	5.	3.	8.	20.	26.	19.	1.57	82.	185.	267.
25	BEND	1	44	5.	8.	3.	20.	19.	26.	1.57	60.	73.	133.
			23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
26	BEND	1	23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
			45	3.	11.	4.	12.	23.	34.	1.57	60.	82.	142.
27	TAN	1	45	3.	4.	11.	12.	34.	23.	1.57	39.	1191.	1230.
			33	3.	4.	13.	23.	34.	16.	1.00	39.	782.	821.
28	TAN	1	33	3.	4.	13.	23.	34.	16.	1.00	82.	135.	217.
			46	3.	4.	14.	56.	34.	10.	1.57	82.	320.	402.
29	BEND	1	46	14.	3.	4.	10.	56.	34.	1.57	60.	127.	187.
			26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
30	BEND	1	26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
			47	6.	3.	17.	33.	71.	6.	1.57	60.	149.	209.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	3.	17.	6.	71.	6.	33.	1.57	82.	377.	459.
			23	3.	25.	9.	60.	6.	20.	1.57	82.	307.	389.

SUMMARY OF RESULTS FOR LOAD NUMBER 12 LOAD TITLE: SSE + SRV + LOCA Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 12 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 12 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1427.	12	1466.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-3.	1.	35.	-28.	3.
5	0.	7.	-30.	45.	328.	-44.
15	0.	-19.	-32.	292.	-29.	-6.
17	3.	-37.	-32.	329.	-45.	-35.
28	3.	-9.	25.	60.	-20.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 19

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	13.	1.	0.	25.	1.	71.	1.57	82.	363.	445.
			34	12.	2.	0.	24.	1.	33.	1.57	82.	198.	280.
2	BEND	1	34	12.	0.	2.	24.	33.	1.	1.57	60.	78.	138.
			3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
3	BEND	1	3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
			35	5.	0.	11.	1.	31.	23.	1.57	60.	73.	133.
4	TAN	1	35	0.	11.	5.	31.	23.	1.	1.57	82.	185.	267.
			5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
5	TAN	1	5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
			36	0.	3.	5.	15.	23.	2.	1.57	82.	133.	215.
6	BEND	1	36	0.	5.	3.	15.	2.	23.	1.57	60.	53.	113.
			7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
7	BEND	1	7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
			37	2.	2.	0.	27.	3.	20.	1.57	60.	64.	124.
8	TAN	1	37	2.	0.	2.	27.	20.	3.	1.57	82.	163.	244.
			30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
9	TAN	1	30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
			38	3.	0.	8.	34.	20.	6.	1.57	82.	191.	273.
10	BEND	1	38	8.	3.	0.	6.	34.	20.	1.57	60.	76.	136.
			10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
11	BEND	1	10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
			39	7.	3.	7.	11.	43.	20.	1.57	60.	93.	153.
12	TAN	1	39	3.	7.	7.	43.	20.	11.	1.57	39.	1359.	1398.
			31	3.	8.	7.	54.	20.	15.	1.00	39.	1050.	1089.
13	TAN	1	31	3.	8.	7.	54.	20.	15.	1.00	82.	182.	264.
			40	4.	8.	8.	65.	20.	20.	1.57	82.	343.	425.
14	BEND	1	40	8.	4.	8.	20.	65.	20.	1.57	60.	136.	196.
			13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
15	BEND	1	13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
			41	13.	4.	0.	21.	78.	18.	1.57	60.	159.	219.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	4.	0.	13.	78.	18.	21.	1.57	82.	400.	482.
			15	5.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
17	TAN	1	15	6.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
			16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
18	TAN	1	16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
			17	7.	0.	17.	161.	18.	74.	1.00	82.	546.	628.
19	TAN	1	17	8.	4.	15.	173.	32.	99.	1.00	82.	619.	701.
			18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
20	TAN	1	18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
			42	2.	4.	1.	27.	32.	33.	1.57	82.	258.	340.
21	BEND	1	42	2.	1.	4.	27.	33.	32.	1.57	60.	102.	162.
			20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
22	BEND	1	20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
			43	4.	4.	3.	29.	29.	25.	1.57	60.	92.	152.
23	TAN	1	43	4.	3.	4.	29.	25.	29.	1.57	39.	1337.	1376.
			32	4.	4.	7.	8.	25.	14.	1.00	39.	523.	562.
24	TAN	1	32	4.	4.	7.	8.	25.	14.	1.00	82.	90.	172.
			44	4.	5.	9.	27.	25.	25.	1.57	82.	216.	298.
25	BEND	1	44	4.	9.	5.	27.	25.	25.	1.57	60.	86.	146.
			23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
26	BEND	1	23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
			45	6.	11.	4.	11.	24.	42.	1.57	60.	94.	154.
27	TAN	1	45	6.	4.	11.	11.	42.	24.	1.57	39.	1372.	1411.
			33	6.	4.	13.	22.	42.	11.	1.00	39.	858.	897.
28	TAN	1	33	6.	4.	13.	22.	42.	11.	1.00	82.	149.	230.
			46	7.	4.	14.	56.	42.	19.	1.57	82.	348.	430.
29	BEND	1	46	14.	7.	4.	19.	56.	42.	1.57	60.	138.	198.
			26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
30	BEND	1	26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
			47	4.	8.	17.	32.	72.	25.	1.57	60.	158.	218.

LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	8.	17.	4.	72.	25.	32.	1.57	82.	399.	481.
			28	11.	25.	4.	16.	25.	123.	1.57	82.	609.	691.

SUMMARY OF RESULTS FOR LOAD NUMBER 13 LOAD TITLE: SSE + SRV + LOCA -XZ.

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 13 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 13 + PRESSURE) ELEMENT	STRESS (PSI)
1	27	1372.	27	1411.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	13.	-0.	1.	25.	-71.	1.
5	14.	1.	-30.	47.	318.	-16.
15	11.	-1.	-31.	281.	-36.	-85.
17	15.	-5.	-32.	334.	-50.	-173.
28	11.	-4.	25.	16.	-123.	25.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 20

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	13.	1.	0.	25.	1.	71.	1.57	82.	363.	445.
			34	12.	2.	0.	24.	1.	33.	1.57	82.	198.	280.
2	BEND	1	34	12.	0.	2.	24.	33.	1.	1.57	60.	78.	138.
			3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
3	BEND	1	3	10.	0.	10.	16.	30.	17.	1.57	60.	72.	132.
			35	5.	0.	11.	1.	31.	23.	1.57	60.	73.	133.
4	TAN	1	35	0.	11.	5.	31.	23.	1.	1.57	82.	185.	267.
			5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
5	TAN	1	5	0.	7.	15.	159.	23.	8.	1.00	82.	494.	575.
			36	0.	3.	5.	15.	23.	2.	1.57	82.	133.	215.
6	BEND	1	36	0.	5.	3.	15.	2.	23.	1.57	60.	53.	113.
			7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
7	BEND	1	7	2.	3.	2.	29.	1.	12.	1.57	60.	60.	120.
			37	2.	2.	0.	27.	3.	20.	1.57	60.	64.	124.
8	TAN	1	37	2.	0.	2.	27.	20.	3.	1.57	82.	163.	244.
			30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
9	TAN	1	30	1.	0.	3.	19.	20.	8.	1.00	82.	88.	170.
			38	3.	0.	8.	34.	20.	6.	1.57	82.	191.	273.
10	BEND	1	38	8.	3.	0.	6.	34.	20.	1.57	60.	76.	136.
			10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
11	BEND	1	10	8.	3.	4.	7.	39.	21.	1.57	60.	85.	145.
			39	7.	3.	7.	11.	43.	20.	1.57	60.	93.	153.
12	TAN	1	39	3.	7.	7.	43.	20.	11.	1.57	39.	1359.	1398.
			31	3.	8.	7.	54.	20.	15.	1.00	39.	1050.	1089.
13	TAN	1	31	3.	8.	7.	54.	20.	15.	1.00	82.	182.	264.
			40	4.	8.	8.	65.	20.	20.	1.57	82.	343.	425.
14	BEND	1	40	8.	4.	8.	20.	65.	20.	1.57	60.	136.	196.
			13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
15	BEND	1	13	11.	4.	5.	20.	71.	16.	1.57	60.	144.	204.
			41	13.	4.	0.	21.	78.	18.	1.57	60.	159.	219.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	4.	0.	13.	78.	18.	21.	1.57	82.	400.	482.
			15	5.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
17	TAN	1	15	6.	0.	16.	140.	18.	42.	1.00	82.	453.	535.
			16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
18	TAN	1	16	1.	0.	1.	81.	18.	37.	1.00	82.	277.	359.
			17	7.	0.	17.	161.	18.	74.	1.00	82.	546.	628.
19	TAN	1	17	8.	4.	15.	173.	32.	99.	1.00	82.	619.	701.
			18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
20	TAN	1	18	6.	4.	10.	60.	32.	37.	1.57	82.	372.	454.
			42	2.	4.	1.	27.	32.	33.	1.57	82.	258.	340.
21	BEND	1	42	2.	1.	4.	27.	33.	32.	1.57	60.	102.	162.
			20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
22	BEND	1	20	2.	3.	5.	41.	32.	4.	1.57	60.	100.	160.
			43	4.	4.	3.	29.	29.	25.	1.57	60.	92.	152.
23	TAN	1	43	4.	3.	4.	29.	25.	29.	1.57	39.	1337.	1376.
			32	4.	4.	7.	8.	25.	14.	1.00	39.	523.	562.
24	TAN	1	32	4.	4.	7.	8.	25.	14.	1.00	82.	90.	172.
			44	4.	5.	9.	27.	25.	25.	1.57	82.	216.	298.
25	BEND	1	44	4.	9.	5.	27.	25.	25.	1.57	60.	86.	146.
			23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
26	BEND	1	23	4.	10.	7.	13.	28.	40.	1.57	60.	96.	156.
			45	6.	11.	4.	11.	24.	42.	1.57	60.	94.	154.
27	TAN	1	45	6.	4.	11.	11.	42.	24.	1.57	39.	1372.	1411.
			33	6.	4.	13.	22.	42.	11.	1.00	39.	858.	897.
28	TAN	1	33	6.	4.	13.	22.	42.	11.	1.00	82.	149.	230.
			46	7.	4.	14.	56.	42.	19.	1.57	82.	348.	430.
29	BEND	1	46	14.	7.	4.	19.	56.	42.	1.57	60.	138.	198.
			26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
30	BEND	1	26	8.	7.	14.	36.	69.	38.	1.57	60.	166.	226.
			47	4.	8.	17.	32.	72.	25.	1.57	60.	158.	218.

LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES F1	F2	F3	M1	LBS AND IN-LBS M2	M3 ***	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	8.	17.	4.	72.	25.	32.	1.57	82.	399.	481.
			28	11.	25.	4.	16.	25.	123.	1.57	82.	609.	691.

SUMMARY OF RESULTS FOR LOAD NUMBER 14 LOAD TITLE: SSE + SRV + LOCA -X-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 14 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 14 + PRESSURE) ELEMENT	STRESS (PSI)
1	27	1372.	27	1411.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	M O M E N T S (IN-LBS) M1	M2	M3
1	13.	-0.	1.	25.	-71.	1.
5	14.	1.	-30.	47.	318.	-16.
15	11.	-1.	-31.	281.	-36.	-85.
17	15.	-5.	-32.	334.	-50.	-173.
28	11.	-4.	25.	16.	-123.	25.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 21

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	3.	35.	3.	28.	1.57	82.	216.	298.
			34	0.	2.	3.	25.	3.	28.	1.57	82.	182.	264.
2	BEND	1	34	0.	3.	2.	25.	28.	3.	1.57	60.	72.	132.
			3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
3	BEND	1	3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
			35	5.	2.	0.	1.	22.	22.	1.57	60.	61.	121.
4	TAN	1	35	2.	0.	5.	22.	22.	1.	1.57	82.	153.	235.
			5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
5	TAN	1	5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
			36	1.	0.	5.	9.	22.	4.	1.57	82.	119.	201.
6	BEND	1	36	1.	5.	0.	9.	4.	22.	1.57	60.	47.	107.
			7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
7	BEND	1	7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
			37	0.	2.	2.	27.	1.	15.	1.57	60.	59.	119.
8	TAN	1	37	0.	2.	2.	27.	15.	1.	1.57	82.	150.	232.
			30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
9	TAN	1	30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
			38	0.	6.	9.	42.	15.	2.	1.57	82.	215.	297.
10	BEND	1	38	9.	0.	6.	2.	42.	15.	1.57	60.	85.	145.
			10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
11	BEND	1	10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
			39	11.	0.	12.	9.	49.	12.	1.57	60.	98.	158.
12	TAN	1	39	0.	12.	11.	49.	12.	9.	1.57	39.	1427.	1466.
			31	0.	13.	12.	52.	12.	9.	1.00	39.	967.	1006.
13	TAN	1	31	0.	13.	12.	52.	12.	9.	1.00	82.	167.	249.
			40	0.	14.	13.	71.	12.	9.	1.57	82.	349.	431.
14	BEND	1	40	13.	0.	14.	9.	71.	12.	1.57	60.	138.	198.
			13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
15	BEND	1	13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
			41	13.	0.	8.	3.	86.	15.	1.57	60.	168.	228.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	8.	13.	86.	15.	3.	1.57	82.	423.	505.
			15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
17	TAN	1	15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
			16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
18	TAN	1	16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
			17	0.	22.	17.	164.	15.	2.	1.00	82.	505.	587.
19	TAN	1	17	3.	15.	15.	165.	30.	33.	1.00	82.	525.	607.
			18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
20	TAN	1	18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
			42	3.	8.	1.	29.	30.	36.	1.57	82.	269.	351.
21	BEND	1	42	3.	1.	8.	29.	36.	30.	1.57	60.	107.	167.
			20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
22	BEND	1	20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
			43	7.	4.	3.	26.	29.	26.	1.57	60.	90.	150.
23	TAN	1	43	7.	3.	4.	26.	26.	29.	1.57	39.	1311.	1350.
			32	6.	3.	7.	2.	26.	3.	1.00	39.	473.	512.
24	TAN	1	32	6.	3.	7.	2.	26.	3.	1.00	82.	82.	164.
			44	5.	3.	8.	20.	26.	19.	1.57	82.	185.	267.
25	BEND	1	44	5.	8.	3.	20.	19.	26.	1.57	60.	73.	133.
			23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
26	BEND	1	23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
			45	3.	11.	4.	12.	23.	34.	1.57	60.	82.	142.
27	TAN	1	45	3.	4.	11.	12.	34.	23.	1.57	39.	1191.	1230.
			33	3.	4.	13.	23.	34.	16.	1.00	39.	782.	821.
28	TAN	1	33	3.	4.	13.	23.	34.	16.	1.00	82.	135.	217.
			46	3.	4.	14.	56.	34.	10.	1.57	82.	320.	402.
29	BEND	1	46	14.	3.	4.	10.	56.	34.	1.57	60.	127.	187.
			26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
30	BEND	1	26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
			47	6.	3.	17.	33.	71.	6.	1.57	60.	149.	209.

LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	3.	17.	6.	71.	6.	33.	1.57	82.	377.	459.
			28	3.	25.	9.	60.	6.	20.	1.57	82.	307.	389.

SUMMARY OF RESULTS FOR LOAD NUMBER 15 LOAD TITLE: SSE + SRV + LOCA -YZ

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 15 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 15 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1427.	12	1466.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	F O R C E S (LBS) F1	F2	F3	* M O M E N T S (IN-LBS) M1	M2	M3
1	0.	-3.	1.	35.	-28.	3.
5	0.	7.	-30.	45.	328.	-44.
15	0.	-19.	-32.	292.	-29.	-6.
17	3.	-37.	-32.	329.	-45.	-35.
28	3.	-9.	25.	60.	-20.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 22

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
1	TAN	1	1	0.	1.	3.	35.	3.	28.	1.57	82.	216.	298.
			34	0.	2.	3.	25.	3.	28.	1.57	82.	182.	264.
2	BEND	1	34	0.	3.	2.	25.	28.	3.	1.57	60.	72.	132.
			3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
3	BEND	1	3	2.	2.	2.	16.	27.	17.	1.57	60.	68.	128.
			35	5.	2.	0.	1.	22.	22.	1.57	60.	61.	121.
4	TAN	1	35	2.	0.	5.	22.	22.	1.	1.57	82.	153.	235.
			5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
5	TAN	1	5	3.	0.	15.	164.	22.	22.	1.00	82.	512.	594.
			36	1.	0.	5.	9.	22.	4.	1.57	82.	119.	201.
6	BEND	1	36	1.	5.	0.	9.	4.	22.	1.57	60.	47.	107.
			7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
7	BEND	1	7	1.	3.	1.	27.	2.	7.	1.57	60.	53.	113.
			37	0.	2.	2.	27.	1.	15.	1.57	60.	59.	119.
8	TAN	1	37	0.	2.	2.	27.	15.	1.	1.57	82.	150.	232.
			30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
9	TAN	1	30	0.	4.	4.	24.	15.	1.	1.00	82.	87.	169.
			38	0.	6.	9.	42.	15.	2.	1.57	82.	215.	297.
10	BEND	1	38	9.	0.	6.	2.	42.	15.	1.57	60.	85.	145.
			10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
11	BEND	1	10	10.	0.	10.	4.	46.	15.	1.57	60.	93.	153.
			39	11.	0.	12.	9.	49.	12.	1.57	60.	98.	158.
12	TAN	1	39	0.	12.	11.	49.	12.	9.	1.57	39.	1427.	1466.
			31	0.	13.	12.	52.	12.	9.	1.00	39.	967.	1006.
13	TAN	1	31	0.	13.	12.	52.	12.	9.	1.00	82.	167.	249.
			40	0.	14.	13.	71.	12.	9.	1.57	82.	349.	431.
14	BEND	1	40	13.	0.	14.	9.	71.	12.	1.57	60.	138.	198.
			13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
15	BEND	1	13	14.	0.	12.	3.	79.	15.	1.57	60.	153.	213.
			41	13.	0.	8.	3.	86.	15.	1.57	60.	168.	228.

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
16	TAN	1	41	0.	8.	13.	86.	15.	3.	1.57	82.	423.	505.
			15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
17	TAN	1	15	0.	9.	16.	146.	15.	3.	1.00	82.	450.	532.
			16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
18	TAN	1	16	0.	16.	1.	82.	15.	1.	1.00	82.	255.	337.
			17	0.	22.	17.	164.	15.	2.	1.00	82.	505.	587.
19	TAN	1	17	3.	15.	15.	165.	30.	33.	1.00	82.	525.	607.
			18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
20	TAN	1	18	3.	13.	10.	54.	30.	10.	1.57	82.	303.	385.
			42	3.	8.	1.	29.	30.	36.	1.57	82.	269.	351.
21	BEND	1	42	3.	1.	8.	29.	36.	30.	1.57	60.	107.	167.
			20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
22	BEND	1	20	4.	3.	7.	38.	36.	4.	1.57	60.	100.	160.
			43	7.	4.	3.	26.	29.	26.	1.57	60.	90.	150.
23	TAN	1	43	7.	3.	4.	26.	26.	29.	1.57	39.	1311.	1350.
			32	6.	3.	7.	2.	26.	3.	1.00	39.	473.	512.
24	TAN	1	32	6.	3.	7.	2.	26.	3.	1.00	82.	82.	164.
			44	5.	3.	8.	20.	26.	19.	1.57	82.	185.	267.
25	BEND	1	44	5.	8.	3.	20.	19.	26.	1.57	60.	73.	133.
			23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
26	BEND	1	23	2.	10.	5.	8.	23.	37.	1.57	60.	85.	145.
			45	3.	11.	4.	12.	23.	34.	1.57	60.	82.	142.
27	TAN	1	45	3.	4.	11.	12.	34.	23.	1.57	39.	1191.	1230.
			33	3.	4.	13.	23.	34.	16.	1.00	39.	782.	821.
28	TAN	1	33	3.	4.	13.	23.	34.	16.	1.00	82.	135.	217.
			46	3.	4.	14.	56.	34.	10.	1.57	82.	320.	402.
29	BEND	1	46	14.	3.	4.	10.	56.	34.	1.57	60.	127.	187.
			26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
30	BEND	1	26	9.	3.	14.	28.	69.	24.	1.57	60.	150.	210.
			47	6.	3.	17.	33.	71.	6.	1.57	60.	149.	209.

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

ELEMENT NUMBER	ELM. TYPE	BRANCH NUMBER	JOINT NO.	*** END FORCES IN LOCAL COORDINATES LBS AND IN-LBS *** F1	F2	F3	M1	M2	M3	SIF	PRESSURE STRESS	LOAD STRESS	COMBINED STRESS
31	TAN	1	47	3.	17.	6.	71.	6.	33.	1.57	82.	377.	459.
			28	3.	25.	9.	60.	6.	20.	1.57	82.	307.	389.

SUMMARY OF RESULTS FOR LOAD NUMBER 16 LOAD TITLE: SSE + SRV + LOCA -Y-Z

LOCATIONS OF MAXIMUM STRESSES COMPUTED IN ACCORD WITH NUCLEAR CODE NC-3600

BRANCH NUMBER	STRESS DUE TO LOAD 16 ELEMENT	STRESS (PSI)	COMBINED STRESS (LOAD 16 + PRESSURE) ELEMENT	STRESS (PSI)
1	12	1427.	12	1466.

*** FORCES AT BOUNDARY JOINTS (IN GLOBAL SYSTEM) ***

BOUNDARY JOINT NO	FORCES (LBS) F1	F2	F3	MOMENTS (IN-LBS) M1	M2	M3
1	0.	-3.	1.	35.	-28.	3.
5	0.	7.	-30.	45.	328.	-44.
15	0.	-19.	-32.	292.	-29.	-6.
17	3.	-37.	-32.	329.	-45.	-35.
28	3.	-9.	25.	60.	-20.	6.

NOTES: REFER TO BOUNDARY CONDITION TABLE FOR CONSTRAINT CONDITIONS
FOR TOTAL CONSTRAINT FORCE ADD NEGATIVE OF APPLIED CONCENTRATED LOADS

OUTPUT FOR THIS LOADING CONDITION IS WRITTEN ON THE FOLLOWING LOGICAL UNITS FOR POSSIBLE SUBSEQUENT USE

FOR NC-3600 STRESS EVALUATION: LOGICAL UNIT 2 FILE NUMBER 23

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* CPU SECONDS ** THIS STEP "STRE" TIME IS   12.82 ** LAST STEP "COMB" TIME IS    7.48 ** DELTA TIME IS    5.34 *
* ELAPSED SECONDS                           238.0                                135.8                    102.2 *

* CPU SECONDS ** THIS STEP "SUPR" TIME IS   12.82 ** LAST STEP "STRE" TIME IS   12.82 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           238.0                                238.0                      0.0 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS   12.84 ** LAST STEP "SUPR" TIME IS   12.82 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           238.0                                238.0                      0.0 *
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START NC3600 NO PRODUCTION NO TAPE 31
WPPSS SCRUBBER DRAIN
GEOMETRY
WPPSS SCRUBBER DRAIN
COORDINATE INCHES
1 0 0 0
3 0 0 -4.5
5 -20 0 -4.5
7 -39 0 -4.5
10 -39 19.5 -4.5
13 -39 22.5 -7.5
15 -39 27.5 -7.5
16 -39 56 -7.5
17 -39 84 -7.5
18 -39 93 -7.5
20 -39 113 -7.5
23 -28.5 113 -7.5
26 -28.5 121 -7.5
28 -28.5 121 -23.5
30 -39 10 -4.5
31 -39 21 -6
32 -33 113 -7.5
33 -28.5 117 -7.5
BOUNDARY
1 ANCHOR
17 ANCHOR
28 ANCHOR
5 YZSTOP
15 ZXSTOP
MATERIAL 304SS
70 28300000 .3 .0000091 18800
150 27900000 .3 .00000925 18800
175 27775000 .3 .00000930 18800
SIF
101 2.1 2.1 1
BRANCH 1 304SS 25 1
RUN 1 0 1.9 .145 .23 3
ELBOW 3 1.5 2.4 .25 .47 0 101
RUN 0 5 1.9 .145 .23 1
RUN 5 0 1.9 .145 .23 2
ELBOW 7 1.5 2.4 .25 .47 0 101
RUN 0 30 1.9 .145 .23 1
RUN 30 0 1.9 .145 .23 2
ELBOW 10 1.5 2.4 .25 .47 0 101
RUN 0 31 .9 .145 .23 1
RUN 31 0 1.9 .145 .23 2
ELBOW 13 1.5 2.4 .25 .47 0 101
RUN 0 15 1.9 .145 .23 1
RUN 15 16 1.9 .145 .23 0
RUN 16 17 1.9 .145 .23 0
RUN 17 18 1.9 .145 .23 2
RUN 18 0 1.9 .145 .23 3
ELBOW 20 1.5 2.4 .25 .47 0 101
RUN 0 32 .9 .145 .23 1
RUN 32 0 1.9 .145 .23 2
ELBOW 23 1.5 2.4 .25 .47 0 101
RUN 0 33 .9 .145 .23 1
RUN 33 0 1.9 .145 .23 2
ELBOW 26 1.5 2.4 .25 .47 0 101
```

```
RUN 0 28 1.9 .145 .23 3
FREQUENCY 7 7 1 1
SCRUBBER DRAIN
3DOF 3 7 10 16 20 23 26
END OF JOB
```

```
     6    31     0     0                                                    PD1
WPPSS SCRUBBER DRAIN
AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977
     6     1     0     0     1                                              P 1
WPPSS SCRUBBER DRAIN                                                        P 2
    31    32    21     0     5     3     7     1     0     0     0     0    P 3
     0     1     0     0     1     0     0                                  P 4
     1    32     7     0     0     1     1                                  P 5
     1     0.0          0.0          0.0          0                        P 7
     3    -0.43934      0.0         -4.06066     0                        P 7
     5   -20.00000      0.0         -4.50000     0                        P 7
     7   -38.56065      0.43934     -4.50000     0                        P 7
    10   -39.00000     19.45268     -4.61418     0                        P 7
    13   -39.00000     22.54727     -7.38582     0                        P 7
    15   -39.00000     27.50000     -7.50000     0                        P 7
    16   -39.00000     56.00000     -7.50000     0                        P 7
    17   -39.00000     84.00000     -7.50000     0                        P 7
    18   -39.00000     93.00000     -7.50000     0                        P 7
    20   -38.56065    112.56065     -7.50000     0                        P 7
    23   -28.93933    113.43933     -7.50000     0                        P 7
    26   -28.50000    120.56065     -7.93934     0                        P 7
    28   -28.50000    121.00000    -23.50000     0                        P 7
    30   -39.00000     10.00000     -4.50000     0                        P 7
    31   -39.00000     21.00000     -6.00000     0                        P 7
    32   -33.00000    113.00000     -7.50000     0                        P 7
    33   -28.50000    117.00000     -7.50000     0                        P 7
    34     0.0          0.0         -3.00000     0                        P 7
    35    -1.50000      0.0         -4.50000     0                        P 7
    36   -37.50000      0.0         -4.50000     0                        P 7
    37   -39.00000      1.50000     -4.50000     0                        P 7
    38   -39.00000     18.87868     -4.50000     0                        P 7
    39   -39.00000     19.93933     -4.93934     0                        P 7
    40   -39.00000     22.06065     -7.06066     0                        P 7
    41   -39.00000     23.12131     -7.50000     0                        P 7
    42   -39.00000    111.50000     -7.50000     0                        P 7
    43   -37.50000    113.00000     -7.50000     0                        P 7
    44   -30.00000    113.00000     -7.50000     0                        P 7
    45   -28.50000    114.50000     -7.50000     0                        P 7
    46   -28.50000    119.50000     -7.50000     0                        P 7
    47   -28.50000    121.00000     -9.00000     0                        P 7
    60    -1.50000      0.0         -3.00000     0                        P 7
    61   -37.50000      1.50000     -4.50000     0                        P 7
    62   -39.00000     18.87866     -6.00000     0                        P 7
    63   -39.00000     23.12131     -6.00000     0                        P 7
    64   -37.50000    111.50000     -7.50000     0                        P 7
    65   -30.00000    114.50000     -7.50000     0                        P 7
    66   -28.50000    119.50000     -9.00000     0                        P 7
  1  3      1.9000      0.1450      2.0000      0.0          0.0          0.0      P11D
  2  4      2.4000      0.2500      2.0000      0.0          0.0          0.0      P11D
  3  3      0.9000      0.1450      2.0000      0.0          0.0          0.0      P11D
   101     2.099999    2.099999     1.000000                                P 12.1
   0.230    0.470      0.230
  1  3 0.70000E 02 0.28300E 08 0.30000E 00 0.91000E-05 18800.0  0.0  0.0  P14
       0.15000E 03 0.27900E 08 0.30000E 00 0.92500E-05 18800.0  0.0  0.0  P14A
       0.17500E 03 0.27775E 08 0.30000E 00 0.93000E-05 18800.0  0.0  0.0  P14A
    25.00000     0.0          0.0          0.0          0.0          0.0      P15
  1  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
 17  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
 28  0 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01 0.100E 01           P18
```

```
 5  0 0.0        0.100E 01 0.100E 01 0.0        0.0        0.0                P18
15  0 0.100E 01 0.0        0.100E 01 0.0        0.0        0.0                P18
 1   1  341001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    3    1    0   0   1                                                    P21B
 2  34   3  60   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
 3   3  35  60   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
 4  35   51002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
 5   5  361002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
 6  36   7  61   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
 7   7  37  61   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
 8  37  301001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
 9  30  381001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
10  38  10  62   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
11  10  39  62   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
12  39  311001   1   1   1   3   3   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
13  31  401001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
14  40  13  63   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
15  13  41  63   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
16  41  151001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
17  15  161001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    0    1    0   0   1                                                    P21B
18  16  171001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    0    1    0   0   1                                                    P21B
19  17  181001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
20  18  421001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    3    1    0   0   1                                                    P21B
21  42  20  64   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
22  20  43  64   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
23  43  321002   1   1   1   3   3   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
24  32  441002   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
25  44  23  65   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
26  23  45  65   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
27  45  331001   1   1   1   3   3   1   1   0   0   0   0  0.0               P21
  1    1    1    0   0   1                                                    P21B
28  33  461001   1   1   1   1   1   1   1   0   0   0   0  0.0               P21
  1    2    1    0   0   1                                                    P21B
29  46  26  66   1   2   1   2   2   1   1   0   0   0   0  0.0               P21
  1  101    1    0   0   1                                                    P21B
```

```
  30  26  47  66   1   2   1   2   2   1   1   0   0   0   0  0.0          P21
    1  101     1    0    0    1                                            P21B
  31  47  281001   1   1   1   1   1   1   1   0   0   0   0  0.0          P21
    1    3    1    0    0    1                                            P21B
    7      0 0.10000E 01 0.10000E 01                                       P25
   3   7  10  16  20  23  26   0   0   0   0   0   0   0   0   0   0   0  P26
     0     0                                                              P28
     0     0                                                              P30
     0                                                                    P68
SCRUBBER DRAIN                                                            D1
     1    -1     7     0     1     0                                      D2
     4     0.00100     7                                                  D3
     0                                                                    PD1

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    0.15 ** LAST STEP "ZERO" TIME IS    0.0  ** DELTA TIME IS    0.15 *
* ELAPSED SECONDS                             2.6                            0.0                            2.6 *
```

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES 3-DIMENSIONAL STRUCTURES COMPUTER PROGRAM

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

** NUCLEAR CODE PER NC-3600 USED **

TYPE OF ANALYSIS : INFLUENCE COEFFICIENTS FOR ELEMENTS IN PIPE FORMAT

TOTAL NUMBER OF ELEMENTS	31
TOTAL NUMBER OF STRUCTURAL JOINTS	32
TOTAL NUMBER OF FICTICIOUS REFERENCE JOINTS	7
TOTAL NUMBER OF LOADS FOR GENERATION OF DYNAMIC DOF	21
TOTAL NUMBER OF MECHANICAL LOADS	0
TOTAL NUMBER OF THERMAL LOADS	0
TOTAL NUMBER OF NON-DYNAMIC LOADS	0
TOTAL NUMBER OF AUXILIARY ORIENTATION MATRICES	0
TOTAL NUMBER OF AUXILIARY COORDINATE SYSTEMS	0
TOTAL NUMBER OF CONSTRAINED BOUNDARY JOINTS	5
TOTAL NUMBER OF NON-DIAGONAL ELASTIC FOUNDATIONS	0
TOTAL NUMBER OF JOINTS WITH NON-ZERO IMPOSED DISPLACEMENT	0
TOTAL NUMBER OF CROSS-SECTION TYPES	3
TOTAL NUMBER OF MATERIALS	1
TOTAL NUMBER OF PIPE PRESSURES	1
TOTAL NUMBER OF GRAVITATIONAL VECTORS	0
TOTAL UNIFORM LOAD VECTORS	0
TOTAL SYSTEM JOINTS READ IN	32
TOTAL FICTIOUS JOINTS READ IN	7
TOTAL USER SUPPLIED STRESS INTENSIFICATION FACTORS	1
TOTAL USER SUPPLIED STIFFNESS MATRICES	0

JOINT COORDINATES IN GLOBAL SYSTEM

NO.	X1(IN)	X2(IN)	X3(IN)
1	0.0	0.0	0.0
3	-0.439340	0.0	-4.060659
5	-20.000000	0.0	-4.500000
7	-38.560638	0.439340	-4.500000
10	-39.000000	19.452667	-4.614180
13	-39.000000	22.547256	-7.385819
15	-39.000000	27.500000	-7.500000
16	-39.000000	56.000000	-7.500000
17	-39.000000	84.000000	-7.500000
18	-39.000000	93.000000	-7.500000
20	-38.560638	112.560638	-7.500000
23	-28.939316	113.439316	-7.500000
26	-28.500000	120.560638	-7.939340
28	-28.500000	121.000000	-23.500000
30	-39.000000	10.000000	-4.500000
31	-39.000000	21.000000	-6.000000
32	-33.000000	113.000000	-7.500000
33	-28.500000	117.000000	-7.500000
34	0.0	0.0	-3.000000
35	-1.500000	0.0	-4.500000
36	-37.500000	0.0	-4.500000
37	-39.000000	1.500000	-4.500000
38	-39.000000	18.878677	-4.500000
39	-39.000000	19.939316	-4.939340
40	-39.000000	22.060638	-7.060659
41	-39.000000	23.121307	-7.500000
42	-39.000000	111.500000	-7.500000
43	-37.500000	113.000000	-7.500000
44	-30.000000	113.000000	-7.500000
45	-28.500000	114.500000	-7.500000
46	-28.500000	119.500000	-7.500000
47	-28.500000	121.000000	-9.000000
60	-1.500000	0.0	-3.000000
61	-37.500000	1.500000	-4.500000
62	-39.000000	18.878647	-6.000000
63	-39.000000	23.121307	-6.000000
64	-37.500000	111.500000	-7.500000
65	-30.000000	114.500000	-7.500000
66	-28.500000	119.500000	-9.000000

CROSS SECTIONAL PROPERTIES

XSEC CODE	ELM. TYPE	H/OD (IN)	W/TH (IN)	AREA (IN**2)	I1 (IN**4)	I2 (IN**4)	I3 (IN**4)	K1	K2	X1 (IN)	Y1 (IN)	X2 (IN)	Y2 (IN)	X3 (IN)	Y3 (IN)	X4 (IN)	Y4 (IN)
1	S	1.900	0.145	.7995E 00	.3099E 00	.6198E 00	.3099E 00	2.0	2.0	0.95	0.0	0.0	0.95	-0.95	0.0	0.0	-0.95
2	C	2.400	0.250	.1689E 01	.9889E 00	.9889E 00	.1978E 01	2.0	2.0	1.20	0.0	0.0	1.20	-1.20	0.0	0.0	-1.20
3	S	0.900	0.145	.3439E 00	.2541E-01	.5082E-01	.2541E-01	2.0	2.0	0.45	0.0	0.0	0.45	-0.45	0.0	0.0	-0.45

MATERIAL PROPERTIES

TYPE	TEMPERATURE(F)	YOUNG'S MODULUS(PSI)	POISSON'S RATIO	COEF. OF THERMAL EXPANSION(/F)	SM (PSI)
1	70.00	28300000.00	0.300000	0.000009100	18800.00
1-A	150.00	27900000.00	0.300000	0.000009250	18800.00
1-B	175.00	27774992.00	0.300000	0.000009300	18800.00

PRESSURE DATA

TYPE	PRESSURE
1	25.00

BOUNDARY CONDITION MATRICES

NO.	JOINT	CODE	BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
1	1	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
2	17	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
3	28	0	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01	0.10000000E 01
4	5	0	0.0	0.10000000E 01	0.10000000E 01	0.0	0.0	0.0
5	15	0	0.10000000E 01	0.0	0.10000000E 01	0.0	0.0	0.0

```
* CPU SECONDS ** THIS STEP "DA3D" TIME IS    0.25 ** LAST STEP "BEGP" TIME IS    0.15 ** DELTA TIME IS    0.10 *
* ELAPSED SECONDS                             5.0                                 2.6                        2.4 *

**** I-AUTONO.1:  AUTOMATIC NUMBERING FOR STRUCTURAL JOINTS IS REQUESTED IN THIS JOB
                  TOTAL STRUCTURAL JOINTS  NBC =   32


 BAND-WIDTH =    12  BY D.O.F.          BAND-WIDTH =     2  BY JOINT

* CPU SECONDS ** THIS STEP "JCSO" TIME IS    0.42 ** LAST STEP "DA3D" TIME IS    0.25 ** DELTA TIME IS    0.17 *
* ELAPSED SECONDS                            26.8                                 5.0                       21.8 *
```

MAGNITUDE OF UNIT LOAD (USED TO DETERMINE INFLUENCE COEFFICIENTS) = 0.1000E 01 LBS.

TOTAL NUMBER OF DYNAMIC DEGREES OF FREEDOM = 21

NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.	NO.	JOINT	DIR.
1	3	1	2	3	2	3	3	3	4	7	1	5	7	2
6	7	3	7	10	1	8	10	2	9	10	3	10	16	1
11	16	2	12	16	3	13	20	1	14	20	2	15	20	3
16	23	1	17	23	2	18	23	3	19	26	1	20	26	2
21	26	3												

```
* CPU SECONDS ** THIS STEP "INPT" TIME IS    0.46 ** LAST STEP "JCSO" TIME IS    0.42 ** DELTA TIME IS    0.04 *
* ELAPSED SECONDS                            32.6                                26.8                      5.9 *
```

CHECK OF ON-DIAGONAL TERMS OF THE SYSTEM STIFFNESS MATRIX

MAXIMUM VALUE (0.13245E 09) OCCURS AT THE 62TH DOF
MINIMUM VALUE (0.90653E 04) OCCURS AT THE 105TH DOF
RATIO OF MAX/MIN= 0.14611E 05

```
* CPU SECONDS ** THIS STEP "EQ3D" TIME IS    2.12 ** LAST STEP "INPT" TIME IS    0.46 ** DELTA TIME IS    1.66 *
* ELAPSED SECONDS                            59.0                                32.6                      26.3 *

* CPU SECONDS ** THIS STEP "SELT" TIME IS    3.04 ** LAST STEP "EQ3D" TIME IS    2.12 ** DELTA TIME IS    0.92 *
* ELAPSED SECONDS                           102.3                                59.0                      43.3 *
```

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
1	1	34	1001	1	1	1	1	3	1	1	1	3.00000	0.23000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0
2	34	3	60	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0847 0.0	-1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 1.000000
3	3	35	60	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0848 0.0	-0.707107 0.0 0.707107 0.0 -1.000000 0.0 0.707107 0.0 0.707107
4	35	5	1002	1	1	1	1	1	1	1	1	18.50000	0.23000			0.0 1.000000 0.0 1.000000 0.0 0.0 0.0 0.0 -1.000000
5	5	36	1002	1	1	1	1	2	1	1	1	17.50000	0.23000			0.0 1.000000 0.0 1.000000 0.0 0.0 0.0 0.0 -1.000000
6	36	7	61	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0847 0.0	0.0 1.000000 0.0 0.0 0.0 1.000000 1.000000 0.0 0.0
7	7	37	61	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0848 0.0	0.707100 0.707114 0.0 0.0 0.0 1.000000 0.707114-0.707100 0.0
8	37	30	1001	1	1	1	1	1	1	1	1	8.50000	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
9	30	38	1001	1	1	1	1	2	1	1	1	8.87868	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
10	38	10	62	1	2	1	1	101	1	1	2	0.39268	0.47000	RAD= FLX= ECC=	1.5000 5.0847 0.0	0.0 -0.000020-1.000000 1.000000 0.0 0.0 0.0 -1.000000 0.000020
11	10	39	62	1	2	1	1	101	1	1	2	0.39269	0.47000	RAD= FLX= ECC=	1.5000 5.0848 0.0	0.0 -0.382680-0.923881 1.000000 0.0 0.0 0.0 -0.923881 0.382680
12	39	31	1001	1	1	1	1	1	1	1	3	1.50002	0.23000			1.000000 0.0 0.0 0.0 -0.707115 0.707099 0.0 -0.707099-0.707115
13	31	40	1001	1	1	1	1	2	1	1	1	1.49998	0.23000			1.000000 0.0 0.0 0.0 -0.707100 0.707114 0.0 -0.707114-0.707100

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')		
14	40	13	63	1	2	1	1	101	1	1	2	0.39268	0.47000	RAD=	1.5000	0.0	0.707110	0.707104
														FLX=	5.0847	-1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.707104	0.707110
15	13	41	63	1	2	1	1	101	1	1	2	0.39273	0.47000	RAD=	1.5000	0.0	0.382698	0.923873
														FLX=	5.0847	-1.000000	0.0	0.0
														ECC=	0.0	0.0	-0.923873	0.382698
16	41	15	1001	1	1	1	1	1	1	1	1	4.37869	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
17	15	16	1001	1	1	1	1	0	1	1	1	28.50000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
18	16	17	1001	1	1	1	1	0	1	1	1	28.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
19	17	18	1001	1	1	1	1	2	1	1	1	9.00000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
20	18	42	1001	1	1	1	1	3	1	1	1	18.50000	0.23000			1.000000	0.0	0.0
																0.0	-1.000000	0.0
																0.0	0.0	-1.000000
21	42	20	64	1	2	1	1	101	1	1	2	0.78542	0.47000	RAD=	1.5000	1.000000	0.0	0.0
														FLX=	5.0847	0.0	0.0	1.000000
														ECC=	0.0	0.0	-1.000000	0.0
22	20	43	64	1	2	1	1	101	1	1	2	0.78538	0.47000	RAD=	1.5000	0.707107	-0.707107	0.0
														FLX=	5.0849	0.0	0.0	1.000000
														ECC=	0.0	-0.707107	-0.707107	0.0
23	43	32	1002	1	1	1	1	1	1	1	3	4.50000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
24	32	44	1002	1	1	1	1	2	1	1	1	3.00000	0.23000			0.0	1.000000	0.0
																-1.000000	0.0	0.0
																0.0	0.0	1.000000
25	44	23	65	1	2	1	1	101	1	1	2	0.78538	0.47000	RAD=	1.5000	0.0	1.000000	0.0
														FLX=	5.0847	0.0	0.0	-1.000000
														ECC=	0.0	-1.000000	0.0	0.0
26	23	45	65	1	2	1	1	101	1	1	2	0.78542	0.47000	RAD=	1.5000	-0.707107	0.707107	0.0
														FLX=	5.0846	0.0	0.0	-1.000000
														ECC=	0.0	-0.707107	-0.707107	0.0

ELM NO.	*** END 1	JOINTS END 2	*** REF	MAT. CODE	ELM. TYPE	PIPE CODE	PRES TYPE	SIF CODE	LEG NO.	BRAN NO.	XSEC CODE	LENGTH OR ANGLE	UNIT WT. LB/IN			ORIENTATION MATRIX (I,J')
27	45	33	1001	1	1	1	1	1	1	1	3	2.50000	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
28	33	46	1001	1	1	1	1	2	1	1	1	2.50000	0.23000			1.000000 0.0 0.0 0.0 -1.000000 0.0 0.0 0.0 -1.000000
29	46	26	66	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0847 0.0	0.0 0.0 -1.000000 1.000000 0.0 0.0 0.0 -1.000000 0.0
30	26	47	66	1	2	1	1	101	1	1	2	0.78540	0.47000	RAD= FLX= ECC=	1.5000 5.0848 0.0	0.0 -0.707099 -0.707114 1.000000 0.0 0.0 0.0 -0.707114 0.707099
31	47	28	1001	1	1	1	1	3	1	1	1	14.50000	0.23000			1.000000 0.0 0.0 0.0 0.0 1.000000 0.0 -1.000000 0.0

```
   MAXIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  17 AND EQUALS 0.28500E 02 INCHES
   MINIMUM ELEMENT LENGTH    OCCURS IN ELEMENT  10 AND EQUALS 0.58902E 00 INCHES
   MAXIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  10 AND EQUALS 0.74605E 08
   MINIMUM ELEMENT STIFFNESS OCCURS IN ELEMENT  17 AND EQUALS 0.44147E 04

* CPU SECONDS ** THIS STEP "EDIT" TIME IS    3.24 ** LAST STEP "SELT" TIME IS    3.04 ** DELTA TIME IS    0.20 *
* ELAPSED SECONDS                           109.7                                102.3                      7.3 *

* CPU SECONDS ** THIS STEP "SLVR" TIME IS    4.96 ** LAST STEP "EDIT" TIME IS    3.24 ** DELTA TIME IS    1.72 *
* ELAPSED SECONDS                           354.2                                109.7                    244.6 *

* CPU SECONDS ** THIS STEP "UPDT" TIME IS    4.99 ** LAST STEP "SLVR" TIME IS    4.96 ** DELTA TIME IS    0.03 *
* ELAPSED SECONDS                           361.8                                354.2                      7.5 *
```

WPPSS SCRUBBER DRAIN
WPPSS SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MASS DISTRIBUTION

JOINT	M1	M2	M3	JOINT	M1	M2	M3	JOINT	M1	M2	M3
1	0.0	0.0	0.0	3	0.14330E-02	0.14330E-02	0.14330E-02	5	0.10714E-01	0.0	0.0
7	0.14330E-02	0.14330E-02	0.14330E-02	10	0.71647E-03	0.71647E-03	0.71647E-03	13	0.71651E-03	0.71651E-03	0.71651E-03
15	0.0	0.97853E-02	0.0	16	0.16815E-01	0.16815E-01	0.16815E-01	17	0.0	0.0	0.0
18	0.81845E-02	0.81845E-02	0.81845E-02	20	0.14330E-02	0.14330E-02	0.14330E-02	23	0.14330E-02	0.14330E-02	0.14330E-02
26	0.14330E-02	0.14330E-02	0.14330E-02	28	0.0	0.0	0.0	30	0.51722E-02	0.51722E-02	0.51722E-02
31	0.89286E-03	0.89286E-03	0.89286E-03	32	0.22321E-02	0.22321E-02	0.22321E-02	33	0.14881E-02	0.14881E-02	0.14881E-02
34	0.16093E-02	0.16093E-02	0.16093E-02	35	0.62224E-02	0.62224E-02	0.62224E-02	36	0.59248E-02	0.59248E-02	0.59248E-02
37	0.32462E-02	0.32462E-02	0.32462E-02	38	0.30007E-02	0.30007E-02	0.30007E-02	39	0.80468E-03	0.80468E-03	0.80468E-03
40	0.80465E-03	0.80465E-03	0.80465E-03	41	0.16615E-02	0.16615E-02	0.16615E-02	42	0.62225E-02	0.62225E-02	0.62225E-02
43	0.20557E-02	0.20557E-02	0.20557E-02	44	0.16093E-02	0.16093E-02	0.16093E-02	45	0.14606E-02	0.14606E-02	0.14606E-02
46	0.14605E-02	0.14605E-02	0.14605E-02	47	0.50320E-02	0.50320E-02	0.50320E-02				

CHECK OF DIAGONAL ELEMENTS OF CONTRACTED MASS MATRIX

MAXIMUM VALUE (0.12587E-08) OCCURS AT DOF 6
MINIMUM VALUE (0.14641E-13) OCCURS AT DOF 3
RATIO OF MAX/MIN = 0.85970E 05

```
* CPU SECONDS ** THIS STEP "MASM" TIME IS    5.25 ** LAST STEP "UPDT" TIME IS    4.99 ** DELTA TIME IS    0.26 *
* ELAPSED SECONDS                           388.7                               361.8                      26.9 *
```

CHECK OF DIAGONAL ELEMENTS OF FLEXIBILITY MARTIX BASED ON A UNIT LOAD OF 0.10000E 01 LBS.

MAXIMUM VALUE(0.31512E-03) OCCURS AT DOF 6
MINIMUM VALUE(0.22680E-06) OCCURS AT DOF 3
RATIO OF CMAX/CMIN= 0.13894E 04

```
* CPU SECONDS ** THIS STEP "INFM" TIME IS    5.44 ** LAST STEP "MASM" TIME IS    5.25 ** DELTA TIME IS    0.19 *
* ELAPSED SECONDS                           440.4                               388.7                      51.7 *

* CPU SECONDS ** THIS STEP "BEGP" TIME IS    5.46 ** LAST STEP "INFM" TIME IS    5.44 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           440.9                               440.4                       0.5 *

* CPU SECONDS ** THIS STEP "SRTL" TIME IS    5.47 ** LAST STEP "BEGP" TIME IS    5.46 ** DELTA TIME IS    0.01 *
* ELAPSED SECONDS                           441.2                               440.9                       0.2 *

* CPU SECONDS ** THIS STEP "SQRT" TIME IS    5.49 ** LAST STEP "SRTL" TIME IS    5.47 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           442.6                               441.2                       1.4 *

* CPU SECONDS ** THIS STEP "INYG" TIME IS    5.49 ** LAST STEP "SQRT" TIME IS    5.49 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           442.6                               442.6                       0.0 *

* CPU SECONDS ** THIS STEP "TQAD" TIME IS    5.51 ** LAST STEP "INYG" TIME IS    5.49 ** DELTA TIME IS    0.02 *
* ELAPSED SECONDS                           443.4                               442.6                       0.8 *

* CPU SECONDS ** THIS STEP "JAMX" TIME IS    5.77 ** LAST STEP "TQAD" TIME IS    5.51 ** DELTA TIME IS    0.26 *
* ELAPSED SECONDS                           450.0                               443.4                       6.6 *

* CPU SECONDS ** THIS STEP "RENM" TIME IS    5.82 ** LAST STEP "JAMX" TIME IS    5.77 ** DELTA TIME IS    0.05 *
* ELAPSED SECONDS                           450.5                               450.0                       0.5 *

* CPU SECONDS ** THIS STEP "TRPL" TIME IS    5.88 ** LAST STEP "RENM" TIME IS    5.82 ** DELTA TIME IS    0.06 *
* ELAPSED SECONDS                           450.8                               450.5                       0.2 *
```

ORTHOGONALITY CHECK

```
LARGEST DIAGONAL TERM......... 0.10000E 01
SMALLEST DIAGONAL TERM........ 0.99998E 00
AVERAGE  DIAGONAL TERM........ 0.10000E 01
LARGEST OFF-DIAGONAL TERM..... 0.21528E-04
AVERAGE OFF-DIAGONAL TERM..... 0.57395E-06
```

```
* CPU SECONDS ** THIS STEP "ORTH" TIME IS    5.88 ** LAST STEP "TRPL" TIME IS    5.88 ** DELTA TIME IS    0.0  *
* ELAPSED SECONDS                           450.8                                450.8                        0.0 *
```

MODE SHAPES FOR ENTIRE SYSTEM

DOF	C(K,DOF),K=1,N						
192	0.0	0.0	0.0	0.0	0.0	0.0	0.0
191	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190	0.0	0.0	0.0	0.0	0.0	0.0	0.0
189	0.0	0.0	0.0	0.0	0.0	0.0	0.0
188	0.0	0.0	0.0	0.0	0.0	0.0	0.0
187	0.0	0.0	0.0	0.0	0.0	0.0	0.0
186	-0.27380E-14	0.38617E-03	0.25043E-14	-0.10613E-15	-0.15888E-03	-0.36358E-03	0.23039E-14
185	-0.18447E-14	0.78318E-03	0.62818E-14	0.50566E-14	-0.24622E-03	0.30840E-03	-0.11566E-14
184	0.14605E-14	-0.72351E-04	0.37841E-14	0.58756E-14	-0.35540E-03	0.68794E-03	-0.18226E-14
183	-0.85720E-15	0.79336E-05	-0.19625E-14	-0.19465E-14	0.32027E-04	0.31442E-05	-0.17993E-14
182	-0.19052E-13	0.46694E-03	-0.46926E-13	-0.68376E-13	0.23708E-02	-0.69485E-02	0.90388E-14
181	-0.20877E-13	0.74451E-02	0.53963E-13	0.40797E-13	-0.31371E-02	0.25873E-02	-0.74553E-14
180	-0.28037E-14	0.40229E-03	0.26852E-14	-0.88393E-17	-0.15506E-03	-0.37284E-03	0.23460E-14
179	-0.17793E-14	0.80072E-03	0.66666E-14	0.54347E-14	-0.21690E-03	0.31859E-03	-0.12735E-14
178	0.11688E-14	-0.84302E-04	0.31673E-14	0.52050E-14	-0.41046E-03	0.67567E-03	-0.23645E-14
177	-0.14883E-14	0.43695E-04	-0.36157E-14	-0.45099E-14	0.20622E-03	-0.29782E-03	-0.97937E-15
176	-0.20544E-13	0.54995E-03	-0.50835E-13	-0.74501E-13	0.27766E-02	-0.76797E-02	0.11111E-13
175	-0.24042E-13	0.84655E-02	0.62007E-13	0.46360E-13	-0.34571E-02	0.27611E-02	-0.77274E-14
174	-0.29548E-14	0.42809E-03	0.29081E-14	0.39039E-16	-0.15192E-03	-0.39936E-03	0.24721E-14
173	-0.17620E-14	0.80883E-03	0.68376E-14	0.55845E-14	-0.20191E-03	0.31808E-03	-0.13061E-14
172	0.67694E-15	-0.94130E-04	0.20942E-14	0.40572E-14	-0.45885E-03	0.65740E-03	-0.32828E-14
171	-0.24860E-14	0.14041E-03	-0.64501E-14	-0.94630E-14	0.67445E-03	-0.10037E-02	0.19681E-14
170	-0.21070E-13	0.58911E-03	-0.52260E-13	-0.76813E-13	0.29654E-02	-0.79740E-02	0.12108E-13
169	-0.27898E-13	0.92645E-02	0.68020E-13	0.48855E-13	-0.37149E-02	0.24914E-02	-0.57177E-14
168	-0.31445E-14	0.44906E-03	0.28880E-14	-0.18942E-15	-0.14815E-03	-0.44425E-03	0.26427E-14
167	-0.14244E-14	0.81010E-03	0.73638E-14	0.62744E-14	-0.12334E-03	0.35486E-03	-0.16865E-14
166	0.15970E-15	-0.10033E-03	0.97432E-15	0.28510E-14	-0.49795E-03	0.63641E-03	-0.42462E-14

165	-0.32062E-14	0.39301E-03	-0.95535E-14	-0.17343E-13	0.19071E-02	-0.26157E-02	0.12015E-13
164	-0.21315E-13	0.58934E-03	-0.52813E-13	-0.77375E-13	0.29633E-02	-0.79750E-02	0.11605E-13
163	-0.35681E-13	0.10387E-01	0.75616E-13	0.48885E-13	-0.41116E-02	0.14317E-02	0.81991E-15
162	-0.35536E-14	0.39593E-03	-0.15755E-14	-0.55928E-14	0.15640E-03	-0.92981E-03	0.29885E-14
161	0.26933E-14	0.82567E-03	0.13781E-13	0.14689E-13	0.83484E-03	0.80337E-03	-0.63261E-14
160	-0.22354E-14	-0.61246E-04	-0.38832E-14	-0.27796E-14	-0.53436E-03	0.44341E-03	-0.83501E-14
159	0.80504E-15	0.63648E-03	-0.27316E-14	-0.14145E-13	0.33569E-02	-0.39427E-02	0.30528E-13
158	-0.21884E-13	0.58989E-03	-0.54097E-13	-0.78680E-13	0.29584E-02	-0.79774E-02	0.10434E-13
157	-0.44743E-13	0.11555E-01	0.78783E-13	0.42604E-13	-0.41949E-02	-0.30825E-03	0.84867E-14
156	-0.35648E-14	0.37896E-03	-0.21983E-14	-0.62048E-14	0.18607E-03	-0.95724E-03	0.27867E-14
155	0.27527E-14	0.82387E-03	0.13854E-13	0.14807E-13	0.84728E-03	0.81366E-03	-0.64533E-14
154	-0.22569E-14	-0.54881E-04	-0.38715E-14	-0.28206E-14	-0.52992E-03	0.43055E-03	-0.82191E-14
153	0.44459E-14	0.10623E-02	0.75952E-14	-0.45491E-14	0.42970E-02	-0.40504E-02	0.36647E-13
152	-0.20415E-13	0.41948E-03	-0.53480E-13	-0.76298E-13	0.28815E-02	-0.75611E-02	0.89563E-14
151	-0.48455E-13	0.11971E-01	0.77070E-13	0.36614E-13	-0.40172E-02	-0.13088E-02	0.11770E-13
150	-0.35753E-14	0.35693E-03	-0.29840E-14	-0.69610E-14	0.21637E-03	-0.97998E-03	0.25369E-14
149	0.28522E-14	0.82022E-03	0.13953E-13	0.14985E-13	0.87294E-03	0.83083E-03	-0.67277E-14
148	-0.22585E-14	-0.50887E-04	-0.38303E-14	-0.28107E-14	-0.52921E-03	0.42333E-03	-0.80867E-14
147	0.84256E-14	0.19587E-02	0.24070E-13	0.12534E-13	0.54462E-02	-0.33624E-02	0.33196E-13
146	-0.16547E-13	0.28748E-04	-0.50547E-13	-0.69123E-13	0.26648E-02	-0.65278E-02	0.63102E-14
145	-0.50106E-13	0.12135E-01	0.75855E-13	0.33645E-13	-0.39308E-02	-0.17346E-02	0.12761E-13
144	-0.34481E-14	0.31856E-03	-0.37684E-14	-0.76270E-14	0.24889E-03	-0.98824E-03	0.23397E-14
143	0.29818E-14	0.81077E-03	0.14021E-13	0.15138E-13	0.90608E-03	0.84352E-03	-0.69736E-14
142	-0.20767E-14	-0.30407E-04	-0.33519E-14	-0.23845E-14	-0.47470E-03	0.41059E-03	-0.77607E-14
141	0.17300E-13	0.44145E-02	0.66318E-13	0.58071E-13	0.81490E-02	-0.82912E-03	0.12388E-13
140	-0.59351E-14	-0.98757E-03	-0.39947E-13	-0.46665E-13	0.19443E-02	-0.35380E-02	-0.10186E-14
139	-0.50333E-13	0.12137E-01	0.75543E-13	0.33350E-13	-0.39333E-02	-0.17351E-02	0.12211E-13
138	0.77399E-15	-0.45983E-03	-0.64237E-14	-0.55238E-14	0.28148E-03	-0.21072E-03	-0.16142E-14
137	0.22839E-14	0.40624E-03	0.81475E-14	0.91926E-14	0.66164E-03	0.53555E-03	-0.51092E-14
136	0.12496E-14	0.34425E-03	0.53997E-14	0.54134E-14	0.52237E-03	0.17750E-03	-0.17969E-14

[illegible]

135	0.30842E-13	0.72807E-02	0.12013E-12	0.11765E-12	0.12146E-01	0.25722E-02	-0.18314E-13
134	0.11273E-14	-0.71196E-03	-0.10554E-13	-0.91828E-14	0.44033E-03	-0.32733E-03	-0.28425E-14
133	-0.51122E-13	0.12145E-01	0.74456E-13	0.32322E-13	-0.39421E-02	-0.17370E-02	0.10290E-13
132	0.10215E-14	-0.48896E-03	-0.61396E-14	-0.50146E-14	0.26880E-03	-0.16020E-03	-0.16254E-14
131	0.21741E-14	0.38677E-03	0.77606E-14	0.87731E-14	0.62922E-03	0.51585E-03	-0.49494E-14
130	0.13111E-14	0.35302E-03	0.55875E-14	0.56035E-14	0.54061E-03	0.18142E-03	-0.17956E-14
129	0.32665E-13	0.75496E-02	0.12620E-12	0.12481E-12	0.12603E-01	0.30540E-02	-0.22892E-13
128	0.26344E-15	-0.21078E-03	-0.37215E-14	-0.34084E-14	0.14582E-03	-0.12385E-03	-0.95490E-15
127	-0.50794E-13	0.11935E-01	0.71585E-13	0.29913E-13	-0.38221E-02	-0.18168E-02	0.93821E-14
126	0.13797E-14	-0.51767E-03	-0.56081E-14	-0.42546E-14	0.25322E-03	-0.10387E-03	-0.13725E-14
125	0.21073E-14	0.37651E-03	0.75448E-14	0.85413E-14	0.60973E-03	0.50641E-03	-0.48804E-14
124	0.14181E-14	0.36602E-03	0.58865E-14	0.58994E-14	0.57189E-03	0.18404E-03	-0.17430E-14
123	0.32147E-13	0.73338E-02	0.12344E-12	0.12248E-12	0.12282E-01	0.30835E-02	-0.23166E-13
122	-0.23597E-15	0.88701E-05	-0.10646E-14	-0.12761E-14	0.28912E-04	-0.60235E-04	-0.27033E-15
121	-0.49499E-13	0.11398E-01	0.65341E-13	0.24997E-13	-0.35446E-02	-0.19551E-02	0.77974E-14
120	0.18725E-14	-0.36865E-03	-0.12875E-14	0.16709E-15	0.85798E-04	0.12349E-03	0.66298E-16
119	0.68967E-15	0.12322E-03	0.24692E-14	0.27953E-14	0.19955E-03	0.16573E-03	-0.15972E-14
118	0.10528E-14	0.22690E-03	0.39045E-14	0.38559E-14	0.39282E-03	0.85968E-04	-0.53320E-15
117	0.52956E-14	0.11225E-02	0.19445E-13	0.19176E-13	0.19626E-02	0.41124E-03	-0.23641E-14
116	-0.77225E-16	0.29029E-05	-0.34840E-15	-0.41763E-15	0.94621E-05	-0.19713E-04	-0.88470E-16
115	-0.97731E-14	0.18477E-02	0.52748E-14	-0.22297E-14	-0.38886E-03	-0.70496E-03	-0.78682E-15
114	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108	-0.23100E-06	0.19824E-14	-0.14088E-03	0.40444E-05	-0.42198E-15	0.28062E-16	-0.64760E-04
107	-0.30897E-03	-0.37875E-14	-0.51813E-04	-0.12595E-03	0.25380E-14	-0.53476E-15	0.22955E-03
106	-0.14456E-03	0.72975E-15	0.50862E-05	0.92441E-04	-0.16217E-14	0.15677E-15	0.96709E-04

105	0.69542E-02	-0.42170E-13	-0.44670E-03	-0.10549E-01	0.27715E-12	0.12883E-13	0.62280E-03
104	-0.58404E-05	0.12701E-14	0.11487E-04	-0.32607E-05	0.16418E-14	0.58512E-15	0.15868E-03
103	0.18862E-05	0.12122E-12	-0.12408E-01	0.48943E-03	-0.70198E-13	-0.11241E-13	0.44913E-03
102	0.96005E-06	-0.77256E-14	0.53485E-03	-0.14858E-04	0.14787E-14	-0.15776E-15	0.26885E-03
101	-0.62346E-03	-0.76426E-14	-0.10455E-03	-0.25416E-03	0.51213E-14	-0.10791E-14	0.46320E-03
100	0.57042E-03	-0.28532E-14	-0.19315E-04	-0.34197E-03	0.56551E-14	-0.69489E-15	-0.40131E-03
99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98	-0.17068E-04	0.25205E-14	0.22778E-04	-0.10530E-04	0.34550E-14	0.12107E-14	0.30121E-03
97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96	0.43420E-05	-0.73679E-14	0.43295E-03	-0.73411E-05	0.45421E-15	-0.42205E-15	0.35204E-03
95	-0.67178E-03	-0.82349E-14	-0.11265E-03	-0.27385E-03	0.55182E-14	-0.11627E-14	0.49910E-03
94	0.63072E-03	-0.28456E-14	-0.17010E-04	-0.20355E-03	0.60567E-15	-0.13134E-14	-0.55776E-03
93	-0.26656E-02	0.12780E-13	0.76874E-04	0.11704E-02	-0.12498E-13	0.46574E-14	0.22251E-02
92	-0.18793E-04	0.27126E-14	0.24513E-04	-0.11647E-04	0.37336E-14	0.13069E-14	0.32310E-03
91	0.69647E-05	-0.34056E-13	0.21062E-02	-0.48415E-04	0.35464E-14	-0.15589E-14	0.14807E-02
90	0.45929E-05	-0.71643E-14	0.41352E-03	-0.62666E-05	0.34904E-15	-0.43746E-15	0.35282E-03
89	-0.67391E-03	-0.82307E-14	-0.11580E-03	-0.27458E-03	0.55218E-14	-0.11683E-14	0.50065E-03
88	0.63833E-03	-0.27953E-14	-0.16869E-04	-0.17741E-03	-0.29303E-15	-0.14056E-14	-0.57239E-03
87	-0.30312E-02	0.14420E-13	0.86596E-04	0.12789E-02	-0.12533E-13	0.54519E-14	0.25551E-02
86	-0.91731E-04	0.30504E-14	0.26564E-04	0.93894E-05	0.37611E-14	0.14728E-14	0.39032E-03
85	-0.67403E-04	-0.39203E-13	0.23356E-02	-0.83596E-04	0.43810E-14	-0.19493E-14	0.17446E-02
84	0.31382E-05	-0.69948E-14	0.39812E-03	-0.61461E-05	0.29991E-15	-0.44443E-15	0.35125E-03
83	-0.67725E-03	-0.81838E-14	-0.12291E-03	-0.27565E-03	0.55270E-14	-0.11742E-14	0.50124E-03
82	0.64458E-03	-0.27117E-14	-0.16600E-04	-0.15219E-03	-0.11188E-14	-0.14777E-14	-0.58033E-03
81	-0.33445E-02	0.15794E-13	0.94890E-04	0.13586E-02	-0.12130E-13	0.61721E-14	0.28417E-02
80	-0.30116E-03	0.39778E-14	0.32229E-04	0.62073E-04	0.40629E-14	0.19609E-14	0.58290E-03
79	-0.28529E-03	-0.45353E-13	0.24937E-02	-0.17603E-03	0.63086E-14	-0.25555E-14	0.20832E-02
78	0.82301E-05	-0.64278E-14	0.36334E-03	-0.24803E-05	0.15369E-15	-0.42993E-15	0.33426E-03
77	-0.69182E-03	-0.83291E-14	-0.11947E-03	-0.28201E-03	0.57356E-14	-0.11709E-14	0.50154E-03
76	0.65091E-03	-0.24357E-14	-0.15274E-04	-0.11430E-03	-0.21766E-14	-0.15139E-14	-0.57023E-03

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75	-0.40373E-02	0.18715E-13	0.11286E-03	0.14961E-02	-0.10010E-13	0.78678E-14	0.34849E-02
74	-0.99326E-03	0.69536E-14	0.50890E-04	0.20006E-03	0.62335E-14	0.36799E-14	0.12289E-02
73	-0.10063E-02	-0.61439E-13	0.27664E-02	-0.47631E-03	0.12379E-13	-0.43233E-14	0.30039E-02
72	0.76026E-04	0.17259E-14	-0.45364E-04	0.42000E-04	-0.78900E-15	0.10189E-15	-0.21738E-04
71	-0.86388E-03	-0.88625E-14	-0.62018E-04	-0.35986E-03	0.91196E-14	-0.77597E-15	0.35636E-03
70	0.66432E-03	0.34983E-14	0.17467E-04	0.30571E-03	-0.10410E-13	-0.53657E-15	-0.42979E-04
69	-0.47528E-02	0.18780E-13	0.11536E-03	0.13826E-02	-0.21363E-14	0.93105E-14	0.39156E-02
68	-0.17071E-02	0.71458E-14	0.54999E-04	0.87778E-04	0.14226E-13	0.51767E-14	0.16664E-02
67	-0.17897E-02	-0.73718E-13	0.28304E-02	-0.79563E-03	0.19467E-13	-0.57211E-14	0.37048E-02
66	0.75351E-04	0.20650E-14	-0.58638E-04	0.42090E-04	-0.72309E-15	0.14351E-15	-0.43675E-04
65	-0.86665E-03	-0.86924E-14	-0.67585E-04	-0.36095E-03	0.92084E-14	-0.74666E-15	0.34215E-03
64	0.66271E-03	0.38918E-14	0.19707E-04	0.32573E-03	-0.10669E-13	-0.43696E-15	-0.16698E-05
63	-0.50769E-02	0.17011E-13	0.10644E-03	0.12280E-02	0.30643E-14	0.95656E-14	0.39323E-02
62	-0.19236E-02	0.59841E-14	0.49219E-04	-0.15057E-04	0.17707E-13	0.53548E-14	0.16794E-02
61	-0.20345E-02	-0.75689E-13	0.27836E-02	-0.89238E-03	0.22055E-13	-0.59197E-14	0.38070E-02
60	0.76597E-04	0.24747E-14	-0.74856E-04	0.43053E-04	-0.68151E-15	0.18922E-15	-0.68643E-04
59	-0.86843E-03	-0.86131E-14	-0.69685E-04	-0.36170E-03	0.92642E-14	-0.73035E-15	0.33451E-03
58	0.66027E-03	0.42926E-14	0.22058E-04	0.34487E-03	-0.10883E-13	-0.32766E-15	0.42936E-04
57	-0.54569E-02	0.14637E-13	0.94417E-04	0.10345E-02	0.92596E-14	0.97803E-14	0.39191E-02
56	-0.19993E-02	0.55139E-14	0.46968E-04	-0.53171E-04	0.18931E-13	0.53999E-14	0.16784E-02
55	-0.20900E-02	-0.75346E-13	0.27365E-02	-0.90908E-03	0.22711E-13	-0.59049E-14	0.38121E-02
54	0.97041E-04	0.44000E-14	-0.16286E-03	0.45867E-04	-0.78915E-15	0.34715E-15	-0.21132E-03
53	-0.95668E-03	-0.77494E-14	-0.57195E-04	-0.40238E-03	0.11504E-13	-0.29817E-15	0.15443E-03
52	0.61689E-03	0.66971E-14	0.37276E-04	0.45951E-03	-0.11995E-13	0.38264E-15	0.34192E-03
51	-0.11163E-01	-0.36634E-13	-0.18221E-03	-0.26565E-02	0.11250E-12	0.89487E-14	0.19838E-02
50	-0.20005E-02	0.53168E-14	0.49698E-04	-0.54419E-04	0.18814E-13	0.54009E-14	0.16989E-02
49	-0.13162E-02	-0.41193E-13	0.15493E-02	-0.49410E-03	0.16668E-13	-0.30824E-14	0.24194E-02
48	0.11383E-03	0.27218E-14	-0.11928E-03	0.28953E-04	-0.13628E-14	0.70704E-16	-0.20264E-03
47	-0.10412E-02	-0.69225E-14	-0.45237E-04	-0.44133E-03	0.13648E-13	0.11558E-15	-0.17971E-04
46	0.53997E-03	0.65926E-14	0.39024E-04	0.45282E-03	-0.11432E-13	0.49329E-15	0.40831E-03

45	-0.16113E-01	-0.95341E-13	-0.51835E-03	-0.66417E-02	0.21358E-12	0.46994E-14	-0.14081E-02
44	-0.20017E-02	0.51281E-14	0.52312E-04	-0.55613E-04	0.18701E-13	0.54019E-14	0.17186E-02
43	-0.41747E-03	-0.76687E-14	0.23201E-03	-0.15797E-03	0.79577E-14	-0.91108E-15	0.52568E-03
42	0.11730E-03	0.19368E-14	-0.94256E-04	0.22923E-04	-0.15374E-14	-0.42704E-16	-0.18465E-03
41	-0.10519E-02	-0.69493E-14	-0.44758E-04	-0.44796E-03	0.13871E-13	0.13079E-15	-0.32920E-04
40	0.51812E-03	0.63506E-14	0.38480E-04	0.43762E-03	-0.11066E-13	0.47068E-15	0.39073E-03
39	-0.16215E-01	-0.99193E-13	-0.53983E-03	-0.69206E-02	0.21950E-12	0.41264E-14	-0.18253E-02
38	-0.19509E-02	0.60900E-14	0.68596E-05	-0.44694E-04	0.18040E-13	0.54023E-14	0.16365E-02
37	-0.29509E-03	-0.51418E-14	0.11636E-03	-0.13012E-03	0.64196E-14	-0.88623E-15	0.31969E-03
36	0.12025E-03	0.12767E-14	-0.67837E-04	0.16816E-04	-0.14570E-14	-0.12422E-15	-0.16470E-03
35	-0.10655E-02	-0.69170E-14	-0.43353E-04	-0.45694E-03	0.14215E-13	0.16940E-15	-0.62256E-04
34	0.50764E-03	0.62473E-14	0.38433E-04	0.42970E-03	-0.10864E-13	0.46386E-15	0.37793E-03
33	-0.15311E-01	-0.94572E-13	-0.50982E-03	-0.66282E-02	0.20933E-12	0.37586E-14	-0.19414E-02
32	-0.18241E-02	0.76724E-14	-0.77958E-04	-0.23910E-04	0.16297E-13	0.52853E-14	0.14498E-02
31	-0.24279E-03	-0.44880E-14	0.78397E-04	-0.12085E-03	0.55687E-14	-0.94495E-15	0.23888E-03
30	0.58210E-04	-0.10572E-14	0.22024E-04	-0.14961E-06	-0.86625E-15	-0.36044E-15	-0.21399E-04
29	-0.43941E-03	-0.29625E-14	-0.97939E-05	-0.19187E-03	0.58950E-14	0.21547E-16	-0.65847E-04
28	0.28831E-03	0.21995E-14	0.23073E-04	0.24103E-03	-0.73855E-14	-0.21464E-15	0.21302E-03
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	-0.24069E-03	-0.59827E-14	0.64276E-04	-0.11759E-03	0.24475E-14	-0.13871E-14	0.19285E-03
24	-0.14782E-04	0.63731E-16	-0.58506E-05	0.85233E-06	-0.19810E-16	0.12931E-16	0.69393E-05
23	0.13073E-03	0.17265E-14	-0.52649E-05	0.58572E-04	-0.12919E-14	0.26807E-15	-0.72851E-05
22	0.56445E-04	-0.20796E-14	0.68346E-05	0.41590E-04	-0.37079E-14	-0.93192E-15	0.38699E-04
21	0.17602E-03	0.41007E-14	-0.12535E-04	0.79930E-04	-0.27185E-15	0.96614E-15	-0.27574E-04
20	0.13503E-03	-0.10398E-13	0.24241E-04	0.79190E-04	-0.13400E-13	-0.41130E-14	0.74778E-04
19	-0.23846E-03	-0.75629E-14	0.49348E-04	-0.11414E-03	-0.85211E-15	-0.18546E-14	0.14419E-03
18	-0.93692E-05	0.27534E-15	-0.44564E-05	0.25762E-05	0.13339E-15	0.84332E-16	0.67616E-05
17	0.10116E-03	0.20251E-14	-0.91701E-05	0.46264E-04	-0.51304E-15	0.43020E-15	-0.22387E-04
16	0.48970E-04	-0.22469E-14	0.59959E-05	0.36068E-04	-0.36581E-14	-0.97004E-15	0.34384E-04

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

15	0.46667E-04	0.21849E-14	-0.45441E-05	0.21475E-04	0.96023E-15	0.63153E-15	-0.11236E-04
14	0.97920E-04	-0.92785E-14	0.15640E-04	0.63632E-04	-0.11722E-13	-0.36466E-14	0.66030E-04
13	-0.18775E-03	-0.68043E-14	0.45139E-04	-0.91039E-04	-0.14116E-14	-0.17191E-14	0.13426E-03
12	-0.41933E-05	0.29289E-15	-0.34576E-05	0.52487E-05	0.50887E-16	0.80303E-16	0.83484E-05
11	0.63958E-04	0.18232E-14	-0.10426E-04	0.30105E-04	0.10460E-15	0.43796E-15	-0.29407E-04
10	0.32229E-04	-0.22215E-14	0.41588E-05	0.23428E-04	-0.31354E-14	-0.90812E-15	0.23594E-04
9	0.56423E-05	0.92805E-15	0.30171E-06	0.24856E-05	0.77193E-15	0.31121E-15	0.15262E-05
8	0.51244E-04	-0.63112E-14	0.82264E-05	0.33757E-04	-0.76072E-14	-0.24419E-14	0.37913E-04
7	-0.99074E-04	-0.42692E-14	0.32490E-04	-0.49620E-04	-0.12231E-14	-0.11005E-14	0.99461E-04
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MODE SHAPE				MODE SHAPE			
DIM	DOL	DIS		DIM	DOL	DIS	
1	1	1	0.000000000	1	1	1	-0.000000000
1	2	1	0.000000000	1	2	1	-0.000000000
1	3	1	0.000000000	1	3	1	-0.000000000
1	4	1	-0.000000000	1	4	1	0.000000000
1	5	1	0.554444225	1	5	1	0.003889125
1	6	1	0.000221125	1	6	1	0.000225894
1	7	1	0.000000000	1	7	1	0.001589010

NORMALIZING FACTOR 0.154018E-01

NODE NUMBER		2	MAX. PREFERENCE	0.101569E-01	0.384314E-01	PERIOD	0.105284E-01 SEC
1	1	1	0.101169875	1	1	2	0.002226195
1	2	1	1.030000000	1	1	2	0.088142120
1	3	1	0.101010192	1	1	2	0.232211184
1	4	1	0.000000000	1	1	2	0.000000000
1	5	1	-0.2[illegible]	1	1	2	-0.[illegible]
1	6	1	[illegible]	1	1	2	[illegible]
1	7	1	[illegible]	1	1	2	[illegible]

MODE NUMBER 1 NAT. FREQUENCY 0.479909E 03 RAD/SEC ; 0.763799E 02 HERTZ PERIOD 0.130925E-01 SEC
NORMALIZING FACTOR 0.162147E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	-0.011578932	3	2	2	0.006038971	3	3	3	0.002878083
7	4	1	-0.018199012	7	5	2	-0.120314717	7	6	3	-1.000000000
10	7	1	-0.125470817	10	8	2	-0.118633926	10	9	3	-0.313104928
16	10	1	0.000116328	16	11	2	-0.000360195	16	12	3	0.428882539
20	13	1	-0.000000000	20	14	2	0.000000000	20	15	3	0.000000000
23	16	1	-0.000000000	23	17	2	-0.000000000	23	18	3	0.000000000
26	19	1	-0.000000000	26	20	2	-0.000000000	26	21	3	-0.000000000

MODE NUMBER 2 NAT. FREQUENCY 0.529130E 03 RAD/SEC ; 0.842136E 02 HERTZ PERIOD 0.118746E-01 SEC
NORMALIZING FACTOR 0.119707E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	-0.000000000	3	2	2	-0.000000000	3	3	3	0.000000000
7	4	1	-0.000000000	7	5	2	0.000000000	7	6	3	-0.000000000
10	7	1	-0.000000000	10	8	2	0.000000000	10	9	3	0.000000000
16	10	1	0.000000000	16	11	2	0.000000000	16	12	3	-0.000000000
20	13	1	0.997040153	20	14	2	-0.017607678	20	15	3	0.630677164
23	16	1	1.000000000	23	17	2	0.035042584	23	18	3	0.088743150
26	19	1	0.707190812	26	20	2	0.045941785	26	21	3	0.003650162

MODE NUMBER 3 NAT. FREQUENCY 0.612494E 03 RAD/SEC ; 0.974814E 02 HERTZ PERIOD 0.102584E-01 SEC
NORMALIZING FACTOR 0.124078E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	0.003637920	3	2	2	0.001260474	3	3	3	-0.000366227
7	4	1	0.009377759	7	5	2	0.000552844	7	6	3	-0.043507498
10	7	1	0.224344552	10	8	2	0.003966752	10	9	3	0.008578353
16	10	1	-1.000000000	16	11	2	0.000925786	16	12	3	-0.036001712
20	13	1	0.000000000	20	14	2	-0.000000000	20	15	3	0.000000000
23	16	1	0.000000000	23	17	2	-0.000000000	23	18	3	0.000000000
26	19	1	0.000000000	26	20	2	-0.000000000	26	21	3	-0.000000000

MODE NUMBER 4 NAT. FREQUENCY 0.645173E 03 RAD/SEC ; 0.102682E 03 HERTZ PERIOD 0.973877E-02 SEC
NORMALIZING FACTOR 0.105493E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	-0.008629896	3	2	2	0.006031841	3	3	3	0.002035663
7	4	1	-0.012334265	7	5	2	-0.004236680	7	6	3	-0.656026900
10	7	1	-0.084591925	10	8	2	-0.001427294	10	9	3	0.116404593
16	10	1	0.046394210	16	11	2	-0.000309088	16	12	3	-1.000000000
20	13	1	0.000000000	20	14	2	-0.000000000	20	15	3	0.000000000
23	16	1	0.000000000	23	17	2	-0.000000000	23	18	3	-0.000000000
26	19	1	0.000000000	26	20	2	-0.000000000	26	21	3	-0.000000000

MODE NUMBER 5 NAT. FREQUENCY 0.672860E 03 RAD/SEC ; 0.107089E 03 HERTZ PERIOD 0.933803E-02 SEC
NORMALIZING FACTOR 0.126034E-01

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	-0.000000000	3	2	2	-0.000000000	3	3	3	0.000000000
7	4	1	0.000000000	7	5	2	0.000000000	7	6	3	0.000000000
10	7	1	0.000000000	10	8	2	0.000000000	10	9	3	0.000000000
16	10	1	-0.000000000	16	11	2	0.000000000	16	12	3	0.000000000
20	13	1	-0.303256571	20	14	2	0.011569738	20	15	3	1.000000000
23	16	1	-0.318736434	23	17	2	0.228625357	23	18	3	0.340942383
26	19	1	-0.274298131	26	20	2	0.220307291	26	21	3	0.016362544

MODE NUMBER 6 NAT. FREQUENCY 0.970572E 03 RAD/SEC ; 0.154471E 03 HERTZ PERIOD 0.647369E-02 SEC
NORMALIZING FACTOR 0.767972E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	-0.000000000	3	2	2	-0.000000000	3	3	3	0.000000000
7	4	1	-0.000000000	7	5	2	0.000000000	7	6	3	0.000000000
10	7	1	-0.000000000	10	8	2	0.000000000	10	9	3	0.000000000
16	10	1	-0.000000000	16	11	2	0.000000000	16	12	3	0.000000000
20	13	1	-0.236572444	20	14	2	-0.016126901	20	15	3	0.397665262
23	16	1	-0.170424402	23	17	2	-0.984551072	23	18	3	-0.527414858
26	19	1	0.359527290	26	20	2	-1.000000000	26	21	3	-0.038780499

MODE NUMBER 7 NAT. FREQUENCY 0.172782E 04 RAD/SEC ; 0.274991E 03 HERTZ PERIOD 0.363647E-02 SEC
NORMALIZING FACTOR 0.393229E-02

JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE	JNT	DOF	DIR	MODE SHAPE
3	1	1	0.034142345	3	2	2	0.016791727	3	3	3	-0.002857269
7	4	1	0.081298709	7	5	2	0.416177571	7	6	3	-0.464187443
10	7	1	0.968134284	10	8	2	0.427071750	10	9	3	1.000000000
16	10	1	0.114217103	16	11	2	0.040354278	16	12	3	0.158381224
20	13	1	0.000000000	20	14	2	-0.000000000	20	15	3	-0.000000000
23	16	1	0.000000000	23	17	2	0.000000000	23	18	3	0.000000000
26	19	1	-0.000000000	26	20	2	0.000000000	26	21	3	-0.000000000

WPPSS SCRUBBER DRAIN
SCRUBBER DRAIN

AIR PRODUCTS MODIFIED PIPDYN-II VERSION PURCHASED 1977

MODE NO.	FREQUENCY (RAD/SEC)
8	0.17699890E 04
9	0.22337021E 04
10	0.23656743E 04
11	0.30398259E 04
12	0.31862529E 04
13	0.56399688E 04
14	0.74500898E 04
15	0.76096289E 04
16	0.10975230E 05
17	0.12450133E 05
18	0.14703090E 05
19	0.15793891E 05
20	0.15905883E 05
21	0.21261555E 05

MODAL PARTICIPATION FACTORS

MODE	DIRECTION 1	DIRECTION 2	DIRECTION 3
1	-0.248176E-04	-0.396275E-04	-0.142616E-03
2	0.287348E-03	0.249299E-05	0.969574E-04
3	-0.176000E-03	0.928930E-06	-0.131955E-04
4	-0.263616E-05	-0.710661E-07	-0.250960E-03
5	-0.980930E-04	0.430995E-04	0.177810E-03
6	-0.103547E-04	-0.111759E-03	0.762247E-05
7	0.521779E-04	0.415009E-04	0.305127E-04
8	-0.703894E-04	0.294925E-04	0.313922E-04
9	-0.127396E-04	-0.162905E-04	-0.457923E-05
10	0.101529E-05	0.211406E-04	-0.252977E-04
11	0.497536E-04	0.100933E-05	-0.367776E-05
12	-0.840746E-06	0.581543E-04	-0.173683E-04
13	-0.270230E-06	0.174198E-04	-0.272657E-06
14	-0.613839E-06	0.115183E-04	0.377329E-05
15	0.334376E-05	0.129881E-04	0.132279E-06
16	0.261612E-05	0.138573E-05	-0.784530E-06
17	-0.140310E-06	0.169349E-05	-0.587449E-05
18	0.227516E-05	-0.160649E-05	0.109278E-05
19	0.156278E-06	-0.693989E-06	-0.616245E-06
20	0.159999E-05	-0.336580E-05	-0.226856E-05
21	-0.113532E-05	0.418763E-08	-0.433134E-05

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MODAL EFFECTIVE MASS

MODE NO.	DIRECTION 1 EFFECTIVE MASS	(ACCUM %)	DIRECTION 2 EFFECTIVE MASS	(ACCUM %)	DIRECTION 3 EFFECTIVE MASS	(ACCUM %)	FREQUENCY (CPS)
1	0.141853E-03	(0.15%)	0.361669E-03	(0.38%)	0.468439E-02	(5.54%)	0.763799E 02
2	0.231175E-01	(24.43%)	0.174007E-05	(0.39%)	0.263200E-02	(8.66%)	0.842136E 02
3	0.116207E-01	(36.63%)	0.323720E-06	(0.39%)	0.653217E-04	(8.74%)	0.974814E 02
4	0.289264E-05	(36.64%)	0.210221E-08	(0.39%)	0.262158E-01	(39.76%)	0.102682E 03
5	0.435637E-02	(41.21%)	0.840993E-03	(1.28%)	0.143140E-01	(56.70%)	0.107089E 03
6	0.101002E-03	(41.32%)	0.117658E-01	(13.76%)	0.547327E-04	(56.77%)	0.154471E 03
7	0.812779E-02	(49.86%)	0.514178E-02	(19.21%)	0.277946E-02	(60.06%)	0.274991E 03
8	0.155223E-01	(66.16%)	0.272499E-02	(22.10%)	0.308735E-02	(63.71%)	0.281702E 03
9	0.809765E-03	(67.01%)	0.132409E-02	(23.51%)	0.104625E-03	(63.83%)	0.355505E 03
10	0.576883E-05	(67.01%)	0.250119E-02	(26.16%)	0.358156E-02	(68.07%)	0.376509E 03
11	0.228742E-01	(91.04%)	0.941378E-05	(26.17%)	0.124987E-03	(68.22%)	0.483803E 03
12	0.717612E-05	(91.05%)	0.343340E-01	(62.58%)	0.306250E-02	(71.84%)	0.507108E 03
13	0.232285E-05	(91.05%)	0.965253E-02	(72.82%)	0.236475E-05	(71.85%)	0.897629E 03
14	0.209138E-04	(91.07%)	0.736374E-02	(80.63%)	0.790250E-03	(72.78%)	0.118572E 04
15	0.647437E-03	(91.75%)	0.976825E-02	(90.99%)	0.101323E-05	(72.78%)	0.121111E 04
16	0.824408E-03	(92.62%)	0.231304E-03	(91.24%)	0.741390E-04	(72.87%)	0.174676E 04
17	0.305159E-05	(92.62%)	0.444540E-03	(91.71%)	0.534919E-02	(79.20%)	0.198150E 04
18	0.111903E-02	(93.79%)	0.557922E-03	(92.30%)	0.258157E-03	(79.51%)	0.234007E 04
19	0.609220E-05	(93.80%)	0.120139E-03	(92.43%)	0.947295E-04	(79.62%)	0.251368E 04
20	0.647667E-03	(94.48%)	0.286610E-02	(95.47%)	0.130201E-02	(81.16%)	0.253150E 04
21	0.582677E-03	(95.09%)	0.792733E-08	(95.47%)	0.848077E-02	(91.20%)	0.338388E 04
SUM OF 21 MODES	0.905405E-01	(95.09%)	0.900103E-01	(95.47%)	0.770591E-01	(91.20%)	
TOTAL LUMPED MASS	0.952121E-01		0.942832E-01		0.844979E-01		

ACCUM=ACCUMULATED PERCENT

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* CPU SECONDS ** THIS STEP "FRQM" TIME IS    6.60 ** LAST STEP "ORTH" TIME IS    5.88 ** DELTA TIME IS    0.72 *
* ELAPSED SECONDS                          471.0                                450.8                        20.2 *
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