

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

July 9, 1984

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

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414

Dear Mr. Denton:

In regards to my July 6, 1984 letter concerning compliance with GDC 51
"Fracture Prevention of Containment Pressure Boundary," please find
attached the information which we committed to provide.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

RWO/ssb

Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NRC Resident Inspector
Catawba Nuclear Station

Mr. Robert Guild, Esq.
Attorney-at-law
P. O. Box 12097
Charleston, South Carolina 29412

Mr. Jesse L. Riley
Carolina Environmental
Study Group
854 Henley Place
Charlotte, North Carolina
28207

Palmetto Alliance
2135½ Devine Street
Columbia, South Carolina 29205

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Boo!
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Catawba Nuclear Station
Power Piping and Mechanical Penetrations
Compliance with GDC 51

I. POWER PIPING AND MECHANICAL PENETRATION MATERIALS

Section 3.1, page 32 of the Catawba Final Safety Analysis Report addresses General Design Criterion 51 of Appendix A of 10CFR Part 50. This section states that the reactor containment boundary shall be designed with sufficient margin to assure that under operating, maintenance, testing, and postulated accident conditions (1) its ferritic materials behave in a nonbrittle manner and (2) the probability of rapidly propagating fracture is minimized. This section also states that the design shall reflect consideration of service temperatures and other conditions of the containment boundary material during operation, maintenance, testing and postulated accident conditions, and the uncertainties in determining (1) material properties, (2) residual, steady-state, and transient stress, and (3) size of flaws.

Duke Power Company has complied with these commitments for mechanical penetrations through selection of materials used in design of the mechanical penetrations. These materials have proven reliable and not subject to brittle fracture in Duke Power's operating plants and in general industry service.

Mechanical penetrations for Catawba meet all code requirements. The effective code for mechanical penetrations is the 1974 edition of the ASME Boiler and Pressure Vessel Code, Section III, Subsection NC including summer 1974 addenda.

In addition to complying with the FSAR commitments and code requirements, the mechanical penetrations comply with guidelines for GDC 51 compliance of Standard Review Plan NUREG 0800 for power operation including power transient conditions. In accordance with NUREG 0800, an assessment of material fracture toughness is made using fracture toughness data presented by NUREG-0577 and ASME Section III, Summer 1977 Addenda, Subsection NC. Using this method a Permissible Lowest Service Metal Temperature (PLSMT) is established for pressure boundary materials. An analysis of the power piping and mechanical penetration materials is discussed below:

A. Penetration Assemblies

- 1) Main Steam and Feedwater Penetration Flued Heads - SA 105; annealed, 2" design axial thickness (see Attachment 1 - June 23, 1983 letter by D. L. Caldwell). NUREG-0577, Table 4.4 assigns a $(NDT + 1.3\sigma)$ NDT of 67°F/77°F to this material. Given the 5 1/2" design axial thickness, the Summer 1977 Addenda Class 2 rules would assign a PLSMT of 125°F/135°F to the material. However, Duke's analysis states the flued heads are part of a floating penetration assembly, which would require a ≤ 2 " axial thickness under the limiting condition. Given a 2" axial thickness, the Summer 1977 addenda Class 2 rules would assign a PLSMT of 107°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.

- 2) Main Steam Penetration Process Pipe - SA 106 Gr. C; 1.5" min. wall. NUREG-0577, Table 4.4 assigns a $(\text{NDT} + 1.3\sigma)$ NDT of 77°F. Summer Addenda Class 2 rules assign a PLSMT of 107°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.
- 3) Main Feedwater Penetration Process Pipe - SA 106 Gr. B; 0.937 min. wall. NUREG-0577, Table 4.4 assigns a $(\text{NDT} + 1.3\sigma)$ NDT of 77°F. Summer 1977 Addenda Class 2 rules assign a PLSMT of 107°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.

B. Piping Subassemblies

- 1) Main Steam Process Pipe - SA 106 Grade C; 31.438" ID x 1.75" min. wall and 31.438" ID x 1.375" min. wall. NUREG-0577, Table 4.4 would assign a $(\text{NDT} + 1.3\sigma)$ NDT of 67°F/77°F to this material. Summer 1977 Addenda Class 2 rules would assign a PLSMT of 97°F/107°F to the material. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.
- 2) Main Steam Process Pipe Fittings - SA 234 WPC (SA 106 Gr. C) 31.5" ID x 2.37" nom. wall manifold. NUREG-0577, Table 4.4 would assign a $(\text{NDT} + 1.3\sigma)$ NDT of 67°F/77°F to this material. Summer 1977 Addenda Class 2 rules would assign a PLSMT of 97°F/107°F to this material. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.

SA 234 WPC (SA 106 Gr. C); 31.625" x 1.375" min. wall ell; 31.625" x 1.750" min. wall (see above analysis).

SA 105, normalized, 1" x 3000#, 2" x 3000" weld boss; est. thickness $\leq 2 \frac{1}{2}$ ". NUREG-0577, Table 4.4 would assign a $(\text{NDT} + 1.3\sigma)$ NDT of -5°F to this material. Summer 1977 Addenda Class 2 rules would assign a PLSMT of 25°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51).

SA 105, normalized, 3/4" (1.375" min. wall) x 6" (0.432" min. wall) sweepolet (see above 2" x 3000# weld boss analysis).

SA 105; 10" x 6" OD transition piece, 10" x 8.75" OD transition piece. CMTR identified the materials as having been normalized. Grinnell Traveler CT-SM-7D calls out 10" x 1 1/2" nom. wall manifold outlets. NUREG-0577, Table 4.4 assigns a $(\text{NDT} + 1.3\sigma)$ NDT of -5°F to this material. Summer 1977 Addenda Class 2 rules assign a PLSMT of 25°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.

- 3) Main Feedwater Process Pipe - SA 106 Gr. B, 18" x S80 (0.937"), assumed to be normalized. NUREG-0577 Fig. B7 and Table 4.4 would assign the material a $(\text{NDT} + 1.3\sigma)$ NDT in that population below 40°F. Based on an assigned NDT of 40°F, Summer 1977 Addenda Class 2 rules would assign a PLSMT of 70°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore

meets the requirements of GDC 51.

- 4) Main Feedwater Process Pipe Fittings - SA 234 WPB (SA 106 Gr. B) 18" x S80 (0.937") ell. Based on the analysis for the feedwater piping, a PLSMT of 70°F is assigned to this material. The design LSMT is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.

SA105 weld boss; normalized; 3/4" and 2". Based on the analysis for the main steam bosses above, a PLSMT of 25°F is assigned to this material. The design LSMT is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.

C. Isolation Valves

- 1) Main Steam Isolation Valve Body - SA 216 Grade WCB; normalized; 2 3/16" min. design thickness. NUREG-0577, Table 4.4 assigns a $(\overline{NDT} + 1.3\sigma)$ NDT of 57°F to 2 1/2" to 5" thick materials. Summer 1977 Addenda Class 2 rules would assign a PLSMT of 87°F. The design LSMT of this material is 115°F (which will be experienced during hydrotest) and therefore meets the requirements of GDC 51.
- 2) Main Steam Isolation Valve Cover - SA 105; quenched and tempered; 5.56" min. design thickness. NUREG-0577, Table 4.4 would assign a $(\overline{NDT} + 1.3\sigma)$ NDT at or below -28°F given that the material was quenched and tempered. Summer 1977 Addenda Class 2 rules would assign a PLSMT of 30°F to the material. The design LSMT is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.
- 3) Main Steam Isolation Valve Poppet - SA 105; quenched and tempered; 6 7/8" min. design thickness. Given the analysis for the valve cover above, Summer 1977 Addenda Class 2 rules would assign a PLSMT of 39°F to the material. The design LSMT is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.
- 4) Main Steam Isolation Valve Pilot Poppet - SA 182 F6 (410 SS); 2" min. design thickness, oil quenched and tempered. From forging prolongation, the estimated $(\overline{NDT} + 1.3\sigma)$ NDT is assumed as 60°F. Summer 1977 Class 2 rules would assign a PLSMT of 90°F. The design LSMT of this material is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.
- 5) Main Feedwater Isolation Valve Body - SA 105; normalized; 1.8" min. design thickness. NUREG-0577, Table 4.4 assigns a $(\overline{NDT} + 1.3\sigma)$ NDT of -5°F. Summer 1977 Addenda Class 2 rules assign a PLSMT of 25°F. The design LSMT of this material is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.
- 6) Main Feedwater Isolation Valve Bonnet - SA 105; normalized; 3 1/4" min. design thickness. NUREG-0577, Table 4.4 assigns a $(\overline{NDT} + 1.3\sigma)$ NDT of 5°F. Summer 1977 Addenda Class 2 rules assign a PLSMT of 38°F. The design LSMT of this material is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.
- 7) Main Feedwater Isolation Valve Neck - SA 105; normalized; 1.8" min. design thickness. Assuming a $(\overline{NDT} + 1.3\sigma)$ NDT of -5°F, the Summer 1977 Addenda Class rules assign a PLSMT of 25°F. The design LSMT of this material is 115°F (during hydrotest) and therefore

meets the requirements of GDC 51.

- 8) Main Feedwater Isolation Valve Retainer - SA 105; normalized; quenched and tempered; 2.9" min. design thickness. Assuming a $(\overline{NDT} + 1.3\sigma)$ NDT of -5°F , the Summer 1977 Addenda Class 2 rules assign a PLSMT of 35°F . The design LSMT of this material is 115°F (during hydrotest) and therefore meets the requirements of GDC 51.

II. MATERIAL FORMS

In order to provide an additional basis for support, attached are the appropriate code data report forms for the penetration assemblies, the main steam system shop fabricated piping, and the main steam and feedwater isolation valves.

CN-SA-83-438

June 23, 1983

C. C. Rolfe

Attention: T. A. Ford

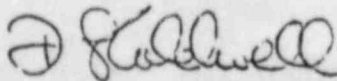
Re: Catawba Unit 1
Main Steam and Feedwater Penetrations
GDC-51
File: CN-1206.02-58

This letter is in response to questions raised by the NRC concerning the design thickness of the Main Steam and Feedwater Systems Flued Heads.

These flued heads are a part of floating penetration assemblies. The penetrations are not anchored to the Reactor Building shell wall but "float" on bellows assemblies on both sides of the wall. Because of this arrangement, the only significant loads on the flued head will be due to pressure in the event of a pipebreak.

The longitudinal thickness of the Main Steam Flued Head is 5½" The longitudinal thickness of the Feedwater Flued Head is 4". The required thickness of the Main Steam Flued Head and the Feedwater Flued Head is less than 2' thick.

Please call J. D. Duncan at 6246 if you have questions.



D. L. Caldwell
Supervising Design Engineer

JDD/eam

cc: R. W. Bonsall
S. S. Lefler
W. R. Selden

Catawba Nuclear Station
Containment Structures
Compliance with GDC 51

1. LOWEST SERVICE METAL TEMPERATURE (LSMT)

The lowest service metal temperature is identified as the limiting temperature which will be experienced by the limiting materials of the containment pressure boundary during the performance of the containment function under operating, maintenance, testing and postulated accident conditions. Calculations based upon conservative assessment of the ambient atmospheric conditions, the insulation and enclosure provided, and the specified minimum containment atmosphere temperature show the LSMT to be 49°F for the steel containment vessel, personnel locks, penetration sleeves and penetration insert plates. The exterior face of the equipment hatch is exposed to ambient outdoor air conditions, and therefore it will experience a lower LSMT than the remainder of the steel containment. The LSMT for the equipment hatch is calculated to be 35°F.

2. CONTAINMENT PRESSURE BOUNDARY MATERIALS (FERRITIC)

Containment pressure boundary materials have been reviewed within the context of General Design Criterion 51. The materials of the following components were characterized with respect to fracture toughness:

A. STEEL CONTAINMENT VESSEL, PERSONNEL LOCKS, EQUIPMENT HATCH, AND PENETRATION SLEEVES

1) General

As stated in Section 3.8.2 of the Catawba FSAR, the steel containment is designed, fabricated and erected in accordance with Subsection NE of the ASME Code, 1971 Edition, including addenda through Summer 1972. This Code edition provides for material fracture toughness by requiring drop-weight tests or Charpy V-notch tests at 30°F or more below the lowest service metal temperature. This temperature was identified in the procurement specifications as 10°F for the steel containment vessel, equipment hatch and penetration sleeves, and as 48°F for the personnel lock. These temperatures are below the calculated LSMT for each component. Consistent and acceptable Charpy V-notch test results have been obtained at test temperatures at least 30°F below the specified lowest service metal temperature, insuring that the material is acceptable for its intended service.

To further demonstrate the suitability of these materials, the discussion below establishes that the service conditions for the material are well removed from the nil-ductility region. Generic nil-ductility transition temperatures for each type of material are used when data is available.

2. CONTAINMENT PRESSURE BOUNDARY MATERIALS (FERRITIC) (cont'd)

A. STEEL CONTAINMENT VESSEL, PERSONNEL LOCKS, EQUIPMENT HATCH, AND PENETRATION SLEEVES, (cont'd.)

2) Steel Containment Vessel

SA-516 Gr 60, normalized, 1", 3/4", and 11/16" thick are identified as having been applied. Typical certified mill test reports for 1" plate show Charpy V-notch test data which does not support the use of the Charpy test temperature as the LSMT within the context of the ASME Summer 1977 Addenda Class 2 rules. However, these ASME rules, NUREG/CR-3009, and CBI in-house data will support assigning a nil-ductility transition temperature of 0°F and a permissible lowest service metal temperature (PLSMT) of 30°F for these materials.

3) Penetration Insert Plates

Thickened insert plates are installed in the containment vessel at some penetrations. SA-516 Gr. 60, normalized, 3/4", 1 1/4", and 1 3/8" thick are identified as having been applied. Certified mill test reports for typical 1 3/8" plate were submitted for review. As was the case for the steel containment vessel itself, ASME Summer 1977 Addenda Class 2 rules, NUREG/CR-3009, and CBI in-house data will support assigning a nil-ductility transition temperature of 0°F and a PLSMT of 30°F for these materials.

4) Penetration Sleeves

SA-333 Gr 6, 24" Schedule 100, 1.531" thick, normalized, is identified as a limiting material. Certified mill test report indicates that the material was Charpy V-notch tested at -30°F to criteria consistent with the ASME Summer 1977 Addenda Class 2 rules and is acceptable for service at 49°F.

Formed, welded, and stress relieved sleeves applying normalized SA-516 Gr 60 in 3/4", 1 1/4", and 1 3/8" thicknesses are identified as limiting materials. Subsection NE rules required qualification of the forming process, including tests to determine that required impact properties are met after straining. Procedure qualification was required to be conducted using material of the same specification, grade or class, and heat treatment. Certified mill test report data for 1 3/8" thick normalized material indicate that the material, before and after fabrication, met Subsection NE Charpy V-notch requirements. While the Charpy results at -30°F do not meet ASME Summer 1977 Addenda Class 2 rules to support the test temperature as the LSMT, they do support a PLSMT of 49°F or lower. Based on NUREG/CR-3009 and ASME Summer 1977 Addenda Class 2 Rules, a PLSMT of 30°F would be developed. A similar analysis is applied to 3/4" and 1 1/4" thick materials.

2. CONTAINMENT PRESSURE BOUNDARY MATERIALS (FERRITIC) (cont'd.)

A. STEEL CONTAINMENT VESSEL, PERSONNEL LOCKS, EQUIPMENT HATCH, AND PENETRATION SLEEVES (cont'd.)

5) Personnel Air Lock

SA-516 Gr 70, normalized, 2 1/2" thick is identified as a limiting material. Charpy V-notch mils lateral expansion data at -30°F do not meet ASME Summer 1977 Addenda Class 2 rules to support the test temperature as the LSMT. However, these rules would assign a nil-ductility transition temperature of 0°F and a PLSMT of 30°F to the material.

SA-333 Gr 6, 6" Schedule 80, 0.432" thick, and 3" Schedule 40, 0.216" thick, identified as containment pressure boundary materials, would be exempted from Charpy V-notch testing by the ASME Summer 1977 Addenda Class 2 rules. Certified mill test reports, however, indicate that the materials were Charpy tested at -50°F, to Charpy V-notch mils lateral expansion supporting a service temperature of 49°F.

SA-350 Gr LF2 fitting, Scrd. coupling 1"-3000#, is identified as a containment pressure boundary material. Based upon dimensioning of commercial forged steel fittings, ASME Summer 1977 Addenda Class 2 rules would exempt the material from testing. However, certified mill test reports indicate that the material was Charpy V-notch tested to energy criteria consistent with the ASME Summer 1977 Addenda Class 2 rules supporting a service temperature of 49°F for the material.

6) Equipment Hatch

SA-516 Gr 70, normalized, 3" thick, used in the hatch barrel, is identified as a limiting material. NUREG/CR-3009 Table 4.4 assigns a 90% confidence nil-ductility transition temperature of -5°F to the material. CBI in-house data shows typical nil-ductility transition temperatures for such material of -10°F and below. ASME Summer 1977 Addenda Class 2 rules can therefore assign a PLSMT of 35°F to the material.

SA-516 Gr 70, normalized, 1 1/8" thick is applied for the dished hatch cover. Consistent with the analysis for the barrel above, ASME Summer 1977 Addenda Class 2 rules would assign a PLSMT of 25°F to the material.

3. QUALITY ASSURANCE DOCUMENTATION FOR LIMITING MATERIALS

- A. CMTR NNI File #46 (1" plate SA-516 Gr 60) (Steel Containment Vessel)
- B. CMTR NNI File #50 (1 3/8" plate SA-516 Gr 60) (penetration insert plates and fabricated penetration sleeves)
- C. CMTR NNI File #187 (24" diameter Sch 100 SA-333 Gr 6) (penetration sleeves)
- D. CMTR Lakeside Bridge and Steel, Heat #T68952 (3" plate SA-516 Gr 70) (Equipment hatch barrel)
- E. CMTR Lamco Industries Heat #67302 (2 1/2" plate SA-516 Gr 70) (Personnel air lock)
- F. CMTR US Steel Heat #A01359 (6" diameter Sch 80 SA-333 Gr 6) (Personnel air lock)
- G. CMTR US Steel Heat #N14522 (3" diameter Sch 40 SA-333 Gr 6) (Personnel air lock)
- H. CMTR Metalloy Heat #8865304 (1" blind flange, SA-350 Gr LF2)
- I. NNI Quality Assurance package for containment plate assembly 1-3-13 (Shows forming process for thickest fabricated sleeves and stress relief of entire assembly following penetration installation.)
- J. NNI Quality Assurance package for containment insert plate assembly 113-1 (Shows thickest penetration insert plate, sleeve fabrication and stress relief of assembly after sleeve installation.)

3A

W-2181

PHOENIX STEEL CORPORATION
CLAYMONT, DELAWARE

SPECIFICATION ASME SA 516 OR 60 PIV. BOLT. LONG L.V. NOTCH IMPACT Q-30 REG F. CLAYMONT, DEL. May 19, 1975
TO AL-2350 (SEC 111 1973 & ADDENDA)

CHEMICAL AND PHYSICAL TESTS OF Silicon Quality Steel

CUSTOMER'S ORDER NO. 5024-A-7

CHARGED TO Newport News Industrial Corp.

MILL ORDER NO. 23624-05

SHIPPED TO Sub. of Newport News Shipbuilding
Newport News, Va. 23606

CAR NO. PC 523042

OK

| PILE No | | SLAB No | SERIAL No | CHEMICAL ANALYSIS | | | | | | | | | | TEST PIECE | | Yield Point (ksi) Per Sq. In. | Tensile Strength (ksi) Per Sq. In. | Elong. (in) 8" | SIZE |
|---|-------|------------|-----------|-------------------|------|------|-----|----|-----------|----------|--|--|------|------------|-------|-------------------------------|------------------------------------|----------------|------|
| Carbon | Mang. | Phos. | Sulph. | Si | Cu | Ni | Cr | Mn | Thickness | See Area | | | | | | | | | |
| Vee-Notch Charpy Impact Tested Q-30 REG F. | | | | | | | | | | | | | | | | | | | |
| 86303-26 | 49732 | 75 NHT 232 | .10 | .06 | .017 | .018 | .15 | | | | | | .92 | 45300 | 65300 | 33.5 | 1-4 40.8x111x.36 | | |
| | 49733 | 75 NHT 232 | | | | | | | | | | | .974 | 45200 | 65900 | 29.7 | ITEM #19 | | |
| | 49734 | 75 NHT 232 | | | | | | | | | | | .973 | 45200 | 67000 | 34.0 | " | | |
| 86504-26 | 49734 | 75 NHT 233 | .10 | 1.20 | .014 | .030 | .29 | | | | | | .998 | 51700 | 71100 | 30.2 | " | | |
| 96515-26 | 49735 | 75 NHT 234 | .09 | 1.13 | .011 | .010 | .16 | | | | | | .905 | 46600 | 64700 | 32.5 | " | | |
| 86767-67 | 49735 | 75 NHT 235 | .09 | 1.14 | .003 | .024 | .23 | | | | | | .976 | 47100 | 70500 | 26.5 | " | | |
| | 49736 | 75 NHT 235 | | | | | | | | | | | .990 | 49000 | 65700 | 31.7 | " 1.0 | | |
| | 49737 | 75 NHT 235 | | | | | | | | | | | .932 | 50400 | 65300 | 33.2 | " | | |
| | 49738 | 75 NHT 235 | | | | | | | | | | | .905 | 51800 | 76300 | 28.5 | " | | |
| | 49739 | 75 NHT 235 | | | | | | | | | | | .987 | 53400 | 69300 | 33.2 | " | | |
| 96375-67 | 49739 | 75 NHT 235 | .11 | 1.13 | .013 | .030 | .23 | | | | | | .959 | 45400 | 64600 | 30.0 | " | | |

OK TO SPEC.

QC ACCEPTED 1 of 2

PL-TES AND TEST RES NORMALIZED AT 1600-1500 DEG F. HELD FOR 15 MIN. AT 1600 DEG F. FOR 15 MIN. AT 1500 DEG F. FOR 15 MIN. AT 1600 DEG F. FOR 15 MIN. AT 15

PLATES AND TEST PCS. NORMALIZED AT 1600-1500 DEG F., HELD FOR 1/2 HOURS AT EACH OF THICKNESS AND AIR COOLED.
STRENGTHENED AND SHOWN TO BE FULFILLING

Tracy
James A. Matney

N. N. I. C.
RECORD CENTER
FILE COPY 46

PPH

W-62181

PHOENIX STEEL CORPORATION
CLAYMONT, DELAWARE

SPECIFICATION ASME SA 516 OR 60 PIV. BOLT. LONG L.V. NOTCH IMPACT Q-30 REG F. CLAYMONT, DEL. May 19, 1975
TO AL-2350 (SEC 111 1973 & ADDENDA)

CHEMICAL AND PHYSICAL TESTS OF Silicon Quality Steel

CUSTOMER'S ORDER NO. 5024-A-7

CHARGED TO Newport News Industrial Corp.
Sub. of Newport News Shipbuilding

MILL ORDER NO. 23624-05

SHIPPED TO Newport News, Va. 23606

CAR NO. PC 523042

OK

| MULT No | SLAB No | SERIAL No | CHEMICAL ANALYSIS | | | | | | | | | | TEST PIECE | | Yield Point (ksi) Per sq. in. | Tensile Strength (ksi) Per sq. in. | Elong. in 8" | SIZE |
|----------|---------|--|-------------------|-------|-------|--------|----|----|----|----|----|-----------|------------|--|-------------------------------|------------------------------------|--------------|------|
| | | | Carbon | Mang. | Phos. | Sulph. | Si | Cu | Ni | Cr | Mn | Thickness | See Area | | | | | |
| 66303-26 | 49732 | L. Exp. .074-.073-.069 W. Spec. 23.4-13.430% | | | | | | | | | | | | | | | | |
| | 49733 | L. Exp. .057-.045-.090 W. Spec. 4.4-20.450% | | | | | | | | | | | | | | | | |
| | 49734 | L. Exp. .072-.071-.077 W. Spec. 5.1-20.450% | | | | | | | | | | | | | | | | |
| 66304-26 | 49735 | L. Exp. .031-.030-.137 W. Spec. 20.4-20.450% | | | | | | | | | | | | | | | | |
| 56315-26 | 49736 | L. Exp. .074-.064-.070 W. Spec. 10.4-70.460% | | | | | | | | | | | | | | | | |
| 96735-67 | 49737 | L. Exp. .076-.050-.063 W. Spec. 22.4-20.450% | | | | | | | | | | | | | | | | |
| 66767-67 | 49738 | L. Exp. .074-.077-.1002 W. Spec. 50.4-20.450% | | | | | | | | | | | | | | | | |
| | 49739 | L. Exp. .071-.070-.076 W. Spec. 60.4-10.450% | | | | | | | | | | | | | | | | |
| | 49740 | L. Exp. .072-.070-.079 W. Spec. 50.4-50.450% | | | | | | | | | | | | | | | | |
| | 49741 | L. Exp. .081-.080-.024 W. Spec. 10.4-10.450% | | | | | | | | | | | | | | | | |
| | 49742 | L. Exp. .083-.070-.021 W. Spec. 10.4-10.450% | | | | | | | | | | | | | | | | |

OK TO SPEC.

Jan 18 1968 5:22 PM

NO ACCEPTED - Zor 2

N. N. I. C.
RECORD CENTER
FILE COPY 46

W-621-1-R1

PHOENIX STEEL CORPORATION
CLAYMONT, DELAWARE

SPECIFICATION ASME SA 516 GR 60 Normalized, Long V-Notch Impacts at Minus 30 Deg F to 15-2350 (Sec III 1973 & Addenda) to Meet 15 Ft. Lb. Average Silicon Quality Steel
MAY 20, 1975

CHEMICAL AND PHYSICAL TESTS OF

CUSTOMER'S ORDER NO. 5024-A-7

CHARGED TO Newport News Industrial Corp.

MILL ORDER NO. 23624-05

SHIPPED TO Newport News, Va. 23606

CAR NO. MILW 60163

Dead Test OK
Thompson Test

| MELT No. | SLAB No. | SERIAL No. | Chemical Analysis | TEST PIECE | Yield Point (lb. per sq. in.) | Tensile Strength (lb. per sq. in.) | % Elong. in 2" | SIZE |
|----------|----------|------------|-------------------|--|-------------------------------|------------------------------------|----------------|--------------------------------|
| 86805-25 | 65780 | TS NML 253 | C | Long V-Notch Charpy Impact Tested @ -30 DEG F. | 45700 | 70200 | 29.5 | 1 - 30.6#x114"x336" Item #14 |
| | 65790 | TS NML 253 | OK TO SPEC. | | 42000 | 71100 | 23.5 | 1 - 4 " " |
| | 65791 | TS NML 253 | | | 52000 | 71900 | 29.2 | 1 - 17 " " |
| | 65793 | TS NML 253 | | | 51600 | 70300 | 30.6 | 1 - 8 " " |
| | 65794 | TS NML 253 | | | 49800 | 71600 | 30.7 | 1 - 15 " " |
| | 65795 | TS NML 253 | | | 49900 | 71000 | 31.2 | 1 - 20 " " |
| 86793-26 | 49095 | TS NML 254 | | | 45700 | 69500 | 31.5 | 2 - 22 " " |
| 86713-26 | 49483 | TS NML 255 | | | 51300 | 71000 | 31.0 | 1 - 23 " " |
| 86713-26 | 49486 | TS NML 255 | | | 49600 | 70500 | 27.5 | 1 - 24 " " |
| 86796-26 | 65677 | TS NML 255 | | | 43500 | 69000 | 26.0 | 1 - 2 30.6#x114"x336" Item #15 |
| 96875-26 | 65422 | TS NML 256 | | | 47700 | 68900 | 33.2 | 1 - 156.1#x112"x222" Item #30 |
| | 65423 | TS NML 256 | | | 49500 | 69900 | 29.7 | 1 - 2 " " |

PLATES AND TEST -CS NORMALIZED AT 1600-1650 DEG F., HELD FOR ONE HOUR PER INCH OF THICKNESS AND AIR COOLED.

SUBSCRIBED AND SWORN TO BEFORE ME

37th Day of May
James A. Threling
Notary Public

N. N. I. C.
RECORD CENTER
FILE COPY 50

I certify the above figures are correct as furnished in the records of the Corporation.

Signature

W-621-1-R1

PHOENIX STEEL CORPORATION
CLAYMONT, DELAWARE

SPECIFICATION ASME SA 516 GR 60 NORMALIZED LONG V NOTCH IMPACT @ -30 DEG F. CLAYMONT, DEL. MAY 20, 1975

CHEMICAL AND PHYSICAL TESTS OF Silicon Quality Steel

CUSTOMER'S ORDER NO. 5024-A-7

CHARGED TO Newport News Industrial Corp.

MILL ORDER NO. 23624-05

SHIPPED TO Newport News, Va. 23606

CAR NO. MILW 60168

Dead Test OK
Thompson Test

| MELT No. | SLAB No. | SERIAL No. | Chemical Analysis | TEST PIECE | Yield Point (lb. per sq. in.) | Tensile Strength (lb. per sq. in.) | % Elong. in 2" | SIZE |
|----------|----------|------------|-------------------|------------|-------------------------------|------------------------------------|----------------|----------------|
| 86806-26 | 65739 | L. Exp. | .016-.013-.020 | | 96875-26 | 65422 | L. Exp. | .077-.080-.079 |
| | 65790 | % Shear | 10%-10%-10% | | | | % Shear | 50%-50%-50% |
| | 65791 | L. Exp. | .051-.074-.068 | | | 65423 | L. Exp. | .071-.076-.079 |
| | 65791 | % Shear | 30%-40%-40% | | | | % Shear | 40%-40%-50% |
| | 65793 | L. Exp. | .090-.097-.085 | | | | | |
| | 65793 | % Shear | 70%-70%-60% | | | | | |
| | 65794 | L. Exp. | .105-.095-.095 | | | | | |
| | 65794 | % Shear | 100%-60%-100% | | | | | |
| | 65796 | L. Exp. | .099-.071-.070 | | | | | |
| | 65796 | % Shear | 30%-40%-40% | | | | | |
| 86799-26 | 49095 | L. Exp. | .074-.072-.085 | | | | | |
| | 49095 | % Shear | 50%-40%-50% | | | | | |
| 86813-26 | 49483 | L. Exp. | .057-.057-.059 | | | | | |
| | 49483 | % Shear | 50%-50%-50% | | | | | |
| | 49486 | L. Exp. | .021-.03-.023 | | | | | |
| | 49486 | % Shear | 10%-20%-10% | | | | | |
| 86796-26 | 65677 | L. Exp. | .057-.096-.051 | | | | | |
| | 65677 | % Shear | 30%-30%-30% | | | | | |

SUBSCRIBED AND SWORN TO BEFORE ME

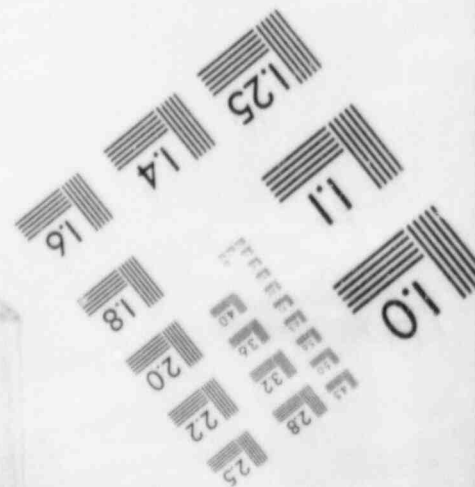
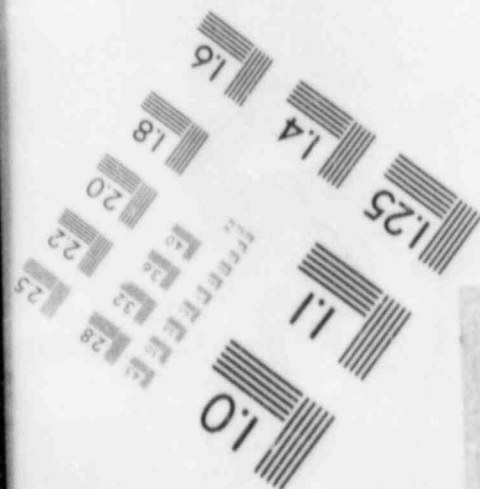
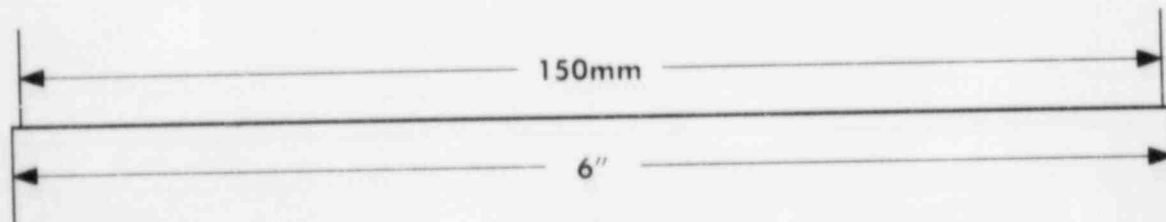
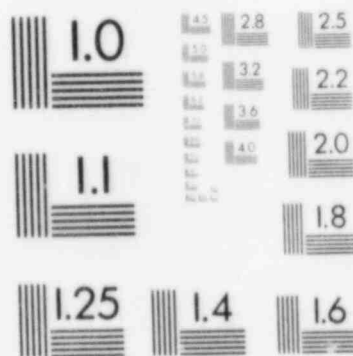
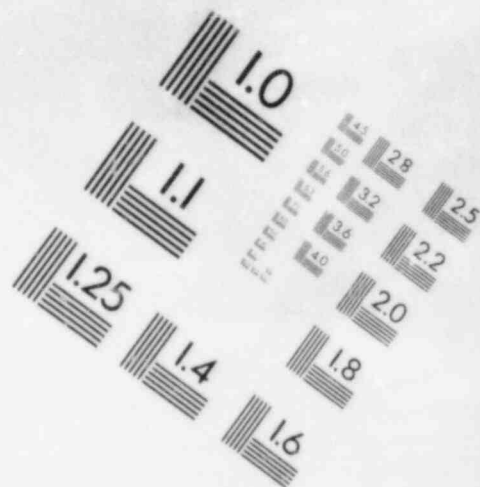
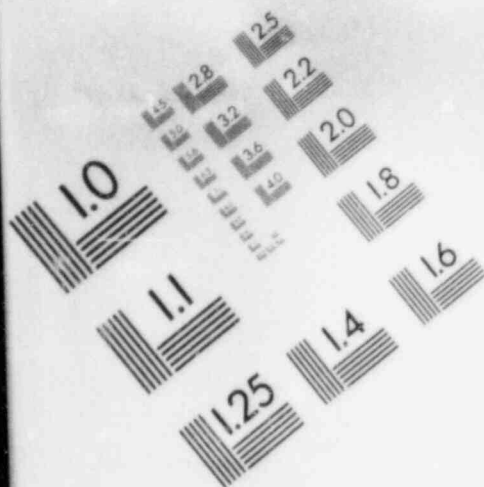
37th Day of May
James A. Threling
Notary Public

N. N. I. C.
RECORD CENTER
FILE COPY 50

I certify the above figures are correct as furnished in the records of the Corporation.

Signature

IMAGE EVALUATION
TEST TARGET (MT-3)



Newport News Industrial Corporation
Subsidiary of Newport News Shipbuilding
A Tenneco Company

MATERIAL INVESTIGATION REQUEST

Date Rec'd by LAB: SEP 23 1975
Date Reported: SEP 23 1975
File Code: MAAA/53030/-
Lab No.: 5849-16

Material/Condition: CARBON STEEL/AS-FORMED
Heat No.: N/A
Batch: N/A
QA Control No.: 75 NNI 256
Witness: N/A

| Name of Article | No. Per Group/Sheet/Line | Item | Drawing/Pattern No. | S.O. | Control Level | Specification |
|--|--------------------------|---------------|---------------------|--------|---------------|-------------------------|
| PENETRATION TEST PLATE | 1 | SG-451-7/1/13 | 17 | 288108 | 5024-A | ASME NUC. SA-516 GR. 60 |
| PLEASE IMPACT TEST PER 51-370 AS SPECIFIED IN INSTRUCTION 451-NC-TOOL. | | | | | | |

TEST RESULTS

Distribution: T.E. BOND, NNI ENGINEERING/DESIGN
Form 1-485 JIM STAFFIERA, NNI GA

MISCELLANEOUS TEST CHART

DATE REC'D: SEP 23 1975
DATE REPORTED: SEP 23 1975
LAB NO.: 5849-2

| Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs |
|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|
| 17.1 | 30 | 46 | | | | | |
| 17.2 | 1 | 42 | | | | | |
| 17.3 | 1 | 26 | | | | | |

QC NO 75 NNI-256

PERFORMED BY: Byrum 9.23.75
CHECKED BY: W.W. Jones

N. N. I. C.
RECORD CENTER
FILE COPY 150

OK TO SPEC.
75 NNI 256 (ONLY)
4 OF 4
QUALIFICATION OF PLATE FORMING PER NE-4210 (HEAT NO. 96875-26)

Newport News Industrial Corporation
Subsidiary of Newport News Shipbuilding
A Tenneco Company

MATERIAL INVESTIGATION REQUEST

Date Rec'd by LAB: SEP 23 1975
Date Reported: SEP 23 1975
File Code: MAAA/53030/-
Lab No.: 5849-16

Material/Condition: CARBON STEEL/AS-FORMED
Heat No.: N/A
Batch: N/A
QA Control No.: 75 NNI 256
Witness: N/A

| Name of Article | No. Per Group/Sheet/Line | Item | Drawing/Pattern No. | S.O. | Control Level | Specification |
|--|--------------------------|---------------|---------------------|--------|---------------|-------------------------|
| PENETRATION TEST PLATE | 1 | SG-451-7/1/12 | 16 | 288108 | 5024-A | ASME NUC. SA-516 GR. 60 |
| PLEASE IMPACT TEST PER SA-310 AS SPECIFIED IN INSTRUCTION 451-NC-TOOL. | | | | | | |

TEST RESULTS

Distribution: T.E. BOND, NNI ENGINEERING/DESIGN
Form 1-485 JIM STAFFIERA, NNI GA

MISCELLANEOUS TEST CHART

DATE REC'D: SEP 23 1975
DATE REPORTED: SEP 23 1975
LAB NO.: 5849-2

| Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs | Sample Temp No. | Temp Ft/Lbs |
|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|
| 16.1 | 30 | 17 | | | | | |
| 16.2 | 1 | 36 | | | | | |
| 16.3 | 1 | 31 | | | | | |

QC NO 75 NNI-256

PERFORMED BY: Byrum 9.23.75
CHECKED BY: W.W. Jones

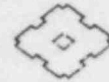
N. N. I. C.
RECORD CENTER
FILE COPY 50

OK TO SPEC.
75 NNI 256 (ONLY)
3 OF 4

MAKER CODE

10 SUMITOMO METAL INDUSTRIES, LTD.
STEEL TUBE WORKS

1. MISHINO-CHO, HIGASHI-KU, KOBE, JAPAN



MILL CERTIFICATE

STANDARD: ASME 3A333 GR.6 and ASME Sect. III, NU-2070

SPECIFICATION: Car Proposal A-No.657

L A T E: DEC.02,1975 CERTIFICATE No. YYD1542

SUPPLIER: 009 235 3751 C. ITOH AND CO., LTD.

CUSTOMER: NEWPORT NEWS INDUSTRIAL CORP.

ARTICLE: SEAMLESS CARBON STEEL PIPE (HOT FINISHED)

NOTES

1. This
 2. Form (1) (2) (3)
 3. See Mill Certificate
 4. Section 1 (1) (2) (3) (4)
 5. Section 2 (1) (2) (3)
 6. Section 3 (1) (2) (3)
 7. Section 4 (1) (2) (3)
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 99. Section 96 (1) (2) (3)
 100. Section 97 (1) (2) (3)
 101. Section 98 (1) (2) (3)
 102. Section 99 (1) (2) (3)
 103. Section 100 (1) (2) (3)

| Mill Work No. | Lot or P.P. No. | O.D. | I.D. | Size (Unit: ft.) | | Length | Quantity (Unit: ft.) | | Weight kg | Order or Job No. | | | | |
|-------------------------|-----------------|------------------------|------|--------------------|------|-----------|----------------------|--------------|-----------|------------------------|------------------|---|-----------------|-----------------------|
| | | | | W.T. | | | No. of pcs. | Total Length | | | | | | |
| YYD1542 | | 24" | | SCH100 (1.531") | | 14' - 18' | 2 | 32'10" | 5474 | 5024-A-14 ITEM No.2 | | | | |
| Heat No. | Lot or P.P. No. | Chemical Composition % | | | | | | | | Tensile Test (1" x 2") | | Hardness | No. of Analysis | Impact Test (ft. lb.) |
| | | C | Si | Mn | P | S | Cu | Ni | Cr | Yield Point | Tensile Strength | | | |
| | | | | 10.29 | | | | | | 24.5 | 42.12 | | | 30°F |
| | | 30 | | 106 | 0.48 | 0.58 | | | | | | | | 10.0 |
| | | | | (135) | | | | | | | | | | 20.0 |
| A28575 | L 12 | 32112 | 011 | 003 | | | | | | 30.4 | 47.940 | | 53 | 152.6 |
| | | 35114 | 012 | 008 | | | | | | | | | | 136.6 |
| | | 34113 | 012 | 010 | | | | | | 27.8 | 46.240 | | | 175.0 |
| | | 34113 | 011 | 008 | | | | | | | | | | 143.3 |
| | | 34114 | 012 | 010 | | | | | | 32.1 | 48.238 | | | 153.8 |
| | | 34114 | 012 | 010 | | | | | | 28.4 | 46.739 | | | 120.7 |
| | | | | | | | | | | | | | 152.6 | |
| | | | | | | | | | | | | | 105.2 | |
| | | | | | | | | | | | | | 153.3 | |
| | | | | | | | | | | | | | 156.2 | |
| | | | | | | | | | | | | | 191.0 | |
| | | | | | | | | | | | | | 147.5 | |
| (T:Top, B:Bottom) | | | | | | | | | | | | | | |
| Description of Tests | | | | | | | | | | | | | | |
| Hydrostatic Test | | Surface & Pores | | Bend | | Flange | | Expansion | | Bore | | HEAT TREATMENT : 900°C ± 20°C NORMALIZING | | |
| (5 sec. min.) | | GOOD | | GOOD | | | | | | | | | | |
| 2000 kg/cm ² | | | | | | | | | | | | | | |
| Surveyor To | | | | | | | | | | | | | | |

N.N.I.C.
 RECORD CENTER
 FILE COPY 181

OK TO
 SPEC
 1-71-76

DO ACCEPTED
 76NN1021

30

J. CONTRACT NO.

P. O. DATE

PURCHASE ORDER NO.

GARY WORKS
GARY, INDIANA 46402

LAKE SIDE BRIDGE & STEEL CO
5300 NO 33RD ST
MILWAUKEE WISC 53209

2C9210-11 11/27/78

SHIPPER NO.

MILL ORDER NO.

P. VOICE NO.

H00547

3 27 79

NB60360

154-15846

VEHICLE

IDENTITY

EJE 35142

LAKE SIDE BRIDGE & STEEL CO
5300 NO 33RD ST
MILWAUKEE WISCONSIN

SHIP TO

BEING DULY SWORN ACCORDING
TO LAW, DEPOSES AND SAYS
THAT THE CHEMICAL ANALYSES
AND/OR TEST RESULTS SHOWN
IN THIS REPORT ARE CORRECT
AS CONTAINED IN THE RECORDS
OF THE COMPANY.

BY:

A. BELKIN

MGR QUALITY ASSURANCE

PLATES CARBON ASME SA516-76/1977/SUMMER 1977

ADDENDA GRADE 70 PRESSURE VESSEL QUALITY NORMALIZE

PLATE AND SUB-SECTION NE OF SECTION III OF ASME

1977 EDITION WITH SUMMER 1977 ADDENDA SUB-

**SEE BELOW

MILL THE APPLICABLE PROVISIONS OF 10CFR PART 21 APPLY

DATE STATE OF INDIANA

COUNTY OF LAKE


SUBSCRIBED AND SWORN TO BEFORE ME

THIS 4 DAY OF APRIL 1979

NOTARY PUBLIC
MY COMMISSION EXPIRES MARCH 14, 1982

| MATERIAL DESCRIPTION | | | QUAN- TITY | WEIGHT | HEAT NO. | TEST OR PIECE IDENTITY | YIELD ST. PSI | TENSILE ST. PSI | ELONGATION % | | % RED. OF AREA | BEN |
|---|---------------------------|-----------|---------------|--------|----------|---------------------------|--------------------|--------------------|--------------|--------------|----------------------|-----|
| THICKNESS OR SECTION | WIDTH, DIA. OR FL. WT. | LENGTH | | | | | | | IN 8" | IN 2" | | |
| 3.0000" | 60.000" | 180 10-28 | 1 | 9189 | T68952 | 01 W2 | + 54000 + 46400 | 82500 83000 | | 29.0 29.0 | | |
| FULL SIZE CHARPY IMPACTS FT LBS - 57-54-53 | | | | | | | | | | | | |
| FULL SIZE CHARPY IMPACTS FT LBS - 31-31-39 | | | | | | | | | | | | |
| PLATES AND TEST SPECIMENS NORMALIZED 1660 F FCE TEMP AND HOLD 96 MIN FCE TIME | | | | | | | | | | | | |
| LONGITUDINAL V-NOTCH CHARPY IMPACTS AT MINUS 30 F TO 20 FT LBS MIN | | | | | | | | | | | | |
| +NORMALIZED | | | | | | | *48900 | 780000 | | 29.0 | | |
| *NORMALIZED AND STRESS RELIEVED | | | | | | | *48000 | 77000 | | 28.0 | | |
| **PARAGRAPHS NE-2100 NE-2200 NE-2300 NE-2400 NE-2500 NE-2600 NE-2700 THOSE PARAGRAPHS APPLICABLE TO PLATE PRODUCT FURNISH | | | | | | | | | | | | |
| NORMALIZED TEST SPECIMENS PLUS NORMALIZED AND STRESS RELIEVED TEST SPECIMENS FOR 8 HOURS FURNISH ONE TENSILE TEST IN | | | | | | | | | | | | |
| NORMALIZED CONDITION ONLY IMPACTS IN BOTH CONDITIONS QUALITY ASSURANCE CERT REQ TO MEET CHARPY V-NOTCH LONGITUDINAL | | | | | | | | | | | | |
| IMPACT TESTS, EA PLATE AS HEAT TREATED AT 20 FT/LBS AT MINUS 30 DEG F HEATING AND COOLING RATES PER NE-4623 SPECIAL | | | | | | | | | | | | |
| SPEC REQ B THE APPLICABLE PROVISIONS OF 10 CFR PART 21 APPLY | | | | | | | | | | | | |
| SYSEUL 3.0050 EXT. | | | | | | | | | | | | |

| LT NO. | TYPE | C | MN | P | S | SI | CU | NI | CR | MO | SN | AL | N | V | B | TI | CB | CO | | |
|--|------|----|-----|-----|-----|----|----|----|----|----|----|----|---|---|---|----|----|----|--|------------------|
| 8952 | HEAT | 23 | 1D8 | 019 | 015 | 23 | | | | | | | | | | | | | | AVG GR. SIZ. 107 |
| TEST SPECIMENS STRESS RELIEVED AT 1150 PLUS OR MINUS 25F WITH CONTROLLED HEATING AND COOLING. FCE | | | | | | | | | | | | | | | | | | | | |
| DID NOT EXCEED 800F AT CHARGE RATE OF HEATING ABOVE 800 DID NOT EXCEED 133F PER HOUR. HEAT AT TEMP | | | | | | | | | | | | | | | | | | | | |
| 8 HR. COOLED TO 800F. RATE OF COOLING TO 800 DID NOT EXCEED 133F PER HOUR | | | | | | | | | | | | | | | | | | | | |
| QUALITY ASSURANCE CRT NO. N1618 EXPIRES JANUARY 21, 1980 | | | | | | | | | | | | | | | | | | | | |



APR 11 1979

LABORATORY 307A

CERTIFICATE OF TESTS

ARMCO

Armco Steel Corporation

P.O. Box 96120, Houston, Texas 77015

| CUSTOMER ORDER NO. | CUSTOMER ORDER NO. | SHIPPED VIA | C.A. INITIAL AND NO. | DATE SHIPPED | SHIPPING LIST (RECAP) NO. | DATE MTR. | BY |
|--------------------|--------------------|-------------|----------------------|--------------|---------------------------|-----------|----|
| TNS 6222 | 015383-6817 | RAIL | TP 821999 | 8-31-76 | 7001293 | 9-29-76 | ag |

DESCRIPTION

BAR OR
PLATE NO.

No.
PCS.

YIELD
PSI

TENSILE
PSI

%
ELONG.

%
REDUCT.

BEND
TEST

HOMO.
TEST

BHN

IMPACT: TYPE

A NOTCH V SIZE FULL

ORIENT.

TEMP.

1

2

3

AVG.

STEEL PLT CARBON ASME SA516 GR
70 FOR PV NORM +S3 SPWHT @ 1100°F
FOR 2-1/2 HRS HT UP & COOL DOWN
160°F/HR MAX +S5 CVNL EA PLT 20/
15 FT LBS @ -30°F NUCLEAR MAT'L
TO MEET ASME B&PV CODE 1971 EDITION
WINTER '73 ADDENDA SEC III DIV 2
CL MC

HEAT: 67302 2-1/2 x 120 x 130"

P57908

2✓

47900✓

76400✓

30.0✓

L -30°F

15✓

20✓

26✓

20✓

% SHEAR

20✓

20✓

20✓

20✓

L.E.

18✓

20✓

29✓

22✓

L -30°F

27✓

31✓

32✓

30✓

% SHEAR

20✓

20✓

20✓

20✓

L.E.

25✓

30✓

30✓

28✓

BOTH PLTS & TEST CPNS WERE NORMALIZED @ 1650°F, TIME @ TEMP: 30 MINUTES & AIR COOLED.
TEST CPNS ONLY WERE STRESS RELIEVED @ 1100°F, TIME @ TEMP: 150 MINUTES & FURNACE COOLED.*

*MAXIMUM HEATING RATE ABOVE 600°F: 160°F/hr
MAX COOLING RATE DOWN TO 600°F: 160°F/hr

| HEAT | C | Mn | P | S | Si | Cr | Ni | Mo | Cu | Ti | V | B | Cb | Al | N | | CHAIN |
|---------|------|-------|-------|-------|------|----|----|----|----|----|---|---|-----------------------------|----|---|----------------------|-------|
| 67302 ✓ | .23✓ | 1.03✓ | .010✓ | .019✓ | .24✓ | | | | | | | | P.O 015383 V.O 6817 | | | 33419-04 33415-01 | 8✓ |
| 67297 ✓ | .22✓ | 1.01✓ | .010✓ | .026✓ | .23✓ | | | | | | | | 1/N 32292-18,23 32301-11 | | | 33407-14 33407-30 | 8✓ |
| 81964 ✓ | .20✓ | 1.07✓ | .010✓ | .023✓ | .25✓ | | | | | | | | 32302-11 32305-02 | | | 33416-02 33417-02 | 8✓ |
| | | | | | | | | | | | | | 32306-02A -02B | | | | |

THE CHEMICAL, PHYSICAL OR MECHANICAL TESTS REPORTED HEREWIT
ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION.

-1- LAMCO INDUSTRIES INC
P O DRAWER 1486
EL CAJON, CALIFORNIA 92020

SIGNED: *[Signature]*
METALLURGICAL DEPT.

CHECKED TO 1974
WINT. 1974 ADD.

"THIS CERTIFIED TEST REPORT HAS BEEN DELIVERED TO A CONSIGNEE OF MATERIAL PUR-
CHASED FROM ARMCO STEEL CORPORATION. TO AVOID THE POSSIBILITY OF ITS MISUSE, ON
THE REDELIVERY OF THIS REPORT TO A THIRD PARTY IT MUST BE RE-CERTIFIED BY AND UNDER
THE NAME OF SUCH CONSIGNEE." (WJW) 11/1/76

STANDARD CERTIFIED TEST REPORT

TUBULAR PRODUCTS

DATE

1-5-76

GRADE

6 ✓ ASTM A333

CUSTOMER

NAME

CAPITAL PIPE & STEEL PRODUCTS INC - ATTN: SELMA DEERMAN

ADDRESS

P.O. Box 471

CITY AND STATE

Rolla, CYNARD PA. 19004

DATE

ASME SA333 ✓

CUSTOMER'S ORDER NO.

75459-00

U.S. STEEL ORDER NO.

KC. 11055

INVOICE NO.

| ITEM NO. | CODE OR LOT NO. | SIZE O. D. | WT/FT OR WALL THICKNESS | HEAT NUMBER | MIN. HYDRO. TEST PRESSURE P.S.I. | MECHANICAL PROPERTIES | | | CHEMICAL ANALYSIS (%) | | | | | | |
|--|-----------------|------------|-------------------------|-------------|----------------------------------|-------------------------------|-------------------------|-----------------|-----------------------|------|-------|------|----|----|-----|
| | | | | | | YIELD STRENGTH P.S.I. / POINT | TENSILE STRENGTH P.S.I. | ELONG. IN. / 2" | C | Mn | P | S | Si | Mo | |
| 1 | | 3.5 | 216 | N14522 | 2500 | 55000 | 74900 | 37.0 | 23.91 | 0.06 | 0.024 | 0.17 | | | CK. |
| | | | | | | | | | 22.94 | 0.05 | 0.024 | 0.16 | | | L. |
| .158 INCH WIDTH SIZE CHARPY NOTCH IMPACT FT/LBS AT -63°F | | | | | | | | | | | | | | | |
| AVE. | | | | | | | | | | | | | | | |
| FT/LBS - 34.5 - 32.0 - 13.0 - 26.5 ✓ | | | | | | | | | | | | | | | |
| % SHEAR - 80 - 80 - 30 - 63 ✓ | | | | | | | | | | | | | | | |
| THERMAL EXPANSION - .068 - .065 - .029 - .054 ✓ | | | | | | | | | | | | | | | |

Lamco Industries
P.O.# J1396-5817
S.O.# LN0902-A
Ch# P-34729
Item# 1
WJW 02 AUG 14 1978

FLATTENING TEST OK

P/N 32297-01

MET 4 REV. 369
155 CAT. NO. 8372 00
01.003.0241

We hereby certify that the above figures are correct, as contained in the records of the company

HT.N14522

11/5/76
CHECKED TO SEC III MC
AND C12 RATED THRU WINT '73
11 E-7

STANDARD SWORN TEST REPORT
TUBULAR PRODUCTS

Seamless Pressure Pipe
Normalized 1600°F for 6.2 Min Quenched
Capital Pipe & Steel Products Inc.

5-12-75 DATE
6 ASME SA333
6 ASTM A333
6 7332-30
AH 02315
356-02415

Longitudinal tensile tests

| SPEC. NO. | SIZE | HEAT | TENSILE | MECHANICAL PROPERTIES | | | CHEMICAL ANALYSIS (%) | | | | | | |
|--------------|------|--------|---------|-----------------------|---------|--------|-----------------------|-----|-----|-----|----|----|-------|
| | | | | YIELD | TENSILE | ELONG. | C | Mn | P | S | Si | Mo | |
| 842 L625 432 | | A01359 | 2800 | 50600 | 71280 | 45.0 | 17 | 111 | 009 | 020 | 17 | | check |
| | | A01359 | 2800 | 50790 | 69800 | 44.0 | 17 | 106 | 010 | 013 | 16 | | check |
| | | | | | | | 17 | 108 | 009 | 017 | 16 | | fail |

Flattening tests satisfactory ✓

Full size longitudinal CVN's specimens at minus -50°F

FT.LBS. %SHEAR LAT. EXP.

| | | | | |
|--------|----|----|------|---|
| A01359 | 95 | 66 | .078 | ✓ |
| | 78 | 49 | .064 | ✓ |
| | 82 | 53 | .068 | ✓ |

Full size longitudinal CVN's specimens at minus -50°F stress relieved at 1100°F

FT.LBS. %SHEAR LAT. EXP.

| | | | | |
|--------|----|----|------|---|
| A01359 | 67 | 51 | .059 | ✓ |
| | 52 | 43 | .047 | ✓ |
| | 35 | 37 | .035 | ✓ |

Lamco Ind.
P.O.# 11396-6817
S.O.# LN-0902-A
Ch# 11-81226
Item# 2
WJW 02 AUG 14 1978

DATE OF
COUNTY OF

SUBSCRIBED AND SWORN TO before me this
12th DAY OF May 1975
E. J. [Signature]

NOTARY PUBLIC

MY COMMISSION EXPIRES

BEING DULY SWORN ACCORDING TO
LAW, DEPOSES AND SAYS THAT THE FIGURES SET FORTH ABOVE ARE COR-
RECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

[Signature]

[Signature]

Chief Metallurgist

United States Steel Corporation, Title A 1 Book
CHECKED TO SEC III

HT. A01359

P/N 32301-06
D/N 32302-06

MADE IN U.S.A.



PRECISION MANUFACTURERS FOR THE PETROCHEMICAL POWER NUCLEAR INDUSTRY

(713) 675-4341

7809 MARKET STREET ROAD

HOUSTON, TEXAS 77029

3H

Customer **McJunkin Corp.**

Date Shipped

Customer Order No.

31-57776

Date

2-8-77

Our Order No.

30019

| ITEM | DESCRIPTION | SPECIFICATIONS |
|------|----------------------|----------------|
| 5. | 1/2" 3000# Sord Cplg | ASME SA350 LF2 |
| 6. | 1" Ditto | Ditto |

| ITEM | HEAT NO. | CARBON | MANG. | PHOS. | SUL. | SIL. | CHROME | NICKEL | MOLY | CU. | CO. | OTHER | OTH. |
|------|--------------|--------------------|---------------------|-------|------|--------------------|--------|--------|-------|----------|-----|-------|------|
| 5. | Requirements | .30 _{max} | 1.35 _{max} | .033 | .040 | .15 _{max} | | | | | | | |
| | B3P332 | .24 | 1.28 | .019 | .027 | .20 | | Charpy | -50°F | 40-20-30 | | | |
| 6. | Requirements | .30 _{max} | 1.35 _{max} | .033 | .040 | .15 _{max} | | | | | | | |
| | 0865304 | .265 | .88 | .013 | .024 | .19 | | Charpy | -50°F | 70-84-65 | | | |
| | Requirements | MAX | MAX | | | MAX | | | | | | | |
| | Requirements | MAX | MAX | | | MAX | | | | | | | |

| ITEM | | YIELD PSI | TENSILE | ELONGATION | REDUCTION | HARDNESS |
|------|--------------|------------|-------------------|------------|-----------|----------|
| 5. | Requirements | 36,000 MIN | 70,000-95,000 MIN | 22% MIN | 30% MIN | MA |
| | Actual | 60,100 ✓ | 88,800 ✓ | 31% ✓ | 64.1% ✓ | |
| 6. | Requirements | 36,000 MIN | 70,000-95,000 MIN | 21% MIN | 30% MIN | MA |
| | Actual | 57,500 ✓ | 82,000 ✓ | 30% ✓ | 67% ✓ | |
| | Requirements | MIN | MIN | MIN | MIN | MA |
| | Actual | | | | | |
| | Requirements | MIN | MIN | MIN | MIN | MA |
| | Actual | | | | | |

| ITEM | SPECIAL TESTING |
|------|--|
| | We certify that the above material complies with ASME SA350. Heat treating in accordance with ASME SA350 LF2. Above fittings are capable of withstanding a hydrostatic test pressure as prescribed by ASME Specs. The above fittings complies with ASME Section III Class MC-1971 Edition with Addenda thru Winter 1974. |

WE CERTIFY THAT THE CHEMICAL ANALYSIS AND PHYSICAL TEST RESULTS APPLYING ON THE ABOVE ORDER NUMBER ARE CORRECT AND TRUE TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Sworn and subscribed to before me

2-8-77

METALLOY, INC.

Eleanor Graham
HARRIS

P.O. 015529

WJW AUG 14 1978 3/15/77

NDE RECORD

JOB ORDER NO. **5024A** DWG. NO. **28813** REV. **F1**
 JOB ORDER LOCATION **Sub Shop** INSPECTOR **D.J. Long** DATE **7-21-76**

| JOINT NO. ASSY | ITEM TO ITEM | PLATE | PIPE | FIT-UP | APPLICATION REQUIRING NDE | TYPE | NDE ACCOMPLISHED INSPECTOR/ LEVEL | DATE |
|-------------------|--------------|-------|------|----------------|---------------------------------|------|---|---------|
| 101 | 1904 | 1902 | " | ASME Type I | Final A-310c | mt | Boyd II | 8-28-76 |
| " | " | " | " | " | Final A-310c | mt | Boyd II | 8-28-76 |
| 102 | 1904 | 1902 | " | ASME Type I | Final A-310c | mt | Boyd II | 8-28-76 |
| " | " | " | " | " | Final A-310c | mt | Boyd II | 8-28-76 |
| 103 | 1904 | 1902 | " | ASME Type I | Final A-310c | mt | Boyd II | 8-28-76 |
| " | " | " | " | " | Final A-310c | mt | Boyd II | 8-28-76 |
| 104 | 1904 | 1902 | " | ASME Type I | Final A-310c | mt | Boyd II | 8-28-76 |
| " | " | " | " | " | Final A-310c | mt | Boyd II | 8-28-76 |
| 105 | 1904 | 1902 | " | ASME Type I | Final A-310c | mt | Boyd II | 8-28-76 |
| " | " | " | " | " | Final A-310c | mt | Boyd II | 8-28-76 |

* INDICATE ACTUAL WALL THICKNESS FOR PIPE JOINTS THAT REQUIRE RT
 REMARKS:

COMPLETE AND IN ACCORDANCE WITH DRAWING AND PROCEDURES
 WELDING SUPERVISOR
 INSPECTION SUPERVISOR
R. Williams 9.11-76
J. F. Bell 9/13/76

**SHIP-OUT
INSPECTION
REPORT**

FILE NO. **5024A** X12-52
 INSPECTION DATE **9-11-76** DATE **9-14-76**
 COMPANY FURN. MAT'L. ☒ CUSTOMER FURN. MAT'L. ☐ OTHER ☐

FINAL INSPECTION OF MATERIAL LISTED
HAS BEEN COMPLETED AND IS RELEASED FOR SHIPMENT

| DWG. NO. | DWG. ITEM | QTY | DESCRIPTION |
|----------|-----------|-----|--|
| 288133 | | | CYLINDER PLT. ASSY 1-3-13 CONSISTING OF THE FOLLOWING ITEMS: |
| ASSY | | | |
| (19) | | | |
| 1901 | | 1 | CYLINDER PLT. |
| 1902 | | 1 | WCB PLT. |
| 1903 | | 1 | STIFFENER FLO. PLT. |
| 1904 | | 5 | CHECK STIFFENER WCB PLTS |
| 1905 | | 4 | PENETRATIONS |
| 1906 | | 2 | PENETRATIONS |
| 1907 | | 2 | PENETRATIONS |
| 1908 | | 1 | PENETRATION |
| 1909 | | 1 | PENETRATION |

APPROVED BY QA **R. Williams** 11-15-76
 THIS COMPLETES PARTIALLY COMPLETED ☐ DATE **11-15-76**
 THIS CLEARS PARTIALLY CLEARED ☐ N/A REV. **N/A** DATED **N/A**

APPLICABLE INSPECTIONS
 EACH CHECKED INSPECTION HAS BEEN PERFORMED ON EACH ITEM LISTED ABOVE
 VISUAL INSPECTION ☒ DOCUMENTATION ☒ OTHER (SPECIFY) _____
 MARKING ☒ MANUFACTURE CER. ☐ SHIPPING PAPERS ☐ EQUIPMENT HISTORY ☐

APPLICABLE DATA
 SHIPPED TO **Duke Power Company** ATTEN: **D. G. Beam**
 CATAWBA Nuclear Station
 NEWPORT-SOUTH CAROLINA
 451-NC-500
 GA 29515-0000
 DATE **9-15-76**
 AUTHORIZED INSPECTION **D.J. Long** N/A

- DISTRIBUTION
- 2 - NNI Records Center
 - 1 - Duke Power Company (documentation package)
 - 1 - NNI QA, Bldg 86, 3rd floor



Newport News Industrial Corporation

Subsidiary of Newport News Shipbuilding
A Tenneco Company

WELD HISTORY RECORD

| | | | | | | | |
|--------------------------|--|--|--|--|--|---|--|
| JOB ORDER NO. 5024A | | DWG. NO. 288133 | | REV. A | | WELD NO. 1-3-13-3A 1-3-13-3B (2) | |
| LOCATION 4 SHOP | | JOINT TYPE 5" FILLET | | M/T I NO. 431-NC-X10-23 | | <input type="checkbox"/> SHIP <input type="checkbox"/> INST. | |
| BASE MATERIAL | | <input type="checkbox"/> PIPE <input checked="" type="checkbox"/> PLATE | | <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> CUT NO. | | <input type="checkbox"/> REPAIR NO. | |
| ITEM 1902 TO ITEM 1903 | | WELDING SUPERVISOR L. A. Smith | | DATE 7-28-75 | | INSPECTOR E. J. Bell | |
| MAT'L TYPE SA-S16-CA-60 | | SA-S16-CA-60 | | DATE 7-28-75 | | DATE 7-28-75 | |
| O.C. CONTROL NO. 75NN180 | | 75NN181 | | DATE 7-28-75 | | DATE 7-28-75 | |
| ACTUAL THK. 3/4" | | 3/4" | | DATE 7-28-75 | | DATE 7-28-75 | |
| WELDER | | ELEC. / FILLER / INSERT | | LAYER NO. THK | | PRE. HT. | |
| EVENHART | | 75NN181 | | TACK WELD SAT | | NA | |
| 0777 | | 75NN181 | | FINAL | | N/A | |
| EVENHART | | 75NN183 | | A+B SAT | | N/A | |

N.N.I.C.
RECORD CENTER
FILE COPY 47

COMPLETE & IN ACCORDANCE WITH DWG. & PROCEDURES

E. J. Bell, J. M. Staffora 1-8-76



Newport News Industrial Corporation

Subsidiary of Newport News Shipbuilding
A Tenneco Company

NDE RECORD

OPP. 170, 200, 220 & 260

| | | | | | | | |
|-----------------------------|----------------------------|----------------------|------|--------------|---------------------------|-----------------------|-----------------|
| JOB ORDER NO. 5024A | | DWG. NO. 288133 | | REV. F1 | | M/T NO. 431-NC-X10-23 | |
| JOB ORDER LOCATION SUB SHOP | | INSPECTOR D. J. Long | | DATE 9-11-76 | | DATE 7-21-76 | |
| JOINT NO. | BASE MATERIAL ITEM TO ITEM | PLATE | PIPE | FIT-UP | APPLICATION REQUIRING NDE | NDE ACCOMPLISHED TYPE | INSPECTOR/LEVEL |
| ASSY 1-3-13 | | | | | | | |
| 4 | 1902 | 1901 | * | REVE 7/24/76 | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |
| 201 | 1904 | 1901 | * | " | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |
| 202 | 1904 | 1901 | * | REVE 7/24/76 | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |
| 203 | 1904 | 1901 | * | REVE 7/24/76 | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |
| 204 | 1904 | 1901 | * | REVE 7/24/76 | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |
| 205 | 1904 | 1901 | * | REVE 7/24/76 | FINAL A-3100 | MT | Boyd # 8-28 |
| " | " | " | * | " | FINAL A-3100 | MT | Boyd # 8-30 |

* INDICATE ACTUAL WALL THICKNESS FOR PIPE JOINTS THAT REQUIRE RT

REMARKS:

COMPLETE AND IN ACCORDANCE WITH DRAWING AND PROCEDURES

WELDING SUPERVISOR

R. W. Williams 9-11-76

INSPECTION SUPERVISOR

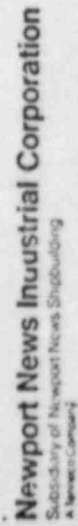
J. F. Bell 9/13/76

DISTRIBUTION

QA

QC

RECORDS CENTER



Newport News Industrial Corporation
 Subsidiary of Newport News Shipbuilding
 A Newport Company

Newport News Industrial Corporation
 Subsidiary of Newport News Shipbuilding
 A Newport Company

| ULTRASONIC TEST DATA | | | | | | | | | |
|--------------------------------------|--|--|--|--|--|--|--|--|--|
| NW FORM 5131 (REV. 1) | | | | | | | | | |
| DATE 8-27-76 | | | | | | | | | |
| SPEC. 11A | | | | | | | | | |
| STRUCTURE UNIT 100-100-100 | | | | | | | | | |
| ORIENTATION NO. 100-100-100 | | | | | | | | | |
| MATERIAL 100-100-100 | | | | | | | | | |
| THICKNESS 100-100-100 | | | | | | | | | |
| STATUS 100-100-100 | | | | | | | | | |
| CALC. BLOCK 100-100-100 | | | | | | | | | |
| PROCEDURE 100-100-100 | | | | | | | | | |
| TEST BLANK 100-100-100 | | | | | | | | | |
| TEST TYPE 100-100-100 | | | | | | | | | |
| TEST NO. 100-100-100 | | | | | | | | | |
| TEST DATE 100-100-100 | | | | | | | | | |
| TEST TIME 100-100-100 | | | | | | | | | |
| TEST LOCATION 100-100-100 | | | | | | | | | |
| TEST DEPTH 100-100-100 | | | | | | | | | |
| TEST ZONE 100-100-100 | | | | | | | | | |
| TEST MAX. SIG. 100-100-100 | | | | | | | | | |
| TEST BEAM 100-100-100 | | | | | | | | | |
| TEST DEFECT 100-100-100 | | | | | | | | | |
| TEST DISPOSITION 100-100-100 | | | | | | | | | |
| TEST REMARKS 100-100-100 | | | | | | | | | |
| TEST LOC. OF STEELING 100-100-100 | | | | | | | | | |
| TEST FWD 100-100-100 | | | | | | | | | |
| TEST AFT 100-100-100 | | | | | | | | | |
| TEST TOP 100-100-100 | | | | | | | | | |
| TEST BOTTOM 100-100-100 | | | | | | | | | |
| TEST INBD 100-100-100 | | | | | | | | | |
| TEST OUTBD 100-100-100 | | | | | | | | | |
| TEST PORT 100-100-100 | | | | | | | | | |
| TEST STBD 100-100-100 | | | | | | | | | |
| TEST BEAM DIRECTION 100-100-100 | | | | | | | | | |
| TEST P - FWD, PORT, AFT 100-100-100 | | | | | | | | | |
| TEST A - AFT, STBD, DOWN 100-100-100 | | | | | | | | | |
| TEST LONGITUDINAL WELD 100-100-100 | | | | | | | | | |
| TEST TRANSVERSE WELD 100-100-100 | | | | | | | | | |
| TEST COMPRESSIONAL 100-100-100 | | | | | | | | | |
| PART OF LAB. REPORT 100-100-100 | | | | | | | | | |



Newport News Industries Corporation

Subsidiary of Newport News Shipbuilding
A Tenneco Company

NDE RECORD

011,270,283,286,289,300,312

| JOB ORDER NO. | OWG. NO. | REV. | MIL. NO. | | | | | | |
|--------------------|---------------|--------------|---------------|------|--------------------------|--|------------------|------------|---------|
| 5824H | 288133 | F1 | UST-AC-X10-23 | | | | | | |
| JOB ORDER LOCATION | INSPECTOR | DATE | | | | | | | |
| SUB SHOP | AJ. Long | 9-11-76 | 7-21-76 | | | | | | |
| JOINT NO. | BASE MATERIAL | ITEM TO ITEM | PLATE | PIPE | FIT-UP | APPLICATION | NDE ACCOMPLISHED | INSPECTOR/ | DATE |
| ASSY 1-3-13 | | | | | | REQUIRING NDE | TYPE | LEVEL | |
| 587 | 1908 | 1901 | X | | RAVE 7/16/76 RAVEM | FINAL A-3100 B-3100 Root 1st PASS A-3100 FINAL B-3100 | MT | Lakety II | 8-30-76 |
| " | " | " | X | | " | " | MT | Barnes II | 8-17-76 |
| " | " | " | X | | " | " | MT | Barnes II | 8-17-76 |
| " | " | " | X | | " | " | MT | Lakety II | 8-30-76 |
| 587 | 1908 | 1901 | X | | | FINAL A-3100 FINAL B-3100 | UT | Barnes II | 8-22-76 |
| " | " | " | X | | | " | UT | Barnes II | 8-22-76 |
| 588 | 1909 | 1901 | X | | RAVE 2-22-76 | FINAL A-3100 B-3100 Root 1st PASS A-3100 FINAL B-3100 | MT | Lakety II | 8-20-76 |
| " | " | " | X | | " | " | MT | Barnes II | 8-17-76 |
| " | " | " | X | | " | " | MT | Barnes II | 8-17-76 |
| " | " | " | X | | " | " | MT | Lakety II | 8-20-76 |
| 588 | 1909 | 1901 | X | | | FINAL A-3100 FINAL B-3100 | UT | MURRAY II | 8-22-76 |
| " | " | " | X | | | " | UT | MURRAY II | 8-22-76 |

* INDICATE ACTUAL WALL THICKNESS FOR PIPE JOINTS THAT REQUIRE RT

| REMARKS | COMPLETE AND IN ACCORDANCE WITH DRAWING AND PROCEDURES |
|--------------------|--|
| Jo 587 30mm 1-20-1 | |
| Jo 588 30mm 1-12-1 | |
| | WELDING SUPERVISOR |
| | R.W. Williams 9-11-76 |
| | INSPECTION SUPERVISOR |
| | J.F. Bldm 9/13/76 |

002353

| RADIOGRAPHIC TECHNIQUE | | Remarks on back | | DATE |
|------------------------|-----------------|----------------------|-------------|----------|
| 5824H | FR | 1-2 | STRUCTURE | 10-16-75 |
| WELD ID. | ORIENTATION NO. | 1-2 | STRUCTURE | 10-16-75 |
| 1-10-4 A+B | 1-2 | 1-2 | STRUCTURE | 10-16-75 |
| STATUS | SOURCE TYPE | SOURCE SIZE | SOURCE I.D. | CURIES |
| 0 | IR-2 | 1/4x1/8 | 1/2 | 73 |
| TIME | TH | TS | STO SETUP | W/L |
| 24 min | 1/4 | 1/2 | 3041-441 | 1735 |
| SOURCE POSITION | SOURCE ANGLE | S.F.D. | FILM | SIZE |
| 1/2 | 90° | 24" | AA | 1X17 |
| EXPOSED BY | FILM HOLDER NO. | INCHES TO BE INTERP. | | |
| Vogelweide | 200 | 14 | | |
| ACCEPTED | MT | GR/RT | RET | REP |
| REASON | DEFECT LENGTH | SPEC | | |
| LINE NO. | LOT NO. | DATE | | |
| Low 2 | ECM-200 | N341/AA1 | | |
| | | 17 1975 | | |

| RADIOGRAPHIC TECHNIQUE | | Remarks on back | | DATE |
|------------------------|-----------------|----------------------|-------------|----------|
| 5824H | FR | 1-2 | STRUCTURE | 10-15-75 |
| WELD ID. | ORIENTATION NO. | 1-2 | STRUCTURE | 10-15-75 |
| 1-10-1-10-5 A+B | 1-2 | 1-2 | STRUCTURE | 10-15-75 |
| STATUS | SOURCE TYPE | SOURCE SIZE | SOURCE I.D. | CURIES |
| 0 | IR-2192 | 1/4x1/8 | 1/2 | 72 |
| TIME | TH | TS | STO SETUP | W/L |
| 4 1/2 min | 1/4 | 1/2 | 3041-441 | 1735 |
| SOURCE POSITION | SOURCE ANGLE | S.F.D. | FILM | SIZE |
| 1/2 | 90° | 24" | AA | 7X17 |
| EXPOSED BY | FILM HOLDER NO. | INCHES TO BE INTERP. | | |
| P. J. Bldm | 144 | 14 | | |
| ACCEPTED | MT | GR/RT | RET | REP |
| REASON | DEFECT LENGTH | SPEC | | |
| LINE NO. | LOT NO. | DATE | | |
| Low 2 | ECM-200 | N341/AA1 | | |
| | | CCT 15 1975 | | |

| RADIOGRAPHIC TECHNIQUE | | Remarks on back | | DATE |
|------------------------|-----------------|----------------------|-------------|----------|
| 5824H | FR | 1-2 | STRUCTURE | 10-16-75 |
| WELD ID. | ORIENTATION NO. | 1-2 | STRUCTURE | 10-16-75 |
| 1-10-1-10-6 A+B | 1-2 | 1-2 | STRUCTURE | 10-16-75 |
| STATUS | SOURCE TYPE | SOURCE SIZE | SOURCE I.D. | CURIES |
| 0 | IR-2 | 1/4x1/8 | 1/2 | 73 |
| TIME | TH | TS | STO SETUP | W/L |
| 24 min | 1/4 | 1/2 | 3041-441 | 1735 |
| SOURCE POSITION | SOURCE ANGLE | S.F.D. | FILM | SIZE |
| 1/2 | 90° | 24" | AA | 1X17 |
| EXPOSED BY | FILM HOLDER NO. | INCHES TO BE INTERP. | | |
| Vogelweide | 272 | 14 | | |
| ACCEPTED | MT | GR/RT | RET | REP |
| REASON | DEFECT LENGTH | SPEC | | |
| LINE NO. | LOT NO. | DATE | | |
| Low 2 | ECM-200 | N341/AA1 | | |
| | | 17 1975 | | |

N.N.I.C.
RECORD CENTER
FILE COPY

PENETRATION SEAM
JOINT 5 1-10-4, 1-10-5 & 1-10-6

ULTRASONIC TEST DATA

| | | | | | |
|---------------------|--|---------------------|--|-------------------|--|
| DATE 5-27-76 | | STRUCTURE 13541-3-3 | | UNIT 01 | |
| ORIENTATION NO. 125 | | THICKNESS 3/16 | | STATUS | |
| TEST NAME 125 | | TRANSDUCER NO. 4775 | | CAL. BLOCK | |
| TYPE 702-1 | | TYPE C | | FREQ. 2.25 | |
| NO. 721204 | | DIE 1/4" | | ANGLE 60° | |
| DISPOSITION | | REMARKS | | LOC. OF STEINLICH | |
| INDICATED | | 0-1 | | FWD | |
| BEAM DIRECTION | | 1-2 | | AFT | |
| MAX. SIG. | | 2-3 | | TOP | |
| ZONE | | 3-0 | | BOTTOM | |
| DEPTH | | | | INBD | |
| LENGTH | | | | PORT | |
| LOCATION | | | | STBD | |

| | | | | | |
|-------------------------------------|--|-----------------------------------|--|--------------------------|--|
| NODE USED | | DISPOSITION | | BEAM DIRECTION | |
| 1ST HALF 2ND HALF | | 0 - SATISFACTORY 1-1 - REJECTABLE | | P - FWD, PORT, 1/4" | |
| 1ST NODE 1ST MODE 2ND NODE 2ND MODE | | N - REJECTABLE | | A - AFT, STBD, OUT, DOWN | |
| DEFECT TYPE | | LENGTH | | C - TRANSVERSE WELD | |
| W - WELD REINFORCEMENT | | N - INCLUSION | | 50 - DIMENSIONAL | |
| U - DELAYS - LAMINAR | | C - CRACK | | PART OF LAB. REPORT | |
| S - STRUCTURE | | L - LACK OF FUSION | | | |

PERFORMED BY *Dr. Bachman*

ULTRASONIC TEST DATA

| | | | | | |
|---------------------|--|---------------------|--|-------------------|--|
| DATE 5-27-76 | | STRUCTURE 13541-3-3 | | UNIT 01 | |
| ORIENTATION NO. 125 | | THICKNESS 3/16 | | STATUS | |
| TEST NAME 125 | | TRANSDUCER NO. 4775 | | CAL. BLOCK | |
| TYPE 702-1 | | TYPE C | | FREQ. 2.25 | |
| NO. 721204 | | DIE 1/4" | | ANGLE 60° | |
| DISPOSITION | | REMARKS | | LOC. OF STEINLICH | |
| INDICATED | | 0-1 | | FWD | |
| BEAM DIRECTION | | 1-2 | | AFT | |
| MAX. SIG. | | 2-3 | | TOP | |
| ZONE | | 3-0 | | BOTTOM | |
| DEPTH | | | | INBD | |
| LENGTH | | | | PORT | |
| LOCATION | | | | STBD | |

| | | | | | |
|-------------------------------------|--|-----------------------------------|--|--------------------------|--|
| NODE USED | | DISPOSITION | | BEAM DIRECTION | |
| 1ST HALF 2ND HALF | | 0 - SATISFACTORY 1-1 - REJECTABLE | | P - FWD, PORT, 1/4" | |
| 1ST NODE 1ST MODE 2ND NODE 2ND MODE | | N - REJECTABLE | | A - AFT, STBD, OUT, DOWN | |
| DEFECT TYPE | | LENGTH | | C - TRANSVERSE WELD | |
| W - WELD REINFORCEMENT | | N - INCLUSION | | 50 - DIMENSIONAL | |
| U - DELAYS - LAMINAR | | C - CRACK | | PART OF LAB. REPORT | |
| S - STRUCTURE | | L - LACK OF FUSION | | | |

PERFORMED BY *Dr. Bachman*

| | | | | | |
|---------------------|--|---------------------|--|-------------------|--|
| DATE 2-11-76 | | STRUCTURE 13541-3-3 | | UNIT 01 | |
| ORIENTATION NO. 125 | | THICKNESS 3/16 | | STATUS | |
| TEST NAME 125 | | TRANSDUCER NO. 4775 | | CAL. BLOCK | |
| TYPE 702-1 | | TYPE C | | FREQ. 2.25 | |
| NO. 721204 | | DIE 1/4" | | ANGLE 60° | |
| DISPOSITION | | REMARKS | | LOC. OF STEINLICH | |
| INDICATED | | 0-1 | | FWD | |
| BEAM DIRECTION | | 1-2 | | AFT | |
| MAX. SIG. | | 2-3 | | TOP | |
| ZONE | | 3-0 | | BOTTOM | |
| DEPTH | | | | INBD | |
| LENGTH | | | | PORT | |
| LOCATION | | | | STBD | |

| | | | | | |
|-------------------------------------|--|-----------------------------------|--|--------------------------|--|
| NODE USED | | DISPOSITION | | BEAM DIRECTION | |
| 1ST HALF 2ND HALF | | 0 - SATISFACTORY 1-1 - REJECTABLE | | P - FWD, PORT, 1/4" | |
| 1ST NODE 1ST MODE 2ND NODE 2ND MODE | | N - REJECTABLE | | A - AFT, STBD, OUT, DOWN | |
| DEFECT TYPE | | LENGTH | | C - TRANSVERSE WELD | |
| W - WELD REINFORCEMENT | | N - INCLUSION | | 50 - DIMENSIONAL | |
| U - DELAYS - LAMINAR | | C - CRACK | | PART OF LAB. REPORT | |
| S - STRUCTURE | | L - LACK OF FUSION | | | |

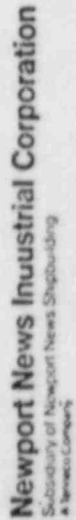
PERFORMED BY *Dr. Bachman*

| | | | | | |
|---------------------|--|---------------------|--|-------------------|--|
| DATE 2-11-76 | | STRUCTURE 13541-3-3 | | UNIT 01 | |
| ORIENTATION NO. 125 | | THICKNESS 3/16 | | STATUS | |
| TEST NAME 125 | | TRANSDUCER NO. 4775 | | CAL. BLOCK | |
| TYPE 702-1 | | TYPE C | | FREQ. 2.25 | |
| NO. 721204 | | DIE 1/4" | | ANGLE 60° | |
| DISPOSITION | | REMARKS | | LOC. OF STEINLICH | |
| INDICATED | | 0-1 | | FWD | |
| BEAM DIRECTION | | 1-2 | | AFT | |
| MAX. SIG. | | 2-3 | | TOP | |
| ZONE | | 3-0 | | BOTTOM | |
| DEPTH | | | | INBD | |
| LENGTH | | | | PORT | |
| LOCATION | | | | STBD | |

| | | | | | |
|-------------------------------------|--|-----------------------------------|--|--------------------------|--|
| NODE USED | | DISPOSITION | | BEAM DIRECTION | |
| 1ST HALF 2ND HALF | | 0 - SATISFACTORY 1-1 - REJECTABLE | | P - FWD, PORT, 1/4" | |
| 1ST NODE 1ST MODE 2ND NODE 2ND MODE | | N - REJECTABLE | | A - AFT, STBD, OUT, DOWN | |
| DEFECT TYPE | | LENGTH | | C - TRANSVERSE WELD | |
| W - WELD REINFORCEMENT | | N - INCLUSION | | 50 - DIMENSIONAL | |
| U - DELAYS - LAMINAR | | C - CRACK | | PART OF LAB. REPORT | |
| S - STRUCTURE | | L - LACK OF FUSION | | | |

PERFORMED BY *Dr. Bachman*

REINFORCEMENT SEAM
JOINT #5 1-20-1 & 1-20-2



WELD HISTORY RECORD

Newport News Industrial Corporation
 Subsidiary of Newport News Shipbuilding
 A Spawdon Company

WELD HISTORY RECORD

[illegible][illegible]



Newport News Indust. Corporation
Subsidiary of Newport News Shipbuilding
A Tenneco Company

NDE RECORD

JOB ORDER NO. 5024H DWG. NO. 288133 REV. F1 M.I. NO. 451-AC-X10-23
JOB ORDER LOCATION SUB SHOP INSPECTOR D.J. Long DATE 9-11-76
7-22-76

| JOINT NO. | BASE MATERIAL ITEM TO ITEM | PLATE | PIPE | FIT-UP | APPLICATION REQUIRING NDE | NDE ACCOMPLISHED INSPECTOR/ LEVEL | DATE |
|------------------------------|-------------------------------|-------------|----------|--------------|---------------------------------|---|-------------------|
| <u>ASSY</u> <u>1-3-13</u> | | | | | | | |
| <u>509</u> | <u>1907</u> | <u>1901</u> | <u>X</u> | <u>DRILL</u> | <u>FINAL</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>A-5100</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>ROOT</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>15% PASS</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>FINAL</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>509</u> | <u>1907</u> | <u>1901</u> | <u>X</u> | <u>"</u> | <u>A-5100</u> | <u>UT</u> | <u>Buckman II</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>FINAL</u> | <u>UT</u> | <u>Buckman II</u> |
| <u>570</u> | <u>1907</u> | <u>1901</u> | <u>X</u> | <u>DRILL</u> | <u>FINAL</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>A-5100</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>ROOT</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>15% PASS</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>FINAL</u> | <u>Taherty II</u> | <u>8-28-76</u> |
| <u>510</u> | <u>1907</u> | <u>1901</u> | <u>X</u> | <u>"</u> | <u>A-5100</u> | <u>UT</u> | <u>Buckman II</u> |
| <u>"</u> | <u>"</u> | <u>"</u> | <u>X</u> | <u>"</u> | <u>FINAL</u> | <u>UT</u> | <u>Buckman II</u> |

* INDICATE ACTUAL WALL THICKNESS FOR PIPE JOINTS THAT REQUIRE RT

REMARKS: JO 509 SEAM = 1-16-3
JO 510 SEAM = 1-16-4

COMPLETE AND IN ACCORDANCE WITH DRAWING AND PROCEDURES
WELDING SUPERVISOR Frank Williams 9-11-76
INSPECTOR SUPERVISOR D.J. Long 9/13/76

002354

RADIOGRAPHIC TECHNIQUE
NNS 1258 (REV. 3) NNS & DD CO. Remarks on back DATE 10-16-75
FILL 51244 ORIENTATION NO. 7-2 STRUCTURE W-1
WELD I.D. 12-12-1-12-1 A+B 248-108 B PENETRATION
STATUS 0 SOURCE TYPE IR SOURCE SIZE 18X14 SOURCE I.D. 62 CURIES 73
SHOT RS SHOTS 1 SHIPWAY 1 TO SET UP 25X44 MAT L 105
TIME 2 1/2 min TM 1 1/2 TS 1 1/2 HENRY 1000 SHIN 14
SOURCE POSITION 7/5 SOURCE ANGLE 90 S.F.D. 20 FILM AA SIZE 7X17
EXPOSED BY Vogelbein FILM HOLDER NO. 14 INCHES TO RE INTERP.
ACCEPTED ☒ MT ☐ GR/RT ☐ RET ☐ REP ☐ VIR ENCL ☐
REASON Leak 2 DEFECT LENGTH 1000 DATE 10/16/75
LINE NO. 1 LOT NO. 1

PENETRATION SEAM
JOINT # 1-12-1

N.N.I.C.
RECORD CENTER
FILE COPY 21

WELD HISTORY RECORD

[illegible]

| ULTRASONIC TEST DATA | | | | | | | | | | DATE | |
|-------------------------------------|--------|-------|---------------|--------------|----------------|-----------------------|-----------------------------------|--------------|-------------------------|--------------------|-----|
| -NH FORM 3321 (REV. 1) | | | | | | | | | | 8/22/72 | |
| HULL | | | | FN | | ORIENTATION NO. | | STRUCTURE | | UNTEST #1 | |
| NA 5024-A | | | | ~ | | ICC RECORDS | | A25Y1-3-13 | | PCT. IN CYL. PIT | |
| PROCEDURE | | | | TEST SURFACE | | MATERIAL | | THICKNESS | | STATUS | |
| X03-7-241 | | | | A/B | | M.S. | | 3/4" | | S | |
| LOCATION | LENGTH | DEPTH | ZONE LOCATION | MAX. ING. | BEAM DIRECTION | INDICATED DEFECT TYPE | DISPOSITION | (INSTRUMENT) | | CALC. BLOCK | |
| | | | | | | | | TYPE 702-A | TYPE G FREQ. 2.25 | NO. | NO. |
| | | | | | | | | NO 72204 | SIZE 4 1/2" ANGLE 60° | LOC. OF STENCILING | |
| | | | | | 16 1/2 | | 25" LCCS | REMARKS | | FWD | |
| | | | | | | | 0-1 | | | AFT | |
| | | | | | | | 1-2 | | | TOP | |
| | | | | | | | 2-3 | | | BOTTOM | |
| | | | | | | | 3-0 | | | INBD | |
| | | | | | | | | | | OUTBD | |
| | | | | | | | | | | PORT | |
| | | | | | | | | | | STBD | |
| | | | | | | | CO-OK | 5-OB | | | |
| NODE USED | | | | | | | DISPOSITION | | BEAM DIRECTION | | |
| 1ST HALF 2ND HALF 1ST HALF 2ND HALF | | | | | | | G - SATISFACTORY (-) - REJECTABLE | | F - FWD PORT, UP | | |
| 1ST NODE 1ST NODE 2ND NODE 2ND NODE | | | | | | | R - REJECTABLE | | A - AFT, STD, OUT, DOWN | | |
| | | | | | | | PENDING REP. OF R | | CW - LONGITUDINAL WELD | | |
| | | | | | | | LENGTH | | T - TRANSVERSE WELD | | |
| | | | | | | | * * 1/8" OR LESS | | CO - COMPRESSIONAL | | |
| DEFECT TYPE | | | | | | | PERFORMED BY | | PART OF LAB REPORT | | |
| W - WELD REINFORCEMENT | | | | | | | Df. Brachman | | | | |
| D - DELAM - LAMINAR | | | | | | | | | | | |
| S - STRUCTURE | | | | | | | | | | | |
| L - LACK OF FUSION | | | | | | | | | | | |
| C - CRACK | | | | | | | | | | | |

[illegible]



Newport News Industrial Corporation
Subsidiary of Newport News Shipbuilding
A Tenneco Company

NDE RECORD

| JOB ORDER NO. | DWG. NO. | REV. | WIT. NO. | | | | | |
|--------------------|----------------------------|---------|---------------|--------|---------------------------|----------|-----------------|---------|
| 5024A | 288133 | F' | 457-22-X10-20 | | | | | |
| JOB ORDER LOCATION | INSPECTOR | | DATE | | | | | |
| SUB SHOP | D. J. Long | 9-11-76 | | | | | | |
| JOINT NO. | BASE MATERIAL ITEM TO ITEM | PLATE | PIPE | FIT-UP | APPLICATION REQUIRING NDE | NDE TYPE | INSPECTOR/LEVEL | DATE |
| AS34 | 1911 | - | x | | BASE METAL | | John II | 9-11-76 |
| 1-3-13 | | - | x | | EXCAVATION | MT | John II | 9-11-76 |
| | | | | | FINAL | MT | John II | 9-11-76 |

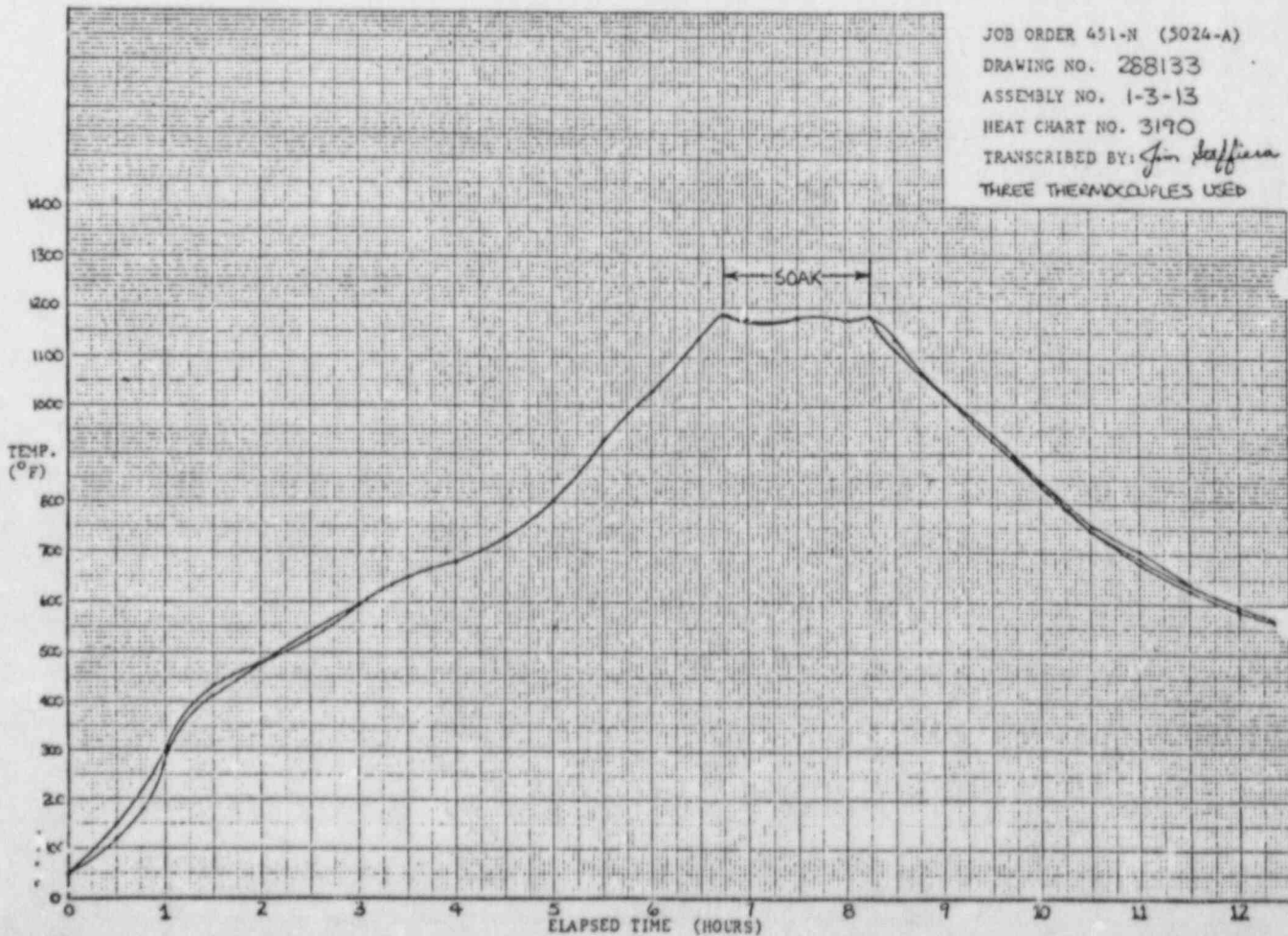
* INDICATE ACTUAL WALL THICKNESS FOR PIPE JOINTS THAT REQUIRE IT

REMARKS: BASE METAL REPAIRS MADE BY PAT. CLAMITY TEMP. ATTACHMENTS, C.C.T. APPROX. 20 PLACES

WELDING SUPERVISOR: R. W. Williams 9-11-76

INSPECTOR: J. J. Bell 9/13/76

000639



NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY
NEWPORT NEWS, VIRGINIA

SHIPPING NOTICE

FOR: NEWPORT NEWS INDUSTRIAL CORPN.
(A TENNECO CO.)

DATE
FEBRUARY 28, 1977

CUSTOMER'S ORDER

A-98512

NEWPORT NEWS, VIRGINIA 23602

5024-A (451-N)

CUSTOMER'S REQ.

N.N. CHARGE
5024-A-00907

N.N. FILE
5924-A

CUSTOMER
DUKE POWER CO.
CHARLOTTE, NORTH CAROLINA

DUKE POWER CO.
C/O D.G. BEAM
CATAMBA NUCLEAR STATION
SOUTH CAROLINA HIGHWAY 274
NEWPORT, SOUTH CAROLINA

MARKS

NNI CORPN. - JOB ORDER 451-N (NNS JO 5024-A)

2/28/77

ROSS TRUCKING CO.

CHARGE PREPAID

TRAILER

D-59

NUMBER PACKAGES 14 -PCS.

NET WT. 15,980 #

PACKAGES

CONTENTS

- 6 - DOME INSERT WELDMENT ASSEMBLIES 111-1 THRU 111-6
DWG. 288113 - "B"
- 6 - DOME INSERT WELDMENT ASSEMBLIES 111-7 THRU 111-12
DWG. 288113 - "B"
- 1 - SHELL INSERT WELDMENT ASSEMBLY 113-1 - DWG. 288229
- 1 - SHELL INSERT WELDMENT ASSEMBLY 113-2 - DWG. 288229

AS PER LIST ATTACHED.

ORDER NOT COMPLETE

LESS DUNNAGE

NET

16,140
160
15,980

COPY TO:-

2-CC. CATAMBA NUCLEAR STATION, P.O. BOX 223, CLOVER, SOUTH CAROLINA 29770

ATTN: D.S. BEAM

1-CC. FRANK M. BEARD, JR., NNI, BLDG. 86

2-CC. J.C. NEFF, ACCOUNTS PAYABLE, NNI, BLDG. 520, 4TH FLOOR

1-CC. R. MACLAUCHLIN W/COPY B/L - NNI, BLDG. 520, 4TH FLOOR

1-CC. JIM MITCHELL, X10, BLDG. 211

1-CC. 073 ACCOUNTS RECEIVABLE



Newport News Industrial Corporation

Subsidiary of Newport News Shipbuilding

A Tenneco Company

SHIP-OUT
INSPECTION
REPORT

FINAL INSPECTION OF MATERIAL LISTED
HAS BEEN COMPLETED AND IS RELEASED FOR SHIPMENT

☒ COMPANY FURN. MAT'L.
☐ CUSTOMER FURN. MAT'L.
☐ OTHER

FILE NO.
X12-313

INSPECTION DATE
2-15-77

| DWG. NO. | DWG. ITEM | P.O. ITEM | QTY | DESCRIPTION |
|----------|-----------|-----------|-----|---|
| 288229 | Δ | | | SHELL INSERT WELDMENT ASSEMBLY CONSISTING OF THE FOLLOWING ITEMS. |
| 288229 | 113-1 | 113-1 | 1 | INSERT PLT. 75NMI 256 |
| | 113-2 | 113-2 | 1 | PENETRATION 75NMI 036 |

APPROVED BY QA

3-11-77
DATE

THIS COMPLETES (PARTIALLY COMPLETED) N/A
THIS CLEARS (PARTIALLY CLEARS) N/A

APPLICABLE INSPECTIONS

EACH CHECKED INSPECTION HAS BEEN PERFORMED ON EACH ITEM LISTED ABOVE

- ☒ VISUAL INSPECTION
- ☒ MARKING
- ☒ SURFACE CLEANLINESS
- ☐ GRADE
- ☒ AS REC'D FOR SHIPOUT
- ☐ MIN. CLEAN TAG
- ☐ PLUG WARNING TAG
- ☐ DIMENSIONAL INSP.
- ☒ WELD PREP
- ☒ OVERALL

- ☒ DOCUMENTATION
- ☒ MANUFACTURE CERT.
- ☐ SHIPPING PAPERS
- ☐ EQUIPMENT HISTORY

OTHER (SPECIFY)

SHIPPING TRANSPORTATION
TRUCK-MOSS TRAILER D59
REMARKS
D. J. Long

APPLICABLE DATA

NNI CHARGE/P.O. NO. 451-N
SHIPMENT NO. 172 (5024-A-172)
SHIPPED TO
DUKE POWER COMPANY ATTN: D.G. BEAM
CATAMBA NUCLEAR STATION
NEWPORT SOUTH CAROLINA
ENGINEERING INSTRUCTION
451-NC-3001
QA INSPECTOR
James E. Hallinan
DATE 2-17-77
CUSTOMER'S INSPECTOR
Milton Walker
DATE 2-20-77
AUTHORIZED INSPECTOR
N/A

DISTRIBUTION

- 2-NNI RECORDS CENTER
- 1-DUKE POWER COMPANY (DOCUMENTATION PACKAGE)
- 1-NNI QA, BLDG 86, 3RD FLOOR

| SPR | ID | GA | SO | CEXX | RSS | SHIPMENT NUMBER |
|-----|----|----|----|------|-----|-----------------|
| | | | | | | 5024-A-175 |



DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
SUPPLIER QUALITY ASSURANCE CERTIFICATION

Name of Supplier Newport News Industrial Corporation Date FEBRUARY 23, 1977
Address of Supplier Plant 230 41st Street Mill Power Order No. A-98512
Newport News, Virginia 23607 Duke Item or Req. No. 1144.09-1
Spec. No. CNS-1144.09-1 Rev. 4
Supplier ID Nos. As noted per attached Shipout Inspection Reports X12-310-311-313 & 314
Description of Component(s) or Material(s) DOVE INSERT ASSEMBLIES III-1 THROUGH III-12
SHELL INSERT ASSEMBLIES III-1 & III-2

☒ Attached Documentation covers all Components/Materials on Mill Power Order.
☒ Attached Documentation covers partial shipment of Components/Materials on Mill Power Order.

The following listed tests, inspections and reports have been completed as required by the specification:

| | |
|--|--|
| <input checked="" type="checkbox"/> Physical & Chemical Analysis | <input checked="" type="checkbox"/> Major Repair Records & Charts |
| <input checked="" type="checkbox"/> Hydro (Test Pressure - PSIG) | <input checked="" type="checkbox"/> Personnel Qualifications on Record |
| <input checked="" type="checkbox"/> Design Report | <input checked="" type="checkbox"/> Stress Report |
| <input checked="" type="checkbox"/> Radiographic Test | <input checked="" type="checkbox"/> Ultrasonic Test |
| <input checked="" type="checkbox"/> Penetrant Test | <input checked="" type="checkbox"/> Repair NDE |
| <input checked="" type="checkbox"/> Operating Test | <input checked="" type="checkbox"/> Performance Curve |
| <input checked="" type="checkbox"/> Dimensional Check | <input checked="" type="checkbox"/> Deviation Record # <u>SEE 1) BELOW</u> |
| | <input checked="" type="checkbox"/> Heat Treatment |
| | <input checked="" type="checkbox"/> Magnetic Particle |
| | <input checked="" type="checkbox"/> Cleanliness |
| | <input checked="" type="checkbox"/> ASME Data Report |

- 1) NONCONFORMITY REPORTS 451-N-X12-7-35 & MS3-4
- 2) _____
- 3) _____

This certifies that the listed Component(s) or Material(s) conform to the requirements of the above referenced Duke Power Company specification including all codes, standards, test requirements and Quality Assurance requirements.

QA RECORDS APPROVED

DATE 2-8-77

James E. Laffera FOR L.H. HARRISON
Supplier Representative Authorized Signature

Title QA Manager Date 2-23-77

(See Instructions)

PACKAGING AND SHIPPING REQUIREMENTS

Specification No. CNS-1144.09-1 Date FEBRUARY 23, 1977

1. ITEM CLASSIFICATION (ANSI H45.2.2 - 1972)
Level A B C D Special _____
Special _____
2. PACKAGING (ANSI H45.2.2 - 1972, Section 3 and Appendix A3)
Level A B C D Special _____
Special Instructions _____

3. SHIPPING (ANSI H45.2.2 - 1972, Section 4.2)
Carrier Open Closed Special
Special Instructions _____

- Shipment via Train Truck Plane Barge Ship Other
Description of other means _____

4. LOADING & TRANSIT (ANSI H45.2.2 - 1973, Section 4.3)
Special instructions for loading, rigging, handling, preservative coatings, seals, stacking and vandalism precautions
Newport News Industrial Corporation Instruction 451-NC-500
5. IDENTIFICATION AND MARKING (ANSI H45.2.2 - 1972, Appendix A3.9)
Item Markings Newport News Industrial Corporation drawing and item/
assembly numbers and Quality Control numbers

- Container Markings Uniform freight classification rules

CP-169



Newport News Industries Corporation
Subsidiary of Newport News Shipbuilding

Newport News Industries Corporation
Subsidiary of Newport News Shipbuilding

Newport News
Subsidiary of News
A Tenneco Company

NDE RECORD

110, 120, 130, 140, 150, 160, 170, 180, 190, 200

MS. No. 240526

657-222-210-465

DATE _____

11-8-76

NOT ACCOMPLISHED

| DATE | INSPECTOR/LEVEL |
|------|-----------------|
|------|-----------------|

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Dec 26 1-14

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| Robert H | 1/2/11 |
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DANCE WITH DRAWING AND

2-11-77

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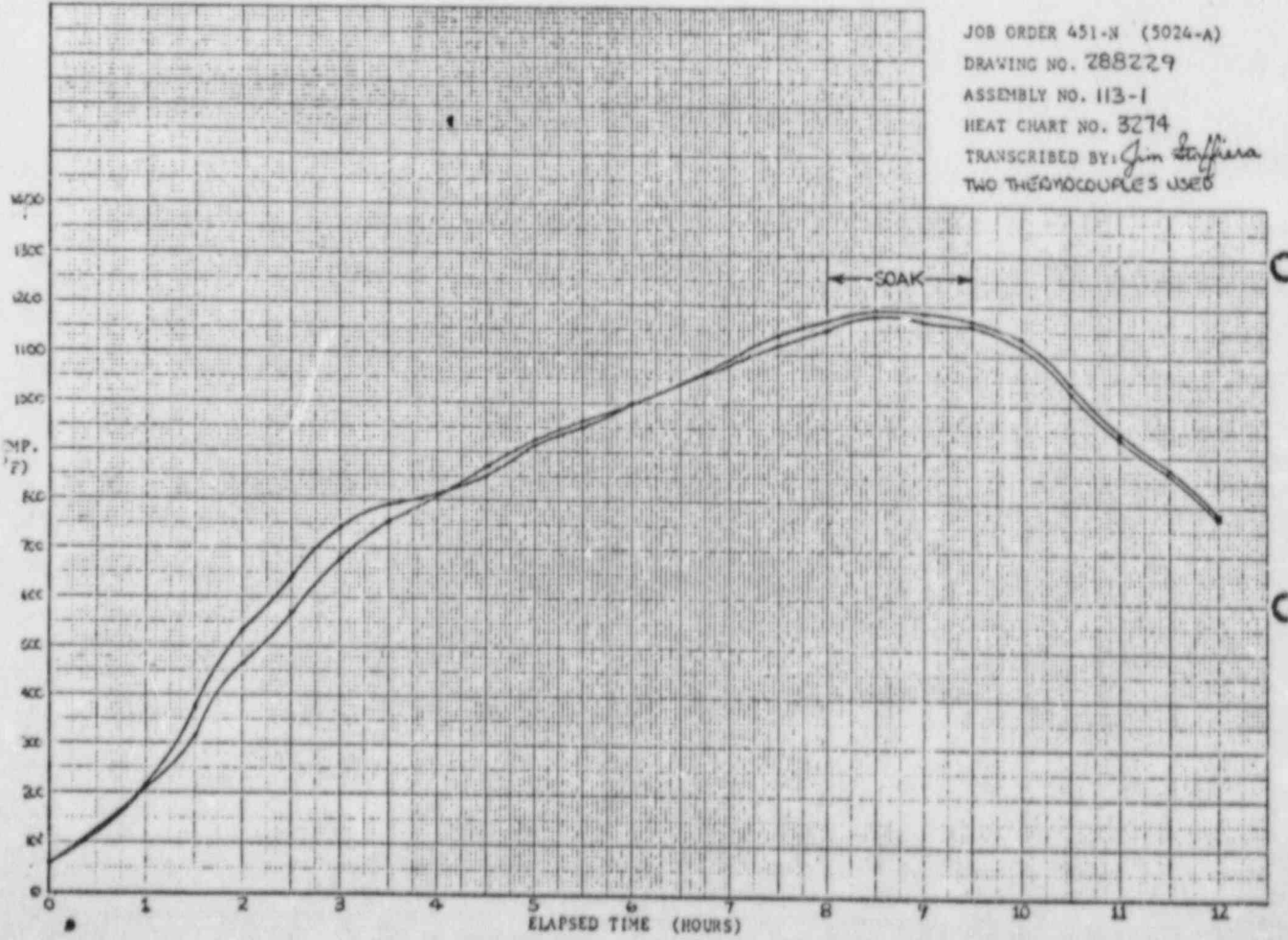
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M.E. 10 X 10 TO THE CENTIMETER 10 X 25 CM.
F.Y. KUEPPEL & ESSER CO. NEW YORK

46 1512



JOB ORDER 451-N (5024-A)

DRAWING NO. 288229

ASSEMBLY NO. 113-1

HEAT CHART NO. 3274

TRANSCRIBED BY: Jim Striffler

TWO THERMOCOUPLES USED



Subsidiary of Harcourt Health Sciences Corporation
© 1999 Harcourt Health Sciences Corporation

WELD HISTORY RECORD

[illegible][illegible]

COMPLETE & IN ACCORDANCE WITH 7725 & 7700 FIGURES

Form Y-401

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6854 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23502 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M113
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/15 19 77 Signed Temp Flex Division By R.L. Jordan
(Manufacturer)Certificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn.have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 11/15 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/15 19 77J.F. Nanion
Inspector's Signature J.F. NanionCommissions 1107 California Comm. No.
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-3 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6854 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23502 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M113
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining).

SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6859 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23762 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M261
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.* Added .4 to Paragraph NC 3649.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 12-1-77 19 --- Signed Temp Flex Division
(Manufacturer)R.L. JordanCertificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the part of a pressure vessel described in thisManufacturer's Partial Data Report on 11/11 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12-1- 19 77J.F. Manion
Inspector's Signature J.F. ManionCommissions 1107 California Comm. No.
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6859 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23762 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M261
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining),
SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6858 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23754 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M113
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/16 19 77 Signed Temp Flex Division
(Manufacturer)By R.L. Jordan
R.L. JordanCertificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn.have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 11/16 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/16 19 77Inspector's Signature J.F. ManionCommissions 1107 California Comm. No.
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6858 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23754 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M113
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining),

SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6855 Nat'l Bd. No. ----(a) Constructed According to Drawing No. D-23510 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M261
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. ----- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet No. 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/14 19 77 Signed Temp Flex Division
(Manufacturer)R.L. Jordan1298Certificate of Authorization Expires January 5, 1979Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at -----Stress analysis report on file at -----Design specifications certified by ----- Prof. Eng. State ----- Reg. No. -----Stress analysis report certified by ----- Prof. Eng. State ----- Reg. No. -----

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co.
of Hartford, Conn. have inspected the part of a pressure vessel described in thisManufacturer's Partial Data Report on 11/14 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/14 19 77J.F. Manion
Inspector's SignatureJ.F. Manion

Commissions

1107 California Comm. No.

National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6855 Nat'l Bd. No. ----(a) Constructed According to Drawing No. D-23510 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M261
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. ----- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

- Flued Head - 54" x 40" x 34" N.P.S., SA-105.
- Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.
- Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

- Bellows - 2 Ply .036" Thk., SA-240 Type 321.
- Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve -
54" O.D. x .50" Wl., SA-515 Grade 70.
- Inner End Sleeve - 54.25" O.D. x 1.75" Wl. (before machining),
SA-516 Grade 70.
- Attachment Sleeve - 54.5" O.D. x .75" Wl., SA516 Grade 70.

Ring Details:

- Split Seal Ring - .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6860 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23770 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M393(c) Applicable ASME Code: Section III, Edition 1974, Addenda date Summer 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.* Added .4 to Paragraph NC 3649.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 12-1-77 19 77 Signed Temp Flex Division
(Manufacturer)By R.L. Jordan
R.L. JordanCertificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn.have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 11/8 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12-1 19 77J.F. Manion
Inspector's Signature

J.F. Manion

Commissions 1107 California Comm. No.

National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6860 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23770 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M393(c) Applicable ASME Code: Section III, Edition 1974, Addenda date Summer 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining),

SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)

(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)

2. Identification-Manufacturer's Serial No. of Part H-6856 Nat'l Bd. No. ----

(a) Constructed According to Drawing No. D-23518 Drawing Prepared by Temp Flex Division

(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M393
Summer

(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. ----- Class 2

3. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)

Expansion Joint design complies with Paragraph NC 3649 (e) (1) of the Code. 3)

Material description on attached Sheet No. 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/11 19 77 Signed Temp Flex Division
(Manufacturer)

R. L. Jordan
R. L. Jordan

Certificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at -----

Stress analysis report on file at -----

Design specifications certified by ----- Prof. Eng. State ----- Reg. No. -----

Stress analysis report certified by ----- Prof. Eng. State ----- Reg. No. -----

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co.
of Hartford, Conn.

have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 11/11 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/11 19 77

J. F. Manion
Inspector's Signature J. F. MANION

Commissions 1107 California Comm. No.
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224

(Name and address of Manufacturer of part)

(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242

(Name and address of Manufacturer of completed nuclear component)

2. Identification-Manufacturer's Serial No. of Part H-6856 Nat'l Bd. No. ----(a) Constructed According to Drawing No. D-23518 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M393Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. ----- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows - 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve -
54" O.D. x .50" Wl., SA-515 Grade 70.Inner End Sleeve - 54.25" O.D. x 1.75" Wl. (before machining),
SA-516 Grade 70.

Attachment Sleeve - 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring - .500" Thk., SA-515 Grade 70.

FORM 2-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification—Manufacturer's Serial No. of Part H-6857 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23526 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M423(c) Applicable ASME Code: Section III, Edition 1974, Addenda date Summer 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.
(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/16 19 77 Signed Temp Flex Division
(Manufacturer)By R.L. Jordan
R.L. JordanCertificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications verified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report verified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn.

have inspected the part of a pressure vessel described in this Manufacturer's Partial Data Report on 11/16 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/16 19 77

J.F. Manion
Inspector's Signature J.F. Manion

Commissions 1107 California Comm. No.
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6857 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23526 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 1-M423
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining).

SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION

1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6861 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23778 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M423
Summer(c) Applicable ASME Code: Section III, Edition 1974, Addenda date 1974, Case No. --- Class 23. Remarks: 1) Assembly as a part used in Containment Vessel Penetration. 2) Bellows
(Brief description of service for which component was designed)Expansion Joint design complies with Paragraph NC 3649.4 (e) (1) of the Code.3) Material description on attached Sheet 2 of 2.

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.

(The applicable Design Specification and Stress Report are not the responsibility of the part Manufacturer. An appurtenance Manufacturer is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 11/15 19 77 Signed Temp Flex Division By R.L. Jordan
(Manufacturer) R.L. JordanCertificate of Authorization Expires January 5, 1979 Certificate of Authorization No. 1298

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of California and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the part of a pressure vessel described in thisManufacturer's Partial Data Report on 11/15 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11/15 19 77J.F. Manion
Inspector's Signature

J.F. Manion

Commissions

1107 California Comm. No.

National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1-2 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3, "Remarks".

FORM N-2 MANUFACTURERS DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*

As required by the Provisions of the ASME Code Rules

T-5191

ASSOCIATED PIPING & ENGINEERING CORPORATION1. (a) Manufactured by Temp Flex Div., 1707 W. Compton Blvd., Compton, CA 90224
(Name and address of Manufacturer of part)(b) Manufactured for Duke Power Company, P.O. Box 2178, Charlotte, N.C. 28242
(Name and address of Manufacturer of completed nuclear component)2. Identification-Manufacturer's Serial No. of Part H-6861 Nat'l Bd. No. ---(a) Constructed According to Drawing No. D-23778 Drawing Prepared by Temp Flex Division(b) Description of Part Inspected Type I-Main Steam Penetration Assembly. Mark No.: 2-M423(c) Applicable ASME Code: Section III, Edition 1974, Addenda date Summer 1974, Case No. --- Class 2

3. REMARKS: (continued)

Materials as follows:

Process Pipe Sub-Assembly:

Flued Head - 54" x 40" x 34" N.P.S., SA-105.

Process Pipe - 31.250" I.D. x 1.510" Min. Wl., SA-106 Grade C.

Guard Pipe - 36.750" I.D. x 1.625" Min. Wl., SA-106 Grade C.

Bellows Sub-Assembly:

Bellows: 2 Ply .036" Thk., SA-240 Type 321.

Inner Center Sleeve, Outer Center Sleeve, and Outer End Sleeve:

54" O.D. x .50" Wl., SA-515 Grade 70.

Inner End Sleeve: 54.25" O.D. x 1.75" Wl. (before machining),

SA-516 Grade 70.

Attachment Sleeve: 54.5" O.D. x .75" Wl., SA-516 Grade 70.

Ring Details:

Split Seal Ring: .500" Thk., SA-515 Grade 70.

25M7

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. Salem, Mass.
(Name and Address of Manufacturer)

2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)

3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
(Name and Address)

4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch)

| | (a) Model No. Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|------|--|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) | 34" Main Steam | 2-13000 | N/A | 13000-01-H | 2 | N/A | 1977 |
| (3) | Isolation Valve | | | Rev.10 | | | |
| (4) | | | | | | | |
| (5) | | | | | | | |
| (6) | | | | | | | |
| (7) | | | | | | | |
| (8) | | | | | | | |
| (9) | | | | | | | |
| (10) | | | | | | | |

5. For service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------|--------------------|-----------------------|-------------|
| (a) Castings | | | |
| Body | SA216, Gr. WCB | Atwood & Morrill Ltd. | S/N 2-13000 |
| RT#J1357 | | | |
| Ht. #121 | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| (b) Forgings | | | |
| Cover | SA105 | Cann & Saul | S/N 5-13000 |
| Ht. #216077 | | | |
| Poppet | SA105 | Cann & Saul | S/N 3-13000 |
| Ht. #216077 | | | |
| Pilot Poppet | SA182, Gr. F6 | Cann & Saul | S/N 2-13000 |
| Ht. #72613 | | | |
| | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NPV-1 (Back)

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|-----------------------------|
| (c) Bolting | | | |
| Studs | SA193, Gr. B7 | Jos. Dyson & Sons | Ht. #8088146 ✓ Code C99B |
| Nuts | SA194, Gr. 2H | Jos. Dyson & Sons | Ht. #L04394 ✓ Code A94 |
| | | | |
| | | | |
| | | | |
| | | | |
| (d) Other Parts | | | |
| * Pipes (2" Sch. 160) | SA106, Gr. B | Braman Dow (U.S. Steel) | Ht. #L20864 ✓ |
| * Pipe (1/2" Sch. 160) | SA106, Gr. B | Braman Dow (Leland Tube) | Ht. #M91512 ✓ |
| 45° Elbow | SA105 | Braman Dow (Vogt Mach.) | Ht. #L00281 ✓ |
| * Note: These parts comply with the Code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test shell 2250 psi.
disc 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971, Addenda Winter 72, Code Case No. N/A, Date N/A.

Signed Atwood & Morrill Co., Inc. by Walter F. Emerson 22 Nov 77
(Manufacturer) Quality Control Manager

Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(IN) (NFV) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina
Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) Thomas F. Wyke
PE State No. Carolina Reg. No. 4870
Stress analysis certified by (1) N/A
PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Nov. 25 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Nov. 28, 19 77
Gene A. Horgan
(Inspector)

Commissions N.Y. 2347
(Nat'l Bd., State, Prov. and No.)

15m7

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. Salem, Mass.
(Name and Address of Manufacturer)

2. Manufactured for Hill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)

3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
(Name and Address)

4. Pump or Valve Valve Nominal Inlet Size 34" (inch) Outlet Size 34"

| (a) Model No., Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|---|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) <u>34" Main Steam</u> | <u>4-13000</u> | <u>N/A</u> | <u>13000-01-H</u> | <u>2</u> | <u>N/A</u> | <u>1977</u> |
| (3) <u>Isolation Valve</u> | | | <u>Rev. 10</u> | | | |
| (4) | | | | | | |
| (5) | | | | | | |
| (6) | | | | | | |
| (7) | | | | | | |
| (8) | | | | | | |
| (9) | | | | | | |
| (10) | | | | | | |

5. For Service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 (Pressure) psi 600 (Temperature) °F or Valve Pressure Class _____ (1)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---------------------|--------------------|-----------------------|-------------|
| (a) Castings | | | |
| Body | SA216, Gr. WCG | Atwood & Morrill Ltd. | S/N 4-13000 |
| Ht. #117 | | | |
| R.T. #J1356 | | | |
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| (b) Forgings | | | |
| Cover | SA105 | Cann & Saul | S/N 6-13000 |
| Ht. #216077 | | | |
| Poppet | SA105 | Cann & Saul | S/N 6-13000 |
| Ht. #216077 | | | |
| Pilot Poppet | SA182, Gr. F6 | Cann & Saul | S/N 1-13000 |
| Ht. #72613 | | | |
| | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NPV-1 (Back)

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA193, Gr. B7 | Jos. Dyson & Sons | Ht. #8088146 Code C99B |
| Nuts | SA 34, Gr. 2H | Jos. Dyson & Sons | Ht. #L04394 Code A94 |
| | | | |
| | | | |
| | | | |
| (d) Other Parts | | | |
| * Pipes (2" Sch. 160) | SA106, Gr. B | Braman Dow (U.S. Steel) | Ht. #L20864 |
| * Pipe (1 1/2" Sch. 160) | SA106, Gr. B | Braman Dow (Leland Tube) | Ht. #M91512 |
| * 45° Elbow | SA105 | Braman Dow (Vogt Mach.) | Ht. #L00281 |
| * Note: These parts comply with the Code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test Shell 2250 psi.
Disc 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971, Addenda Winter 1972 (Date), Code Case No. N/A, Date N/A.
Signed Atwood & Morrill Co., Inc. (Manufacturer) by Walter F. Emerson QC Mgr 28 Dec 77
Our ASME Certificate of Authorization No. N1766 to use the N (N) (NFV) symbol expires 5-20-80 (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina
Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller
PE State So. Carolina Reg. No. 4237
Stress analysis certified by (1) N/A
PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B. I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Dec 28 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Dec 28 19 77

4 (Inspector)

Commissions

Mass 1196
(Nat'l Bd., State, Prov. and No.)

As Required by the Provisions of the ASME Code, Section III, Div. 1

25m5
1. Manufactured by Atwood & Morrill Co., Inc. Salem, MA
(Name and Address of N Certificate Holder)
2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
(Name and Address)
4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch) (inch)

| | | | | | |
|---------------|----------------------------|--------------|-------------|------------|----------|
| (a) Model No. | (b) N Certificate Holder's | (c) Canadian | (d) Drawing | (f) Nat'l. | (g) Year |
| Series No. | Serial | Registration | No. | Bd. No. | Built |
| or Type | No. | No. | No. | (e) Class | |

(1) 34" Main Steam 8-13000 N/A 13000-01-H 2 N/A 1978
 (2) Isolation Valve Rev. 11
 (3) _____
 (4) _____
 (5) _____
 (6) _____
 (7) _____
 (8) _____
 (9) _____
 (10) _____

5. For Service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---------------------|------------------------|----------------------------------|--------------------|
| (a) Castings | | | |
| <u>Body</u> | <u>SA 216, Gr. WCB</u> | <u>Atwood & Morrill Ltd.</u> | <u>S/N 8-13000</u> |
| <u>Ht. # 114</u> | | | |
| <u>Rt. # K7</u> | | | |
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| (b) Forgings | | | |
| <u>Cover</u> | <u>SA 105</u> | <u>Cann & Saul</u> | <u>S/N 3-13000</u> |
| <u>Ht. # 216077</u> | | | |
| <u>Poppet</u> | <u>SA 105</u> | <u>Cann & Saul</u> | <u>S/N 8-13000</u> |
| <u>Ht. # 216077</u> | | | |
| <u>Pilot Poppet</u> | <u>SA 182, Gr. F6</u> | <u>Cann & Saul</u> | <u>S/N 8-13000</u> |
| <u>Ht. # 834649</u> | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA 193, Gr. B7 | Jos. Dyson & Sons | Ht. #8088146 Code C99B |
| Nuts | SA 194, Gr. 2H | Jos. Dyson & Sons | Ht. #L04394 Code A94 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| (d) Other Parts | | | |
| * Pipe (2" sch-160) | SA 106, Gr. B | Braman Dow (U.S. Steel) | Ht. # L20864 |
| * Pipe (1/2" sch-160) | SA 106, Gr. B | Braman Dow (Leland Tube) | Ht. # M91512 |
| * 45° Elbow | SA 105 | Braman Dow (Vogt Mach.) | Ht. # L00281 |
| * Note: These parts comply with the Code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test 2250 psi. Disk Differential test pressure 1500 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971, Addenda Winter 1972, Code Case No. N/A, Date N/A.

Signed Atwood & Morrill Co., Inc. by Walter F. Emerson 27 June 78
(N Certificate Holder) Quality Control Manager
Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(N) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina
Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller

PE State So. Carolina Reg. No. 4237

Stress analysis certified by (1) N/A

PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on JUNE 27 19 78, and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date JUNE 27 19 78

Walter F. Emerson
(Inspector)

Commissions MA1222
(Nat'l Bd., State, Prov. and No.)

15ms

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. Salem, Mass.
(Name and Address of Manufacturer)

2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)

3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
(Name and Address)

4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch)

| | (a) Model No., Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|------|---|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) | 34" Main Steam | 3-13000 | N/A | 13000-01-H | 2 | N/A | 1978 |
| (3) | Isolation Valve | | | Rev. 10 | | | |
| (4) | | | | | | | |
| (5) | | | | | | | |
| (6) | | | | | | | |
| (7) | | | | | | | |
| (8) | | | | | | | |
| (9) | | | | | | | |
| (10) | | | | | | | |

5. For Service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------|--------------------|-----------------------|-------------|
| (a) Castings | | | |
| Body | SA216, Gr. WCB | Atwood & Morrill Ltd. | S/N 3-13000 |
| Ht. #112 | | | |
| R.T. #J1355 | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| (b) Forgings | | | |
| Cover | SA105 | Cann & Saul | S/N 2-13000 |
| Ht. #216077 | | | |
| Poppet | SA105 | Cann & Saul | S/N 1-13000 |
| Ht. #216077 | | | |
| Pilot Poppet | SA182, Gr. F6 | Cann & Saul | S/N 3-13000 |
| Ht. #72613 | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA193, Gr. B7 | Jos. Dyson & Sons | Ht. #8088146 Code C99B |
| Nuts | SA194, Gr. 2H | Jos. Dyson & Sons | Ht. #L04394 Code A94 |
| (d) Other Parts | | | |
| * Pipes (2" Sch. 160) | SA106, Gr. B | Braman Dow (U.S. Steel) | Ht. #L20864 |
| * Pipe (1 1/2" Sch. 160) | SA106, Gr. B | Braman Dow (Leland Tube) | Ht. #M91512 |
| * 45° Elbow | SA105 | Braman Dow (Vogt Mach.) | Ht. #L00281 |
| * Note: These parts comply with the Code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test Shell 2250 psi.
Disc 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971

Addenda Winter 1972 (Date), Code Case No. N/A, Date N/A

Signed Atwood & Morrill Co., Inc.
(Manufacturer)

by Walter F. Emerson (PC Mgr. 18) Jan 78

Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(N) (NFV) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co. Charlotte, No. Carolina

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller

PE State So. Carolina Reg. No. 4237

Stress analysis certified by (1) N/A

PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B. I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Jan. 18th 1978, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Jan. 18th 1978

Y. Pine
(Inspector)

Commissions Mass. 1196
(Nat'l Bd., State, Prov. and No.)

25M3

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. Salem, MA
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)
3. Location of Installation CATAWBA Nuclear Station, Newport, So. Carolina
(Name and Address)
4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch)

| | (a) Model No., Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|------|---|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) | 34" Main Steam | 5-13000 | N/A | 13000-01-H | 2 | N/A | 1978 |
| (3) | Isolation Valve | | | Rev. 10 | | | |
| (4) | | | | | | | |
| (5) | | | | | | | |
| (6) | | | | | | | |
| (7) | | | | | | | |
| (8) | | | | | | | |
| (9) | | | | | | | |
| (10) | | | | | | | |

5. For service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---------------------|--------------------|----------------------|-------------|
| (a) Castings | | | |
| Body | SA216, GR. WCB | Atwood & Morrill LTD | S/N 5-13000 |
| HT# 125 | | | |
| RT# J1413 | | | |
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| | | | |
| | | | |
| (b) Forgings | | | |
| Cover | SA 105 | Cann & Saul | S/N 1-13000 |
| HT# 216077 | | | |
| Poppet | SA 105 | Cann & Saul | S/N 5-13000 |
| HT# 216077 | | | |
| Pilot Poppet | SA 182, GR. F6 | Cann & Saul | S/N 5-13000 |
| HT# 834649 | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NPV-1 (Back)

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA 193, GR. B7 | Jos. Dyson & Sons | HT # 8088146 Code C99B |
| Nuts | SA 194, GR. 2H | Jos. Dyson & Sons | HT # 104394 Code A94 |
| | | | |
| | | | |
| | | | |
| | | | |
| (d) Other Parts | | | |
| *Pipes (2"sch-160) | SA 106, GR. B | Braman Dow (U.S. Steel) | HT # 120864 |
| *Pipe (3"sch-160) | SA 106, GR. B | Braman Dow (Leland Tube) | HT # M91512 |
| *45° Elbow | SA 105 | Braman Dow (Vogt Mach.) | HT # L00281 |
| | | | |
| *NOTE: These parts comply with the Code for Material Construction and Workmanship, but are not included in design. | | | |

9. Hydrostatic test shell 2250 psi.
disc. 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971

Addenda Winter 1972 (Date), Code Case No. N/A, Date N/A

Signed Atwood & Morrill Co., Inc.
(Manufacturer)

by Walter F. Emmer QCMP 5878

Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(N) (NFV) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller

PE State So. Carolina Reg. No. 4237

Stress analysis certified by (1) N/A

PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Feb. 3rd 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Feb 3rd 19 78

J. Pine
(Inspector)

Commissions Mass. 1196
(Nat'l Bd., State, Prov. and No.)

ISM3

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. - Salem, MA
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)
3. Location of installation CATAWBA Nuclear Station, Newport, So. Carolina
(Name and Address)
4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch)

| (a) Model No. Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|--|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) <u>34" Main Steam</u> | <u>6-13000</u> | <u>N/A</u> | <u>13000-01-H</u> | <u>2</u> | <u>N/A</u> | <u>1978</u> |
| (3) <u>Isolation Valve</u> | | | <u>Rev. 10</u> | | | |
| (4) | | | | | | |
| (5) | | | | | | |
| (6) | | | | | | |
| (7) | | | | | | |
| (8) | | | | | | |
| (9) | | | | | | |
| (10) | | | | | | |

5. For service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---------------------|--------------------|-----------------------|-------------|
| (a) Castings | | | |
| Body | SA 216, GR. WCB | Atwood & Morrill LTD. | S/N 6-13000 |
| HT # 132 | | | |
| RT # J1414 | | | |
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| | | | |
| (b) Forgings | | | |
| Cover | SA 105 | Cann & Saul | S/N 8-13000 |
| HT # 215759 | | | |
| Poppet | SA 105 | Cann & Saul | S/N 4-13000 |
| HT # 216077 | | | |
| Pilot Poppet | SA 182, GR. F6 | Cann & Saul | S/N 6-13000 |
| HT # 834649 | | | |
| | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA 193, GR. B7 | Jos. Dyson & Sons | HT # 8088146 Code C99B |
| Nuts | SA 194, GR. 2H | Jos. Dyson & Sons | HT # L04394 Code A94 |
| (d) Other Parts | | | |
| *Pipes (2" sch-160) | SA 106, GR. B | Braman Dow (U.S. Steel) | HT # L20864 |
| *Pipe (1" sch-160) | SA 106, GR. B | Braman Dow (Leland Tube) | HT # M91512 |
| *45° Elbow | SA 105 | Braman Dow (Vogt Mach.) | HT # L00281 |
| * NOTE: These parts comply with the Code for Material Construction and Workmanship, but are not included in design. | | | |

9. Hydrostatic test shell 2250 psi.
Disc. 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I, Edition 1971.

Addenda Winter, 1972 (Date), Code Case No. N/A, Date N/A.

Signed Atwood & Morrill Co., Inc.
(Manufacturer)

by Walter F. Emerson QC Mgr 25 Jan 78

Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(N) (NPV) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller

PE State So. Carolina Reg. No. 4237

Stress analysis certified by (1) N/A

PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B.I. & I. Co.

of Hartford, Conn.

have inspected the pump, or valve, described in this Data Report on Jan. 26 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Jan 26 19 78

(Inspector)

Commissions

Mass. 1196

(Nat'l Bd., State, Prov. and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
 (As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc. Salem, Mass.
 (Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
 (Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
 (Name and Address)
4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
 (inch)

| (a) Model No. Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|--|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) <u>34" Main Steam</u> | <u>1-13000</u> | <u>N/A</u> | <u>13000-01-H</u> | <u>2</u> | <u>N/A</u> | <u>1977</u> |
| (3) <u>Isolation Valve</u> | | | <u>Rev.10</u> | | | |
| (4) | | | | | | |
| (5) | | | | | | |
| (6) | | | | | | |
| (7) | | | | | | |
| (8) | | | | | | |
| (9) | | | | | | |
| (10) | | | | | | |

5. For Service in Main Steam Piping System

(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class _____ (1)
 (Pressure) (Temperature)

7. Cold Working Pressure 1500 psi at 100°F.

8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|----------------|--------------------|-----------------------|-------------|
| (a) Castings | | | |
| Body | SA216, Gr. WCB | Atwood & Morrill Ltd. | S/N 1-13000 |
| Ht. #103 | | | |
| RT #16674C-001 | | | |
| RT #J1718 | | | |
| | | | |
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| | | | |
| (b) Forgings | | | |
| Cover | SA105 | Cann & Saul | S/N 7-13000 |
| Ht. #216077 | | | |
| Poppet | SA105 | Cann & Saul | S/N 2-13000 |
| Ht. #216077 | | | |
| Pilot Poppet | SA182, Gr. F6 | Cann & Saul | S/N 4-13000 |
| Ht. #72613 | | | |
| | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|---------------------------|
| (c) Bolting | | | |
| Studs | SA193, Gr. B7 | Jos. Dyson & Sons | Ht. #8088146 Code C998 |
| Nuts | SA194, Gr. 2H | Jos. Dyson & Sons | Ht. #L04394 Code A94 |
| (d) Other Parts | | | |
| * Pipes (2" Sch. 160) | SA106, Gr. B | Braman Dow (U.S. Steel) | Ht. #L20864 |
| * Pipe (4" Sch. 160) | SA106, Gr. B | Braman Dow (Leland Tube) | Ht. #M91512 |
| * 45° Elbow | SA105 | Braman Dow (Vogt Mach.) | Ht. #L00281 |
| * Note: These parts comply with the Code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test Shell 2250 psi.
Disc 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. I., Edition 1971
Addenda Winter 1972, Code Case No. N/A, Date N/A
Signed Atwood & Morrill Co., Inc. by Walter F. Emerson QC Mgr 19 Dec 77
(Date) (Manufacturer)
Our ASME Certificate of Authorization No. N1766 to use the N symbol expires 5-20-80
(N) (NFV) (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina
Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) Thomas F. Wyke
PE State No. Carolina Reg. No. 4870
Stress analysis certified by (1) N/A
PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B. I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Dec. 20th 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Dec 20 19 77
H. L. [Signature]
(Inspector)

Commissions Mass 1196
(Nat'l Bd., State, Prov. and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Atwood & Morrill Co., Inc., Salem, MA
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply Co., Charlotte, No. Carolina
(Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, So. Carolina
(Name and Address)
4. Pump or Valve Valve Nominal Inlet Size 34" Outlet Size 34"
(inch)

| (a) Model No. Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|--|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) 34" Main Steam | 7-13000 | N/A | 13000-C1-H | 2 | N/A | 1978 |
| (3) Isolation Valve | | | Rev. 11 | | | |
| (4) | | | | | | |
| (5) | | | | | | |
| (6) | | | | | | |
| (7) | | | | | | |
| (8) | | | | | | |
| (9) | | | | | | |
| (10) | | | | | | |

5. For service in Main Steam Piping System
(Brief description of service for which equipment was designed)

6. Design Conditions 1185 psi 600 °F or Valve Pressure Class (1)
(Pressure) (Temperature)
7. Cold Working Pressure 1500 psi at 100°F.
8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---------------------|--------------------|----------------------|------------|
| (a) Castings | | | |
| Body | SA216, GR. WC6 | Atwood & Morrill Ltd | S/N7-13000 |
| HT # 127 | | | |
| RT # J1435 | | | |
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| | | | |
| (b) Forgings | | | |
| Cover | SA105 | Cann & Saul | S/N4-13000 |
| HT # 216077 | | | |
| Poppet | SA105 | Cann & Saul | S/N7-13000 |
| HT # 216077 | | | |
| Pilot Poppet | SA182, GR. F6 | Cann & Saul | S/N7-13000 |
| HT # 834549 | | | |
| | | | |
| | | | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NPV-1 (Back)

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|---|--------------------|-----------------------------|-------------------------|
| (c) Bolting | | | |
| Studs | SA193, GR. B7 | Jos. Dyson & Sons | HT#8088146 Code C99B |
| Nuts | SA194, GR. 2H | Jos. Dyson & Sons | HT#L04394 Code A94 |
| (d) Other Parts | | | |
| * Pipes (2" sch-160) | SA106, GR. B | Braman Dow (U.S. Steel) | HT #L20864 |
| * Pipe (1/2" sch-160) | SA106, GR. B | Braman Dow (Leland Tube) | HT #M91512 |
| * 45° Elbow | SA105 | Braman Dow (Vogt Mach) | HT #L00281 |
| * NOTE: These parts comply with the code for material construction and workmanship, but are not included in design. | | | |

9. Hydrostatic test shell 2250 psi.
disc 1500

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. I, Edition 1971,

Addenda Winter 1972 (Date), Code Case No. N/A, Date N/A

Signed Atwood & Morrill Co., Inc. (Manufacturer) by Walter F. Emerson QC Mgr 28 Feb 78

Our ASME Certificate of Authorization No. N1766 to use the N (N) (NFV) symbol expires 5/20/80 (Date)

CERTIFICATION OF DESIGN

Design information on file at Mill Power Supply Co., Charlotte, No. Carolina

Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) R.E. Miller

PE State So. Carolina Reg. No. 4237

Stress analysis certified by (1) N/A

PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by H.S.B.I. & I. Co. of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on Feb. 28 19 78 and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Feb. 28 19 78
Y. Pine
(Inspector)

Commissions Mass. 1196
(Nat'l Bd., State, Prov. and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

Nuclear Valve Division

- (Name & Address of Manufacturer)

Mill Power Supply/Duke Power Company

- (Name and Address)

5. Pump or Valve Identification NVD P/N 74040, 18 Inch Feedwater Isolation Valve, CS, 900#

Serial Number 31311 (1 Valve)

(Brief description of service for which equipment was designed)

- (b) National Board No. 1065

- (Pressure)

7. The material, design, construction, and workmanship complies with ASME Code Section III. Class 2

Edition 1974, Addenda Date Winter '74, Case No. N/A

(a) Castings

Gate-Code 2P83

Material Spec. No.

SA351 CF8M

Manufacturer

Pacific Metals

Remarks

- (b) Forgings

Body-Code 1Q22

SA105

Gulf Forge

Bonnet-Code 1Q20

SA105

Compton Forge

Neck-Code 1R36

SA105

Compton Forge

Retainer-Code 1R44

SA105

Gulf Forge

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items, 1, 2, 5a and 5b on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NP-1 (back)

[illegible]

8. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA 91409
N/A

Stress analysis report on file at N/A
Design specifications certified by Thomas F. Wyke (1) Prof. Eng. State N.C. Reg. No. 4870
Stress analysis report certified by N/A (1) Prof. Eng. State _____ Reg. No. _____

(1) Signature not required. List name only.

We certify that the statements made in this report are correct.

We certify that the statements made in this report are correct.

Nuclear Valve Division

Date August 17 19 78 Signed of Borg Warner
(Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill. have inspected the equipment described in this Data

of Long Grove, Ill. have inspected the equipment described in this Data Report on August 17 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 17 19 78

[Signature]
(Inspector)

Commissions CA 1406 NB 8026
(National Board, State, Province and No.)

2CF60

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Nuclear Valve Div. of Borg Warner, 7500 Tyrone Ave., Van Nuys, Ca.
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply/Duke Power Co., P.O. Box 1339, Charlotte, N.C.
(Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, South Carolina 28710
(Name and Address)
4. Pump or Valve Feedwater Isolation Nominal Inlet Size 18 Outlet Size 18
(inch)

| | (a) Model No., Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|------|---|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) | 900# | 31315 | N/A | 74040 | 2 | 1131 | 1978 |
| (3) | Motor On | | | | | | |
| (4) | | | | | | | |
| (5) | | | | | | | |
| (6) | | | | | | | |
| (7) | | | | | | | |
| (8) | | | | | | | |
| (9) | | | | | | | |
| (10) | | | | | | | |

5. The valves are designed to handle a fluid media which includes steam, water condensate, borated water, etc., associated with a PWR and BWR. The temperature pressure rating of the media is stated below.
(Brief description of service for which equipment was designed)

6. Design Conditions 1385 psi 600 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------------|--------------------|----------------|---------|
| (a) Castings | | | |
| Gate-Code 2N12 | SA 351 CF8M | Pacific Metals | |
| | | | |
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| | | | |
| | | | |
| (b) Forgings | | | |
| Body-Code 1Q22 | SA 105 | Gulf Forge | |
| Bonnet-Code 1Q20 | SA 105 | Compton Forge | |
| Neck-Code 1R36 | SA 105 | Compton Forge | |
| Retainer-Code 1R44 | SA 105 | Gulf Forge | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Date September 7 1978 Commissions NOE 26 CA406
(Inspector) (Nat'l Bd., State, Prov. and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code Rules

Nuclear Valve Division

1. Manufactured by of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA Order No. 46763
(Name & Address of Manufacturer)

(Name & Address of Manufacturer)

Mill Power Supply/Duke Power Company

2. Manufactured for P.O. Box 1339, Charlotte, North Carolina Order No. C23593
(Name and Address)

(Name and Address)

3. Owner Catawba Nuclear Station

4. Location of Plant Newport, South Carolina 28710

5. Pump or Valve Identification NVD P/N 74040, 18 Inch Feedwater Isolation Valve, CS, 900#

Serial Number 31310 (1 Valve)

(Brief description of service for which equipment was designed)

(a) Drawing No. 74040 Prepared by Nuclear Valve Division of Borg Warner

(b) National Board No. 1060

6. Design Conditions 1385 600 °F
(Pressure) (Temperature)

(Pressure)

$$\text{psi} \frac{600}{(\text{Temperature})} \text{ } ^\circ\text{F}$$

(Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class _____ 2

Edition 1971, Addenda Date Summer '73, Case No. N/A

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------------|--------------------|----------------|---------|
| (a) Castings | | | |
| Gate-Code 2P93 | SA351 CF8M | Pacific Metals | |
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| (b) Forgings | | | |
| Body-Code 1Q82 | SA105 | Gulf Forge | |
| Bonnet-Code 1Q20 | SA105 | Compton Forge | |
| Neck-Code 1R36 | SA105 | Compton Forge | |
| Retainer-Code 1R44 | SA105 | Gulf Forge | |
| | | | |

FORM NPV-1 (back)

| | Mark No. | Material Spec. No. | Manufacturer | Remarks |
|-----------------|----------|--------------------|--------------|---------|
| (c) Bolting | | | | |
| | N/A | | | |
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| (d) Other Parts | | | | |
| | N/A | | | |
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8. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA 91409
 Stress analysis report on file at N/A
 Design specifications certified by Thomas F. Wyke (1) Prof. Eng. State N.C. Reg. No. 4870
 Stress analysis report certified by N/A (1) Prof. Eng. State Reg. No.
 (1) Signature not required. List name only.

We certify that the statements made in this report are correct.

Date August 9 19 78 Signed of Borg Warner By Steve Champion
 (Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill. have inspected the equipment described in this Data Report on August 9 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 9 19 78

Paul J. [Signature]
 (Inspector)

Commissions AB 8026 041406
 (National Board, State, Province and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code Rules

Nuclear Valve Division

1. Manufactured by of Borg Warner, 7500 Tyrone Ave., Van Nuys, Ca. Order No. 46763
(Name & Address of Manufacturer)

Mill Power Supply/Duke Power Company

2. Manufactured for P.O. Box 1339, Charlotte, North Carolina Order No. C23593
(Name and Address)

3. Owner Catawba Nuclear Station

4. Location of Plant Newport, South Carolina 28710

5. Pump or Valve Identification NVD P/N 11040, 18 Inch Feedwater Isolation Valve, CS, 900#
Serial Number 31310 (1 Valve)
(Brief description of service for which equipment was designed)

(a) Drawing No. 74040 Prepared by Nuclear Valve Division of Borg Warner

(b) National Board No. 1060

6. Design Conditions 1385 psi 600 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III. Class 2
Edition 1974, Addenda Date Winter '74, Case No. N/A

*7. Original NPV-1 Dated and Signed August 9, 1978 listed the incorrect Addenda Date.

The items described in #5 were designed and manufactured to the correct Addenda Date listed on this Attachment #1.

FORM NPV-1 (back)

[illegible]

8. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, Ca. 91409
M/A

Stress analysis report on file at _____ N/A

Design specifications certified by Thomas F. Wyke (1) Prof. Eng. State N.C. Reg. No. 4870

Stress analysis report certified by N/A (1) Prof. Eng. State Reg. No.

(1) Signature not required. List name only.

We certify that the statements made in this report are correct.

Nuclear Valve Division

Date August 23 19 78 Signed of Borg Warner By [Signature]
(Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill. have inspected the equipment described in this Data

and/or the State or Province of _____ have inspected the equipment described in this Data
of Long Grove, Ill., and state that to the best of my knowledge and belief, the Manufacturer
Report on August 25 19 78, and state that to the best of my knowledge and belief, the Manufacturer
has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.
I, _____, neither the Inspector nor his employer makes any warranty, expressed or implied, concern-

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 25 19 78

(Inspector)

Commissions B75 CA. 7669 NB
(National Board, State, Province and No.)

20FS1

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Nuclear Valve Div. of Borg Warner, 7500 Tyrone Ave., Van Nuys, Ca.
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply/Duke Power Co., P.O. Box 1339, Charlotte, N.C.
(Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, South Carolina 28710
(Name and Address)
4. Pump or Valve Feedwater Isolation Nominal Inlet Size 18 Outlet Size 18
(inch)

| (a) Model No. Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|--|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) <u>900#</u> | <u>31314</u> | <u>N/A</u> | <u>74040</u> | <u>2</u> | <u>1130</u> | <u>1978</u> |
| (3) <u>Motor Op.</u> | | | | | | |
| (4) | | | | | | |
| (5) | | | | | | |
| (6) | | | | | | |
| (7) | | | | | | |
| (8) | | | | | | |
| (9) | | | | | | |
| (10) | | | | | | |

5. The valves are designed to handle a fluid media which includes steam, water condensate, borated water, etc., associated with a PWR and BWR. The temperature pressure rating of the media is stated below.
(Brief description of service for which equipment was designed)

6. Design Conditions 1385 psi 600 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|----------------------------|--------------------|------------------------|---------|
| (a) Castings | | | |
| <u>Gate-Code 2P85</u> | <u>SA 351 CF8M</u> | <u>Pacific Metals</u> | |
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| (b) Forgings | | | |
| <u>Body-Code 1Q22</u> | <u>SA 105</u> | <u>Gulf Forge</u> | |
| <u>Bonnet-Code 1Q20</u> | <u>SA 105</u> | <u>Compton Forge</u> | |
| <u>Neck-Code 1R36</u> | <u>SA 105</u> | <u>Compton Forge</u> | |
| <u>Retainer-Code 2W93A</u> | <u>SA 105</u> | <u>Jorgensen Steel</u> | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Commissioner 8026 CA1406
(Nat'l Bd. State. Prov. and No.)

2CF42

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

(As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by Nuclear Valve Div. of Borg Warner, 7500 Tyrone Ave., Van Nuys, Ca.
(Name and Address of Manufacturer)
2. Manufactured for Mill Power Supply/Duke Power Co., P.O. Box 1339, Charlotte, N.C.
(Name and Address of Purchaser or Owner)
3. Location of Installation Catawba Nuclear Station, Newport, South Carolina 28710
(Name and Address)
4. Pump or Valve Feedwater Isolation Nominal Inlet Size 18 Outlet Size 18
(inch)

| | (a) Model No., Series No. or Type | (b) Manufacturers' Serial No. | (c) Canadian Registration No. | (d) Drawing No. | (e) Class | (f) Nat'l. Bd. No. | (g) Year Built |
|------|---|-------------------------------------|-------------------------------------|--------------------|-----------|-----------------------|-------------------|
| (1) | 900# | 31313 | N/A | 74040 | 2 | 1129 | 1978 |
| (3) | Motor Op. | | | | | | |
| (4) | | | | | | | |
| (5) | | | | | | | |
| (6) | | | | | | | |
| (7) | | | | | | | |
| (8) | | | | | | | |
| (9) | | | | | | | |
| (10) | | | | | | | |

5. The valves are designed to handle a fluid media which includes steam, water condensate, borated water, etc., associated with a PWR and BWR. The temperature pressure rating of the media is stated below.
(Brief description of service for which equipment was designed)

6. Design Conditions 1385 psi 600 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------------|--------------------|----------------|---------|
| (a) Castings | | | |
| Gate-Code 2P66 | SA 351 CF8M | Pacific Metals | |
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| | | | |
| (b) Forgings | | | |
| Body-Code 1Q22 | SA 105 | Gulf Forge | |
| Bonnet-Code 1Q20 | SA 105 | Compton Forge | |
| Neck-Code 1R36 | SA 105 | Compton Forge | |
| Retainer-Code 1R44 | SA 105 | Gulf Forge | |

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Date September 7 19 78
[Signature] Commissions NSB026 CA1406
 (Inspector) (Nat'l Bd. State, Prov. and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code Rules

1. Manufactured by of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA Order No. 46763
(Name & Address of Manufacturer)

(Name & Address of Manufacturer)

2. Manufactured for P.O. Box 1339, Charlotte, North Carolina Order No. C-23593
(Name and Address)

(Name and Address)

3. Owner Catawba Nuclear Station

4. Location of Plant Newport, South Carolina 28710

5. Pump or Valve Identification NYD R/N 74040, 18 Inch FeedWater Isolation Valve, 900#, CS, MO

Serial Number 31309 (1 Valve)

(Brief description of service for which equipment was designed)

(a) Drawing No. 74040 Prepared by Nuclear Valve Division of Borg Warner

(b) National Board No. 1048

6. Design Conditions 1885 psi 600 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class _____ 2

Edition 1974, Addenda Date Winter '74, Case No. N/A

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2, 5a and 5b on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

FORM NPV-1 (back)

[illegible]

B. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA 91409

Stress analysis report on file at _____ N/A

Design specifications certified by Thomas F. Wyke (1) Prof. Eng. State N.C. Reg. No. 4870

Stress analysis report certified by N/A (1) Prof. Eng. State Reg. No.

(1) Signature not required. List name only.

We certify that the statements made in this report are correct.

Nuclear Valve Division

Date August 2 19 78 Signed of Borg Warner By Yvonne Sturro
(Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill. have inspected the equipment described in this Data

Report on August 2 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 2 19 78

(Signature)
Manuel B. Diana (Inspector)

Commission

CA 1275 NB 7669

(National Board, State, Province and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code Rules

Nuclear Valve Division

1. Manufactured by of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA Order No. 46763
(Name & Address of Manufacturer)

(Name & Address of Manufacturer)

Mill Power Supply/Duke Power Company

2. Manufactured for P.O. Box 1339, Charlotte, North Carolina Order No. C23593

(Name and Address)

3. Owner Catswba Nuclear Station

4. Location of Plant Newport, South Carolina

5. Pump or Valve Identification NVD P/N 74040, 18 Inch Feedwater Isolation Valve, CS, 900#

Serial Number 31312

(Brief description of service for which equipment was designed)

(a) Drawing No. 74040 Prepared by Nuclear Valve Division of Borg Warner

(b) National Board No. 1064

6. Design Conditions 1385 psi 600 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class 2

Edition 1974, Addenda Date Winter '74, Case No. N/A

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|--------------------|--------------------|----------------|---------|
| (a) Castings | | | |
| Gate-Code 2P81 | SA351 CF8M | Pacific Metals | |
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| | | | |
| | | | |
| (b) Forgings | | | |
| Body-Code 1Q22 | SA 105 | Gulf Forge | |
| Bonnet-Code 1Q20 | SA 105 | Compton Forge | |
| Neck-Code 1R36 | SA 105 | Compton Forge | |
| Retainer-Code 1R44 | SA 105 | Gulf Forge | |
| | | | |
| | | | |

FORM NPV-1 (back)

[illegible]

8. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at: NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA 91409

Stress analysis report on file at N/A

Design specifications certified by Thomas F. Wyke

(1) Prof. Eng. State N.C. Reg. No. 4870

Stress analysis report certified by N/A

(1) Prof. Eng. State _____ Reg. No. _____

(1) Signature not required. List name only.

We certify that the statements made in this report are correct.

Nuclear Valve Division

Date August 17 19 78

Signed of Borg Warner

By John C. Lamm

(Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill.

Report on August 17 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of SMF 6.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 17 19 78

[Signature]
(Inspector) _____ Co

Commissions

MS B.2.6 CA 1406

(National Board, State, Province and No.)

FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code Rules

Nuclear Valve Division

1. Manufactured by of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA Order No. 46763
(Name & Address of Manufacturer)
Mill Power Supply/Duke Power Company
2. Manufactured for P.O. Box 1339, Charlotte, North Carolina Order No. C-23593
(Name and Address)
3. Owner Catawba Nuclear Station
4. Location of Plant Newport, South Carolina 28710
5. Pump or Valve Identification NVD P/N 74040, 18 Inch FeedWater Isolation Valve, 900#, CS, MO

Serial Number 31308 (1 Valve)

(Brief description of service for which equipment was designed)

(a) Drawing No. 74040 Prepared by Nuclear Valve Division of Borg Warner

(b) National Board No. 1047

6. Design Conditions 1385 psi 600 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class _____ 2

Edition 1974, Addenda Date Winter '74, Case No. N/A

| Mark No. | Material Spec. No. | Manufacturer | Remarks |
|----------------------|--------------------|-----------------|---------|
| (a) Castings | | | |
| Gate - Code 2P76 | SA 351 CF8M | Chiang & Assoc. | |
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| (b) Forgings | | | |
| Body - Code 1Q22 | SA 105 | Gulf Forge | |
| Bonnet- Code 1Q20 | SA 105 | Compton Forge | |
| Neck - Code 1E36 | SA 105 | Compton Forge | |
| Retainer - Code 1E44 | SA 105 | Gulf Forge | |
| | | | |
| | | | |

FORM NPV-1 (back)

[illegible]

8. Hydrostatic test 3250 psi.

CERTIFICATION OF DESIGN

Design information on file at NVD of Borg Warner, 7500 Tyrone Ave., Van Nuys, CA 91409

Stress analysis report on file at _____ N/A

Design specifications certified by Thomas F. Wyke (1) Prof. Eng. State N. C. Reg. No. 4870

Stress analysis report certified by N/A (1) Prof. Eng. State Reg. No.

(1) Signature not required. List name only.

We certify that the statements made in this report are correct.

Nuclear Valve Division

Date August 2 19 78 Signed of Borg Warner By [Signature]
(Manufacturer)

Certificate of Authorization No. N-1254 expires October 27, 1978

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of California and employed by Lumbermen's Mutual Casualty of Long Grove, Ill. have inspected the equipment described in this Data

Report on August 2 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date August 2 19 78

(Inspector)
Manuel E. Diana

Commissions

CA 1275 NB 7669

(National Board, State, Province and No.)

FORM NPT-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 4

1. Fabricated by ITT Grinnell Ind. Piping, Inc. Kernersville Order No. 7127
(Name and Address of Fabricator) 9-13-78

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-34X Prepared by ITT Grinnell Industrial Piping, Inc.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 --- Drawings
3 --- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-5M-4D
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length

See Attached Sheets

- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 9-12-78 Signed ITT GRINNELL
Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 9-15-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-15-78 Barrick Bell Commissions N.C. - No. 878
(Inspector) National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 7, "Remarks".
Printed in U.S.A. (2/73)

KERNERSVILLE, N. C.

Q. A. FORM 12.1C

Sheet 2 of 4

△ 754 12/17/77 → REDRAWN 10-23-77

REV. ① SM 11-11-77

CHK'D. PG

REV. (2) SA 12-14-77

CHK'D 2/3

REV. 12-15-72

CHICK'S

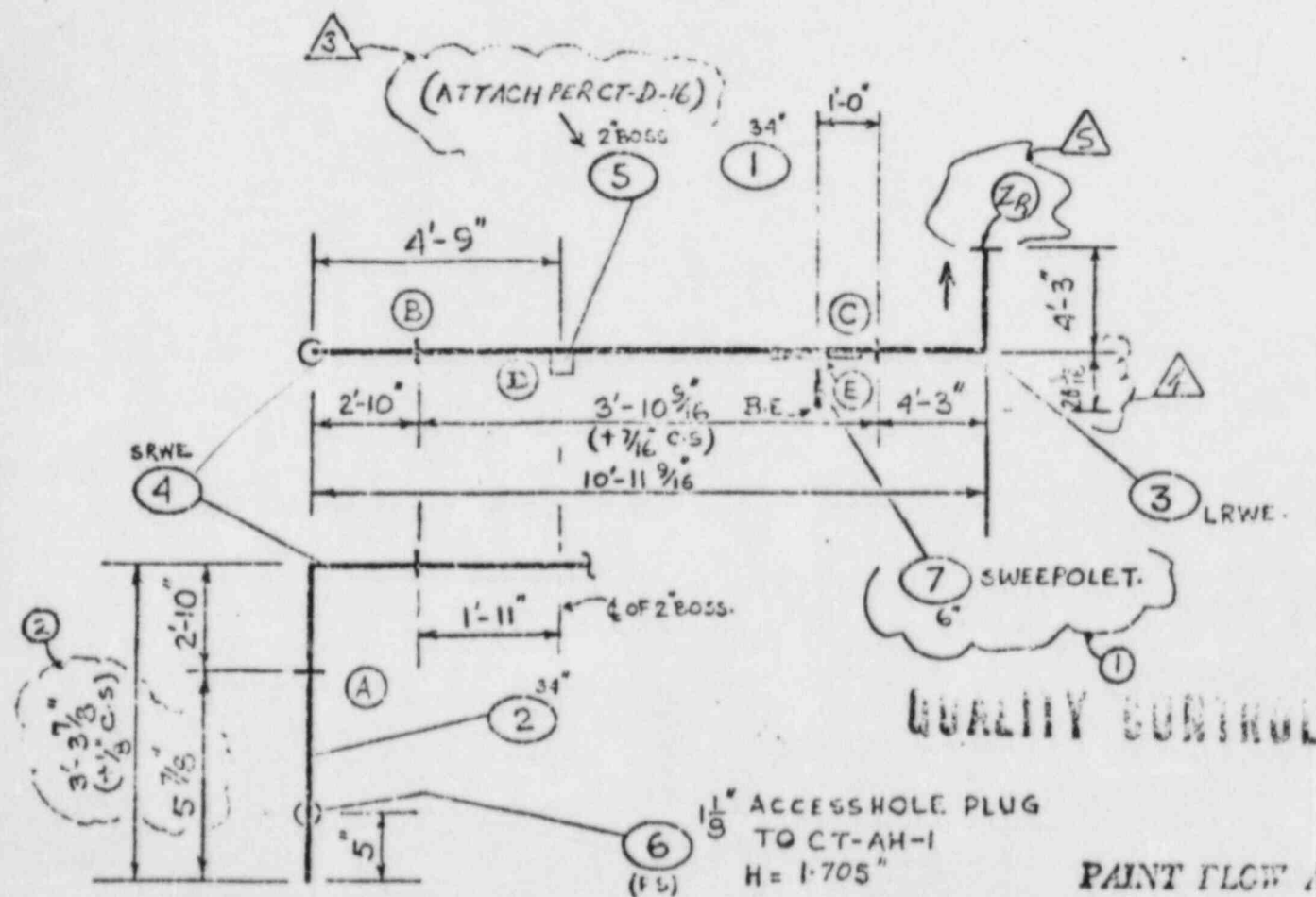
470620-13

$$\text{CHK'D FG}$$

✓ SPECIAL MATERIAL
✓ CHECK ALLOCATION SHEETS
BEFORE CUTTING

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK. _____
SHOP SHALL GRIND TO FIT—IF REQUIRED.

{ USE 3'-10⁹/₁₆" FROM BAR# 18, LOT# 4121
{ HT.# L 3117, USE BALANCE FOR ITEM# 2.



QUALITY SUBMITTER

PAINT FLOW ARROWS

MACHINE ENDS
PER SKETCH C T-D-2, EXCEPT AS NOTED.

Nuclear Safety Related

CLASS DIVE B LINE SPEC. PS 1500.5(01)

APP. CODE 285 Sec. III Cl. 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Magn. Particle (MP) | ✓ | Special Cleaning | ✓ | Heat Treat | | Mill Test Reports | ✓ |
| Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM 1101B STEAM (SM)

FAB. SPECS. JSUE

EF, DRWG NO. CN-1551-S14004 (REV.2)

PRESS 1185 PSI TEMP 600 °F WT 772g LBS

FACE MARK C.T. 5M-4D

REGISTER CT-01-748

2000

Revision No. 5th Revision Date 6-20-2011

DUKE POWER COMPANY

Charlotte, N.C.
P.O. C-12517

| | UNIT PRICE | DIS. | |
|----|------------|---------|---------|
| M | P.O. | YEN-208 | NET |
| 1 | 100.00 | 10.00 | 90.00 |
| 2 | 200.00 | 20.00 | 180.00 |
| 3 | 300.00 | 30.00 | 270.00 |
| 4 | 400.00 | 40.00 | 360.00 |
| 5 | 500.00 | 50.00 | 450.00 |
| 6 | 600.00 | 60.00 | 540.00 |
| 7 | 700.00 | 70.00 | 630.00 |
| 8 | 800.00 | 80.00 | 720.00 |
| 9 | 900.00 | 90.00 | 810.00 |
| 10 | 1000.00 | 100.00 | 900.00 |
| 11 | 1100.00 | 110.00 | 990.00 |
| 12 | 1200.00 | 120.00 | 1080.00 |
| 13 | 1300.00 | 130.00 | 1170.00 |
| 14 | 1400.00 | 140.00 | 1260.00 |
| 15 | 1500.00 | 150.00 | 1350.00 |
| 16 | 1600.00 | 160.00 | 1440.00 |
| 17 | 1700.00 | 170.00 | 1530.00 |
| 18 | 1800.00 | 180.00 | 1620.00 |
| 19 | 1900.00 | 190.00 | 1710.00 |
| 20 | 2000.00 | 200.00 | 1800.00 |
| 21 | 2100.00 | 210.00 | 1890.00 |
| 22 | 2200.00 | 220.00 | 1980.00 |
| 23 | 2300.00 | 230.00 | 2070.00 |
| 24 | 2400.00 | 240.00 | 2160.00 |
| 25 | 2500.00 | 250.00 | 2250.00 |
| 26 | 2600.00 | 260.00 | 2340.00 |
| 27 | 2700.00 | 270.00 | 2430.00 |
| 28 | 2800.00 | 280.00 | 2520.00 |
| 29 | 2900.00 | 290.00 | 2610.00 |
| 30 | 3000.00 | 300.00 | 2700.00 |
| 31 | 3100.00 | 310.00 | 2790.00 |
| 32 | 3200.00 | 320.00 | 2880.00 |
| 33 | 3300.00 | 330.00 | 2970.00 |
| 34 | 3400.00 | 340.00 | 3060.00 |
| 35 | 3500.00 | 350.00 | 3150.00 |
| 36 | 3600.00 | 360.00 | 3240.00 |
| 37 | 3700.00 | 370.00 | 3330.00 |
| 38 | 3800.00 | 380.00 | 3420.00 |
| 39 | 3900.00 | 390.00 | 3510.00 |
| 40 | 4000.00 | 400.00 | 3600.00 |
| 41 | 4100.00 | 410.00 | 3690.00 |
| 42 | 4200.00 | 420.00 | 3780.00 |
| 43 | 4300.00 | 430.00 | 3870.00 |
| 44 | 4400.00 | 440.00 | 3960.00 |
| 45 | 4500.00 | 450.00 | 4050.00 |
| 46 | 4600.00 | 460.00 | 4140.00 |
| 47 | 4700.00 | 470.00 | 4230.00 |
| 48 | 4800.00 | 480.00 | 4320.00 |
| 49 | 4900.00 | 490.00 | 4410.00 |
| 50 | 5000.00 | 500.00 | 4500.00 |
| 51 | 5100.00 | 510.00 | 4590.00 |
| 52 | 5200.00 | 520.00 | 4680.00 |
| 53 | 5300.00 | 530.00 | 4770.00 |
| 54 | 5400.00 | 540.00 | 4860.00 |
| 55 | 5500.00 | 550.00 | 4950.00 |
| 56 | 5600.00 | 560.00 | 5040.00 |
| 57 | 5700.00 | 570.00 | 5130.00 |
| 58 | 5800.00 | 580.00 | 5220.00 |
| 59 | 5900.00 | 590.00 | 5310.00 |
| 60 | 6000.00 | 600.00 | 5400.00 |
| 61 | 6100.00 | 610.00 | 5490.00 |
| 62 | 6200.00 | 620.00 | 5580.00 |
| 63 | 6300.00 | 630.00 | 5670.00 |
| 64 | 6400.00 | 640.00 | 5760.00 |
| 65 | 6500.00 | 650.00 | 5850.00 |
| 66 | 6600.00 | 660.00 | 5940.00 |
| 67 | 6700.00 | 670.00 | 6030.00 |
| 68 | 6800.00 | 680.00 | 6120.00 |
| 69 | 6900.00 | 690.00 | 6210.00 |
| 70 | 7000.00 | 700.00 | 6300.00 |
| 71 | 7100.00 | 710.00 | 6390.00 |
| 72 | 7200.00 | 720.00 | 6480.00 |
| 73 | 7300.00 | 730.00 | 6570.00 |
| 74 | 7400.00 | 740.00 | 6660.00 |
| 75 | 7500.00 | 750.00 | 6750.00 |
| 76 | 7600.00 | 760.00 | 6840.00 |
| 77 | 7700.00 | | |

E

MFG. Code

Register No. CT--DI-34XMATERIALS RECORD
PRODUCTION PLANNERSheet 24 of 24Revision No. 3 Revision Date 1/1/68Piece Mark CT-SM-4DJob Name DUKE POWER COMPANY
CATAWBA UNIT #1
CHARLOTTE, N.C.Contract No. 7127Location

P.O. C-12517

PART NUMBER

SYS. MAIN STEAM

DESCRIPTION

QUAN
OR
LENG

QUALITY CONTROL

HEAT
NUMBER

DOCUMENT IN PROCESS

STATUS

U/M

ACCOUNTING/MATERIAL

UNIT PRICE
P.O.D.S.
VENDOR

NET

| | | | | | | | | | | | |
|-----------|-------|---|---|-------------------------|--|--|--|---|--|-----------------------|--|
| CT-4012-2 | 1 1/2 | 1 1/8" ACCESS HOLE PLUG PER SK. CT-AH-1, TO ASME, SA-105, H=1.705 | 1 | | | | | E | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 3/4 | SP. END PROT. PER CT-EP-1 | 2 | | | | | E | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 3/4 | SPIDER BRACING PER CT-ES-1 | 2 | | | | | E | | | |
| | | | | | | | | | | | |
| CT-2168-1 | 3/4 | 3/4" (1.375 NW) X 6" (S-80) SWEEPolet TO SA-105, WITH 37 1/2° RE. | 1 | | | | | E | | SEE ATTACHED SHEET | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 6 | END PROT. | 1 | | | | | E | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 2 | END PROT. | 1 | AT GRINNELL IND. PIPING | | | | E | | | |
| | | | | KERNERSVILLE, N. C. | | | | | | | |

Code Ann. Sec. III, Cl. 2Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS 118MFG. Code

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 of 4

1. Fabricated by ITT Grinnell Ind. Piping, Inc. Kernersville Order No. 7128
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identifies on MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-25X Prepared by ITT Grinnell Industrial Piping, Inc.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 --- Drawings
3,4 --- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-4C
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length)

See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 8-10-78 Signed ITT GRINNELL Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT.

have inspected the piping described in this Data Report on 8-14-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III.*The Hartford Steam Boiler Inspection and Insurance Co.

By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8-14-78 Benny K. Baker 19 78
(Inspector) Commissions N.C. - No. 878
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 6 on this data report is complete.

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

Sheet 2-44
FORM EN-101 REV 1/78
Q.A. FORM N2.1C

CONT. NO. 7127
NAME DUKE POWER COMPANY
LOCATION CATAWBA UNIT #1
Charlotte, N.C.
P.O. C-12517

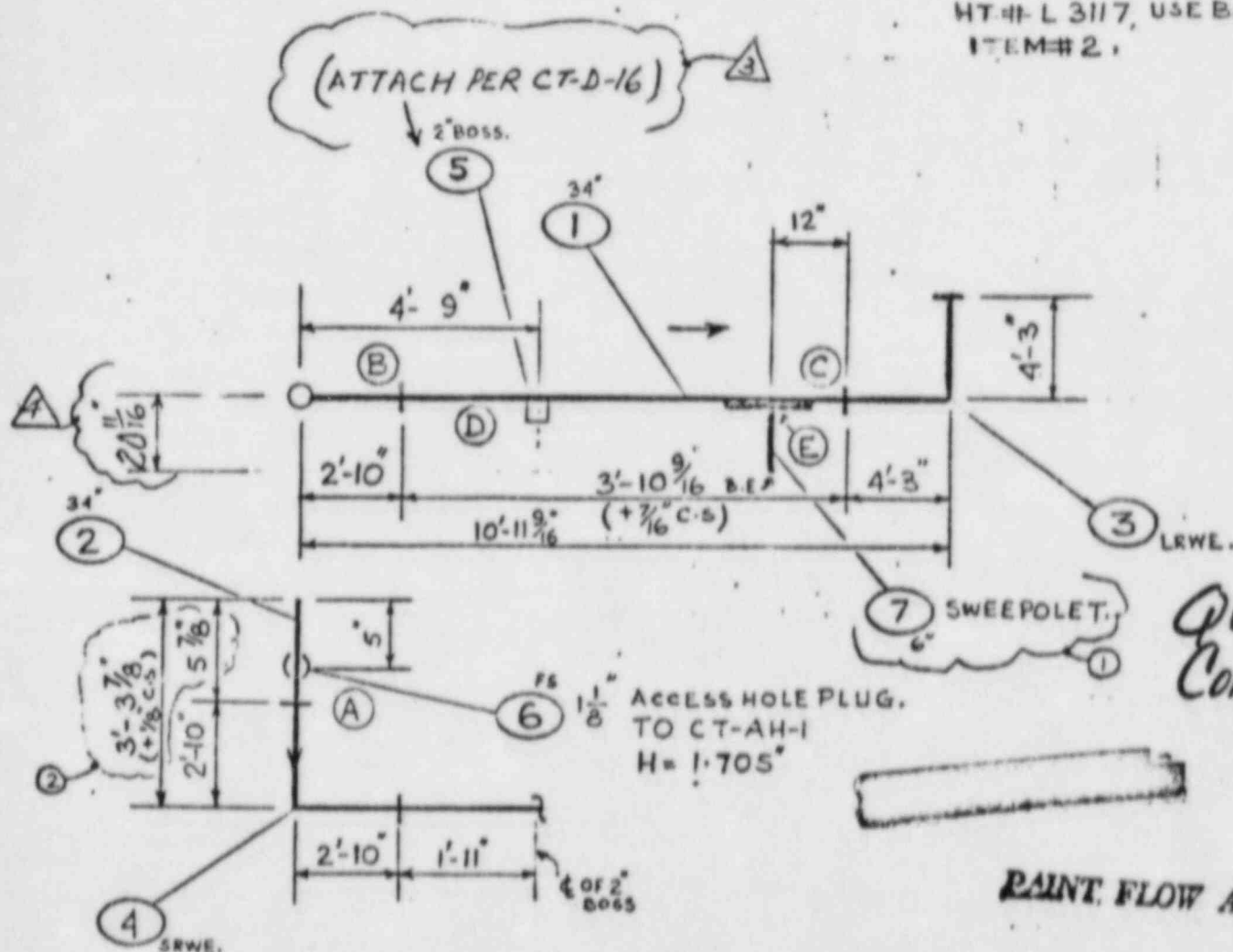
→ RE. DRW'G NO. 12-28-77
REV. ① 5/11/77
REV. ② 5/12/77
REV. ③ 5/23/78
④ 7-5-78

CHK'D PG
CHK'D PG
CHK'D PG
CHK'D PG
PG

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT—IF REQUIRED.

SPECIAL MATERIAL
CHECK ALLOCATION SHEETS
BEFORE CUTTING

USE $3'-10\frac{9}{16}"$ FROM BAR# 17 LOT# 4121
HT. # L 3117, USE BALANCE FOR
ITEM# 2.



QUALITY
CONTROL

PAINT FLOW ARROWS

MACHINE ENDS
PER SKETCH CT-D-2, EXCEPT AS NOTED.

Nuclear Safety Related

| | | | |
|--|--|--|---|
| CLASS <u>DUKE B</u> | LINE SPEC. <u>PS 1500.5 (01)</u> | APP. CODE <u>Asme. Sec. III, Cl. 2</u> | NO. REQ'D <u>1</u> |
| Radiography (RT) <input checked="" type="checkbox"/> | Special Marking <input type="checkbox"/> | Preheat <input checked="" type="checkbox"/> | Cert. of Compliance <input type="checkbox"/> |
| Mag. Particle (MT) <input checked="" type="checkbox"/> | Special Cleaning <input checked="" type="checkbox"/> | Heat Treat <input type="checkbox"/> | Mill Test Reports <input checked="" type="checkbox"/> |
| Liq. Penetrant (PT) <input type="checkbox"/> | Painting <input checked="" type="checkbox"/> | Code Stamp <input checked="" type="checkbox"/> | Data Reports <input checked="" type="checkbox"/> |
| SYSTEM <u>MAIN STEAM (SM)</u> | FAB. SPECS. <u>JS 118</u> | PRESS. <u>1185</u> PSI | TEMP. <u>600</u> °F |
| REF. DRW'G NO. <u>CN-1491-SMOOI (REV. 2)</u> | WT. <u>7720</u> LBS. | REGISTER <u>CT-01-25X</u> | |
| PIECE MARK <u>CT-SM-4C</u> | | | |

Register No. CT-01-25X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 3 of 4
Revision No. ASM Revision Date 5-22-75

Place Mark CT-SM-4C Job Name DUKE POWER COMPANY
CATAWBA UNIT #1

Contract No. 7127 Location _____

| ITEM | PART NUMBER | DESCRIPTION | QUAN OR LENG | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | |
|------|---------------------------------|--|--------------|-----------------|---------------------|--------|---------------------|-----------------|--------------|-----|
| | | | | HEAT NUMBER | DOCUMENT IN PROCESS | STATUS | U/M | UNIT PRICE P.Q. | DIST. VENDOR | NET |
| | | <i>sup. Main Steam</i> | | | | | | | | |
| 1 | P.B.C.T.C.D.* 3,4 CT-01-11-1 | 31-438 I.D X I-375 MW. SML'S CS, PIPE TO ASME, SA-106 GR-C. (USE 3'-10 3/8" FROM BAR #17, LOT # 4121, H.T. # L3117.) | 3'-8" | | | | F | | | |
| 2 | P.B.C.T.C.D.* 3,4 CT-01-11-1 | — DITTO — (USE BALANCE FROM ABOVE BAR.) | 0'-5" | | | | F | | | |
| 3 | L.A.A.T.C.* 3,4 CT-01-17-1 | 31-438 I.D X I-375 MW. 90° LRWE TO SA-234 WFB-W, MADE FROM SA-515 GR-70 PLATE, (70,000 PSI TENSILE), OR SA-234 WPG SEAMLESS, ENDS PER DETAIL CT-D-2 | 1 | | | | E | | | |
| | | <i>SEE ATTACHED SHEETS</i> | | | | | | | | |
| 4 | L.B.A.T.C.* 3,4 CT-01-16-1 | — DITTO — EXCEPT, SRWE | 1 | | | | E | | | |
| 5 | Y.A.A.C.E.* 12 CT-30d2-3 | 2" 3000# CS. SPWELDBOSS TO SA-105 PER DET-SK. CT-WB-1 (ATTACH PER CT-B-16) | 1 | | | | E | | | |

Code None, Sec. III, Cl. 2

Class DUKE B

Nuclear Safety Related

Job Supplement JS 118

MFG. Code _____

ITT GRINNELL IND. PIPING
KERNERSVILLE, N.C.

Register No. CT-01-25X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 24 Of 24

Revision No. 3 SM Revision Date 5-23-78

Piece Mark CT-SM-4C

Job Name CATAWBA UNIT #1

Contract No. 7127

Location _____

DUKE POWER COMPANY

Charlotte, N.C.

P.O. C-12517

DESCRIPTION

QUAN
OR
LENG

QUALITY CONTROL

HEAT
NUMBER

DOCUMENT IN PROCESS

STATUS

U/M

ACCOUNTING/MATERIAL

UNIT PRICE
P.O.

DIS.
VENDOR

NET

PART NUMBER

Sup. Main Steam

| | | | | | | | | | | | |
|---|-------------|-----|----------------------------|---|--|--|--|--|---|--|--|
| 6 | XXXXXX | 112 | 1 1/8" ACCESS HOLE PLUG | 1 | | | | | E | | |
| | CT-4012-2 | | PER SK. CT-AH-1, TO | | | | | | | | |
| | | | ASME, SA-105, H=1.705 | | | | | | | | |
| | | 34 | SP. END PROT. PERCT-EP-1 | 2 | | | | | E | | |
| | | 34 | SPIDER BRACING PER | 2 | | | | | E | | |
| | | | CT-ES-1 | | | | | | | | |
| 7 | X 8 A L C A | 34 | 34" (1.375 MW) X 6" (S-80) | 1 | | | | | E | | |
| | CT-2168-1 | | SWEET POLET, TO SA-105, | | | | | | | | |
| | | | WITH 37 1/2° BE | | | | | | | | |
| | | 6 | END PROT. | 1 | | | | | E | | |
| | | 2 | END PROT. | 1 | | | | | E | | |
| | | | BY GRINNELL IND. PIPING | | | | | | | | |
| | | | KERNERSVILLE, NC | | | | | | | | |

See Attached
SHEETS

Code Ann. Sec. III, Cl. 2

Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS118

MFG. Code _____

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

Sheet 1 of 3

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator)
2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)
3. Owner Duke Power Company 4. Location of Plant Newport, SC
5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant, etc.)
- (a) Drawing No. CT-01-15X Prepared by ITT Grinnell Industrial Piping, Inc.
- (b) National Board No. N/A
6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A
- Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)
- Supplemental Sheets 2 ---- Drawings
3 ---- Bill (s) of Material
7. Shop Hydrostatic Test Field psi.
8. Description of piping inspected Piece Mark Number CT-5M-4B
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 5-26-78 Signed ITT GRINNELL Ind. Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 5-29-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co.

By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5-29-78
Barry K. Bobb
(Inspector)

Commission N.C. No. 878
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".

ITT Grinnell Industrial Piping Inc.

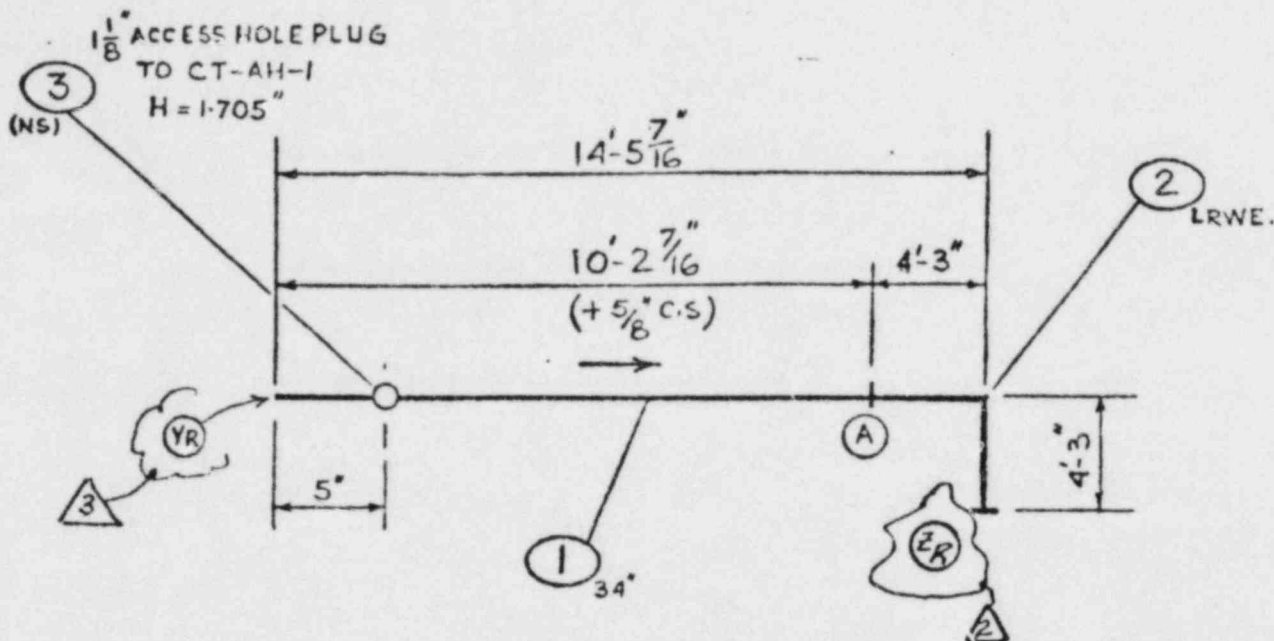
KERNERSVILLE, N. C.

sheet 2 of 3
FORM EN-101 REV 1/77
Q.A. FORM N2.1C

CONT. NO. 7127
NAME DUKE POWER COMPANY
LOCATION CATAWBA UNIT #1
Charlotte, N.C.
C-12517

→ REDRAWN 10-28-77 CHK'D P.G.
REV ① SM 12-14-77 CHK'D P.G.
REV ② 76-3-10-78 CHK'D P.G.
REV ③ SM 5-4-78 CHK'D P.G.

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK. _____
SHOP SHALL GRIND TO FIT—IF REQUIRED.



PIPE: 31-438 I.D X 1.375 MW
SA-106C.
FLG:
B. W. FITG: SA-234W PB-W, OR
SA-234WPC.
F. S. FITG: SA-105

QUALITY CONTROL

PAINT FLOW ARROWS

MACHINE ENDS
PER SKETCH CT-D-2

Nuclear Safety Related

CLASS DUKE B LINE SPEC. PS 1500.5 (01) APP. CODE Time, Sec. III, CL 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | | Mill Test Reports | ✓ |
| Liq. Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM (SM) FAB. SPECS. JS 115
REF. DRWG NO. CN-1491-SM002 (REV 2) PRESS. 1135 PSI. TEMP. 600 °F. WT. 8546 LBS.
PIECE MARK CT-SM-4B REGISTER CT-01-15X

GRINNELL INDUSTRIAL PIPING, INC. Kernsville, N.C.

FORM 100-100-100
 O.A. FORM 100-100

Register No. C.T.-01-15X **MATERIALS RECORD** Sheet 3 of 3
 Piece Mark CT-SM-4B **PRODUCTION PLANNER** Revision No. _____ Revision Date _____
 Job Name CATAWBA UNIT #1 **DUKE POWER COMPANY** Contract No. 7127 Location _____
Kernsville, N.C.

| PART NUMBER | | DESCRIPTION | QTY | OR LENO | QUALITY CONTROL | | STATUS | ACCOUNTING/MATERIAL | | DIS. VENDOR | NET |
|-------------|------|-------------------------------------|-----|---------|-----------------|---------------------|--------|---------------------|--------|-------------|-----|
| 34 | 35 | | | | HEAT NUMBER | DOCUMENT IN PROCESS | | UNIT PRICE | % ROOM | | |
| 1 | 11-1 | 31.438" I.D. X 1.315" MW. SMLS. 10' | 1 | 21 | L3130109 | 100 | (100) | F | | | |
| 2 | 11-1 | C.S. PIPE TO C.A.S.M.F. SA-106 | 54' | 54' | 366197 | 100 | (100) | 2-14-28 | | | |
| 3 | 11-1 | G.R.C. | | | | | | | | | |
| 4 | 11-1 | 31.438" I.D. X 1.315" MW. 90° LRWE | 1 | | ARAP | 100 | (100) | F | | | |
| 5 | 11-1 | TO SA-234 W.P.B.-W, MADE | | | | | | | | | |
| 6 | 11-1 | FROM SA-515 G.R. TO PLATE, | | | | | | | | | |
| 7 | 11-1 | (70,000 PSI MIN. STRENGTH), OR | | | | | | | | | |
| 8 | 11-1 | SA-234 W.P.C. SEAMLESS, | | | | | | | | | |
| 9 | 11-1 | ENDS PER DETAIL CT-D-2. | | | | | | | | | |
| 10 | 11-1 | 1" ACCESS HOLE PLUG PER | 1 | | AP-4 | 100 | (100) | F | | | |
| 11 | 11-1 | CT-AH-1 H=1-705" | | | | | | | | | |
| 12 | 11-1 | MAT. TO SA-105 | | | | | | | | | |
| 13 | 11-1 | | | | | | | | | | |
| 14 | 11-1 | | | | | | | | | | |
| 15 | 11-1 | | | | | | | | | | |
| 16 | 11-1 | | | | | | | | | | |
| 17 | 11-1 | | | | | | | | | | |
| 18 | 11-1 | | | | | | | | | | |
| 19 | 11-1 | | | | | | | | | | |
| 20 | 11-1 | | | | | | | | | | |
| 21 | 11-1 | | | | | | | | | | |
| 22 | 11-1 | | | | | | | | | | |
| 23 | 11-1 | | | | | | | | | | |
| 24 | 11-1 | | | | | | | | | | |
| 25 | 11-1 | | | | | | | | | | |
| 26 | 11-1 | | | | | | | | | | |
| 27 | 11-1 | | | | | | | | | | |
| 28 | 11-1 | | | | | | | | | | |
| 29 | 11-1 | | | | | | | | | | |
| 30 | 11-1 | | | | | | | | | | |
| 31 | 11-1 | | | | | | | | | | |
| 32 | 11-1 | | | | | | | | | | |
| 33 | 11-1 | | | | | | | | | | |
| 34 | 11-1 | | | | | | | | | | |
| 35 | 11-1 | | | | | | | | | | |
| 36 | 11-1 | | | | | | | | | | |
| 37 | 11-1 | | | | | | | | | | |
| 38 | 11-1 | | | | | | | | | | |
| 39 | 11-1 | | | | | | | | | | |
| 40 | 11-1 | | | | | | | | | | |
| 41 | 11-1 | | | | | | | | | | |
| 42 | 11-1 | | | | | | | | | | |
| 43 | 11-1 | | | | | | | | | | |
| 44 | 11-1 | | | | | | | | | | |
| 45 | 11-1 | | | | | | | | | | |
| 46 | 11-1 | | | | | | | | | | |
| 47 | 11-1 | | | | | | | | | | |
| 48 | 11-1 | | | | | | | | | | |
| 49 | 11-1 | | | | | | | | | | |
| 50 | 11-1 | | | | | | | | | | |
| 51 | 11-1 | | | | | | | | | | |
| 52 | 11-1 | | | | | | | | | | |
| 53 | 11-1 | | | | | | | | | | |
| 54 | 11-1 | | | | | | | | | | |
| 55 | 11-1 | | | | | | | | | | |
| 56 | 11-1 | | | | | | | | | | |
| 57 | 11-1 | | | | | | | | | | |
| 58 | 11-1 | | | | | | | | | | |
| 59 | 11-1 | | | | | | | | | | |
| 60 | 11-1 | | | | | | | | | | |
| 61 | 11-1 | | | | | | | | | | |
| 62 | 11-1 | | | | | | | | | | |
| 63 | 11-1 | | | | | | | | | | |
| 64 | 11-1 | | | | | | | | | | |
| 65 | 11-1 | | | | | | | | | | |
| 66 | 11-1 | | | | | | | | | | |
| 67 | 11-1 | | | | | | | | | | |
| 68 | 11-1 | | | | | | | | | | |
| 69 | 11-1 | | | | | | | | | | |
| 70 | 11-1 | | | | | | | | | | |
| 71 | 11-1 | | | | | | | | | | |
| 72 | 11-1 | | | | | | | | | | |
| 73 | 11-1 | | | | | | | | | | |
| 74 | 11-1 | | | | | | | | | | |
| 75 | 11-1 | | | | | | | | | | |
| 76 | 11-1 | | | | | | | | | | |
| 77 | 11-1 | | | | | | | | | | |
| 78 | 11-1 | | | | | | | | | | |
| 79 | 11-1 | | | | | | | | | | |
| 80 | 11-1 | | | | | | | | | | |
| 81 | 11-1 | | | | | | | | | | |
| 82 | 11-1 | | | | | | | | | | |
| 83 | 11-1 | | | | | | | | | | |
| 84 | 11-1 | | | | | | | | | | |
| 85 | 11-1 | | | | | | | | | | |
| 86 | 11-1 | | | | | | | | | | |
| 87 | 11-1 | | | | | | | | | | |
| 88 | 11-1 | | | | | | | | | | |
| 89 | 11-1 | | | | | | | | | | |
| 90 | 11-1 | | | | | | | | | | |
| 91 | 11-1 | | | | | | | | | | |
| 92 | 11-1 | | | | | | | | | | |
| 93 | 11-1 | | | | | | | | | | |
| 94 | 11-1 | | | | | | | | | | |
| 95 | 11-1 | | | | | | | | | | |
| 96 | 11-1 | | | | | | | | | | |
| 97 | 11-1 | | | | | | | | | | |
| 98 | 11-1 | | | | | | | | | | |
| 99 | 11-1 | | | | | | | | | | |
| 100 | 11-1 | | | | | | | | | | |

Code AMS. Sec. III, Cl. 2 Class DUKE B **Nuclear Safety Related**
 Job Supplement JS-118 MFG. Code _____

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*
(As Required by the Provisions of the ASME Code Rules)

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator) NC

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C 12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-5X Prepared by ITT GRINNELL Industrial Piping Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 ---Drawings
3 ---Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-5m-4A
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 3-28-78 Signed ITT Grinnell Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by HARTFORD CT. have inspected the piping described in this Data Report on 3-29-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. THE HARTFORD STEAM BOILER INSPECTION AND INSURANCE CO.

By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 3-29-78 Barry (Inspector)
Commissions N.C. - No. 878
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".

Printed in U.S.A. (2/73)

This form (E62) is obtainable from the ASME, 345 E. 47th St. New York, N.Y. 10017

Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

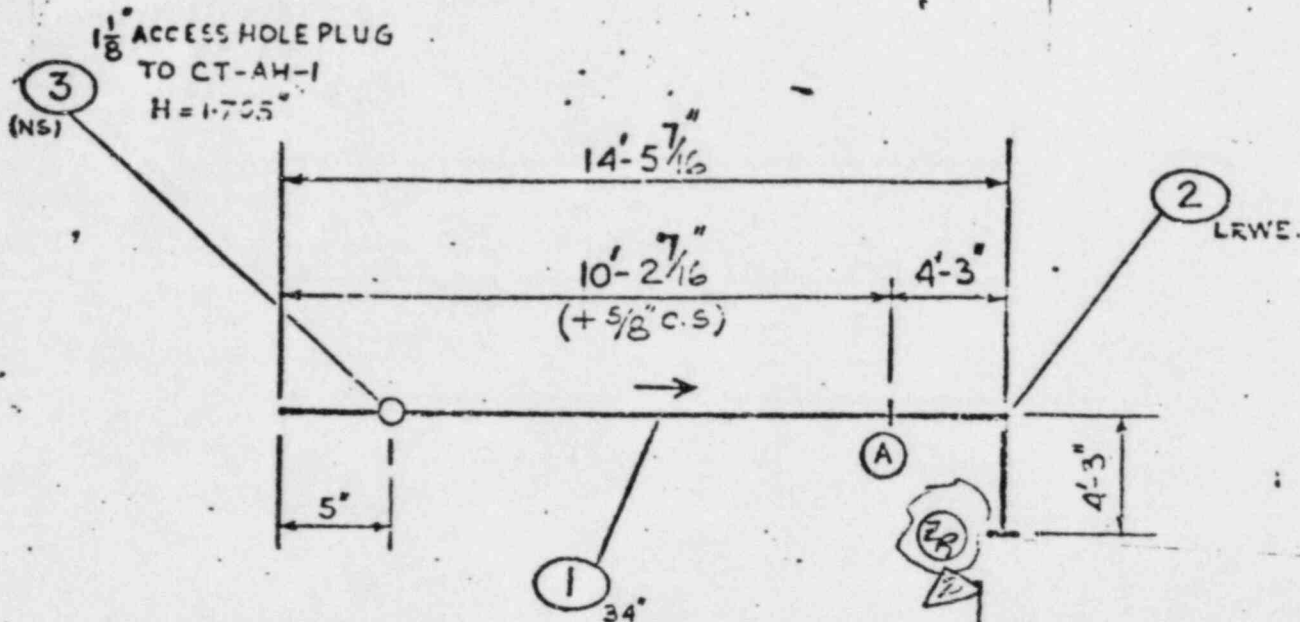
QA FORM 2.10
20F3

CONT. NO. 7127
NAME DUKE POWER COMPANY
LOCATION CATAWBA UNIT #1
CHARLOTTE NC.
P.O. C12517

→ REDRAWING 10-28-77
REV. ① SM, 12-14-77
REV. ② FES-2-73
REV. _____

CHK'D RG
CHK'D SM
CHK'D PS-3-2-7
CHK'D _____

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT—IF REQUIRED.



PIPE: 31-435 I.D. X 11-375 MW,
SA-106C.
FLG:
B. W. FTIG: SA-224 WPB-W OR
F. S. FTIG: SA-224 WPC.
SA-105.

REVISION

PAINT FLOW ARROWS

MACHINE ENDS
PER SKETCH CT-D-2

Nuclear Safety Related

| | | | | |
|---|----------------------------------|---------------------------------|--------------------|--------------------|
| CLASS <u>DUKE B</u> | LINE SPEC. <u>PS 1500.5 (CI)</u> | APP. CODE <u>PS 1500.5 (CI)</u> | CL 2 | NO. REQ'D <u>1</u> |
| Radiography (RT) | ✓ | Special Marking | Preheat | ✓ |
| Mag. Particle (MT) | ✓ | Special Cleaning | Heat Treat | ✓ |
| Dye Penetrant (PT) | ✓ | Painting | Code Stamp | ✓ |
| SYSTEM <u>MAIN STEAM (SM)</u> | FAB. SPEC'S <u>JS 116</u> | TEST TEMP <u>600 °F.</u> | WT <u>8546 LBS</u> | |
| W.P. DRWG NO. <u>CH-149A-SM003 (REV2)</u> | PRESS <u>1135</u> | REGISTER <u>CT-01-5X</u> | | |
| SECT MARK <u>CT-SM-4A</u> | | | | |

GRINNELL INDUSTRIAL PIPING, INC.

KERNERSVILLE N.C.

FORM EN-102 REV 7/78
Q.A. FORM N2.1F

H.P.

Register No. CT-01-5X MATERIALS RECORD PRODUCTION PLANNER Sheet B of B

Piece Mark CT-SM-4A Job Name DUKE POWER COMPANY CATAWBA UNIT #1 Contract No. 7127 Revision No. Revision Date

| ITEM | PART NUMBER | | | QUAN OR LENG | QUALITY CONTROL | | ACCOUNTING/MATERIAL | | | |
|------|-------------|------|---|--------------|-----------------|---------------------|---------------------|-----|-----------------|-------------|
| | | | | | HEAT NUMBER | DOCUMENT IN PROCESS | STATUS | U/M | UNIT PRICE P.S. | DIS. VENDOR |
| 1 | PRCT CD | 3.4 | 31.433" I.D X 1.375" MW SML'S | 10 | L3130P8 | 2-25-78 | | F | | |
| | CT-01-11-1 | | CS, PIPE TO ASME, SA-106 | | N-26620 Z | | | | 2-14-78 | |
| | | | GR.C | | | | | | | |
| 2 | LAAT C** | 3.4 | 31.433" I.D X 1.375" MW, 90° LRWE | 1 | ARAR #1 | Bwf-16-21-78 | | E | | |
| | CT-01-17-1 | | TO SA-234 WPB-W, MADE FROM SA-515 GR. 70 PLATE, (70,000 PSI TENSILE), OR SA-234 WPC SEAMLESS, ENDS PER DETAIL CT-D-2. | | | | | | | |
| 3 | CT-01-12-2 | 1.12 | 1" ACCESS HOLE PLUG PER CT-AH-1, SA-105, H=1.705 | ✓ | ABF | AP 3-22-78 | | E | F2.36 | Bx 2 R |
| | | 3.4 | SP END PROT. PER CT-EP-1 | 2 | | | | E | | |
| | | 3.4 | SPIDER BRACING PER CT-ES-1 | 2 | | | | E | | |

FORM NPT-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

1 OF 4

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-6X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 3 & 4 ---- Drawings
---- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-5A
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 6-26-78 Signed ITT GRINNELL Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 6-27-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co.

By signing this certificate, neither the inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 6-27-78 Barry K. Bolie Commissions N.C. - No. 878
(Inspector) National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 7, "Remarks".
Printed in U.S.A. (2-73)

CT-SM-5A

Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FOR PIPING
QA FORM 102.10

2084

CONT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION CATAWBA UNIT #1

Charlotte N.C.

P.O.C 12517

RE DRAWING NO. 10-26-77

CHK'D TGL

REV. ① 11-11-77

CHK'D PG

REV. ② 12-14-77

CHK'D PG

REV. ③ 5-23-78

CHK'D PG

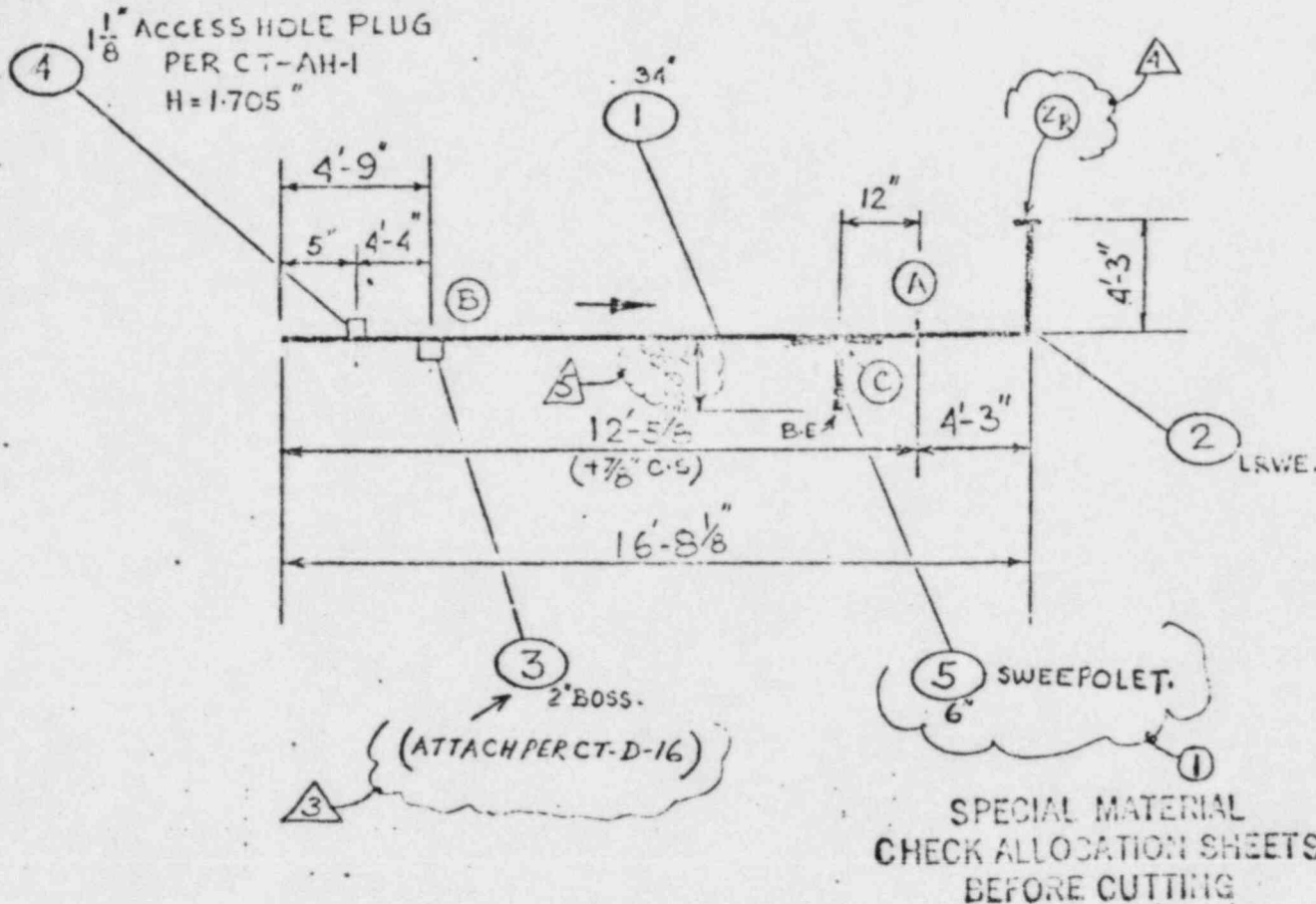
REV. ④ 5-23-78

PG

REV. ⑤ 7-6-78

SL

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT—IF REQUIRED.



USE BAR #13, LOT # 4121,
HT. # L3123, (13'-0 1/4")

PAINT FLOW ARROWS

QUALITY CONTROL

MACHINE ENDS

PER SKETCH CT-D-2,
EXCEPT AS NOTED.

Nuclear Safety Related

CLASS DUKE B LINE SPEC. PS 1500.5(01) APP. CODE Ann. Sec. III, CL 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | | Mill Test Reports | ✓ |
| Liq. Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM (SM) FAB. SPEC. JS 11B

REF. DRWG NO. CN-1491-SM.003 (REV. 2) PRESS. 1185 PSI. TEMP. 600 °F. WT 10,479 LBS.

PIECE MARK CT-SM-5A REGISTER CT-01-6X

GRINNELL INDUSTRIAL PIPING, INC.

KERNERSVILLE, NC

REVISION

FORM EN-102 REV 7/75

O.A. FORM N2.17

Register No. CT-01-6X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 3 of 4

Revision No. ASAI Revision Date 5-22-76

Piece Mark CT-SM-5A

Job Name DUKE POWER COMPANY
CATAWBA UNIT #1

Contract No. 7127

Location

| PART NUMBER | DESCRIPTION | QTY OR LENG | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | | |
|---------------------------|--|-------------------|-----------------|----------|------------|---------------------|-----|--------------------|----------------|-----|
| | | | HEAT NUMBER | DOCUMENT | IN PROCESS | STATUS | U/M | UNIT PRICE P.C. | DIS. VENDOR | NET |
| 2 BCT-CD-34 CT-01-11-1 | 31.438" I.D X 1.375" MW. SMLS 12-56 CS, PIPE TO ASME, SA-106 GR.C. USE BAR# 13, LOT# 4121, HT# L3122 (15'-6") | 1 | | | | | F | | | |
| LAATC-17-1 CT-01-17-1 | 31.438" I.D X 1.375" MW, 90° LRWE. TO SA-234 WPB-W, MADE FROM SA-515 GR. 70 PLATE, (70,000 PSI TENSILE), OR SA-234 WPC SEAMLESS, ENDS PER DETAIL CT-D-2 | 1 | | | | | E | | | |
| Y*AA*CE* CT-30-2-3 | 2" 3000# CS. SP. WELD BOSS TO SA-105 PER DET. SK# CT-WB-1 (ATTACH PER CT-D-16). | 1 | | | | | E | | | |
| A*~*~*~*~*~* CT-1012-2 | 1 1/8" ACCESS HOLE PLUG PER CT-AH-1, SA-105 "H"=1-705 | 1 | | | | | E | | | |

Handwritten signature/initials

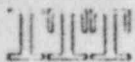
Code Area Sec. III, CL 2

Class DUKE P.

Nuclear Safety Related

Job Supplement JS 118

MFG. Code



GRINNELL INDUSTRIAL PIPING, INC.

KERNERSVILLE NC.

FORM EN-102 REV 7/73

O.A. FORM N2.1F

H.P

Register No. CT-01-6X

MATERIALS RECORD

PRODUCTION PLANNER

Sheet 24 Of 24

Revision No. (1) SM Revision Date 11-11-77

Piece Mark CT-SM-5A

Job Name DUKE POWER COMPANY

CATAWBA UNIT #1

Contract No. 7127

Location

| ITEM | PART NUMBER | | | DESCRIPTION | QUAN OR LENG | QUALITY CONTROL | | | | ACCOUNTING/MATERIAL | | | |
|------|-------------|------|----|--|--------------------|-----------------|-------------------|------------|--------|---------------------|--------------------|----------------|-----|
| | | | | | | HEAT NUMBER | DOCUMENT | IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| | | 3.4 | | SP. END PROTECTORS PER CT-EP-1 | 2 | | | | | E | | | |
| | | 3.4 | | SPIDER BRACING PER CT-ES-1 | 2 | | | | | E | | | |
| 5 | X BAL CA | 3.4" | 6" | 34(1-375 MW) X 6"(S-80) SWEEP OLET, TO SA-105, 37 1/2" B.E | 1 | P232 | SWIF-17 8/1/77 | | | E | | | |
| | CT-216B-1 | 6" | | END PROT. | 1 | | | | | E | | | |
| | | 2" | | END PROT. | 1 | | | | | E | | | |

Code Arms. Sec. III, Cl. 2

Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS118

MFG. Code

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 of 4

1. Fabricated by ITT Grinnell Ind. Piping, Inc. Kernersville Order No. 7127
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-16X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 ---- Drawings
3,4 ---- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-5B
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 8-31-78 Signed ITT GRINNELL Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of MD and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 9/1 19 78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9/1 19 78
Thomas A. Smith (Inspector) Commission N-1456
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".

CT-SM-5B

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

Sheet 2 of 4
FORM IPI-101 REV 1/70
Q.A. FORM IPI-10

CONT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION CATAWBA UNIT #1

CHARLOTTE, N.C.
C-12517

LENGTH OF ACCESS HOLE PLUG SHALL
BE $\pm 1/16"$ OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT—IF REQUIRED.

→ RE DRAWING 10-28-77

REV. ① M. 11-11-77

REV. ② M. 12-14-77

REV. ③ SM 5-23-78

REV. ④ SM 5-29-78

REV. ⑤ 7/1, 6-2-78

CHK'D PG

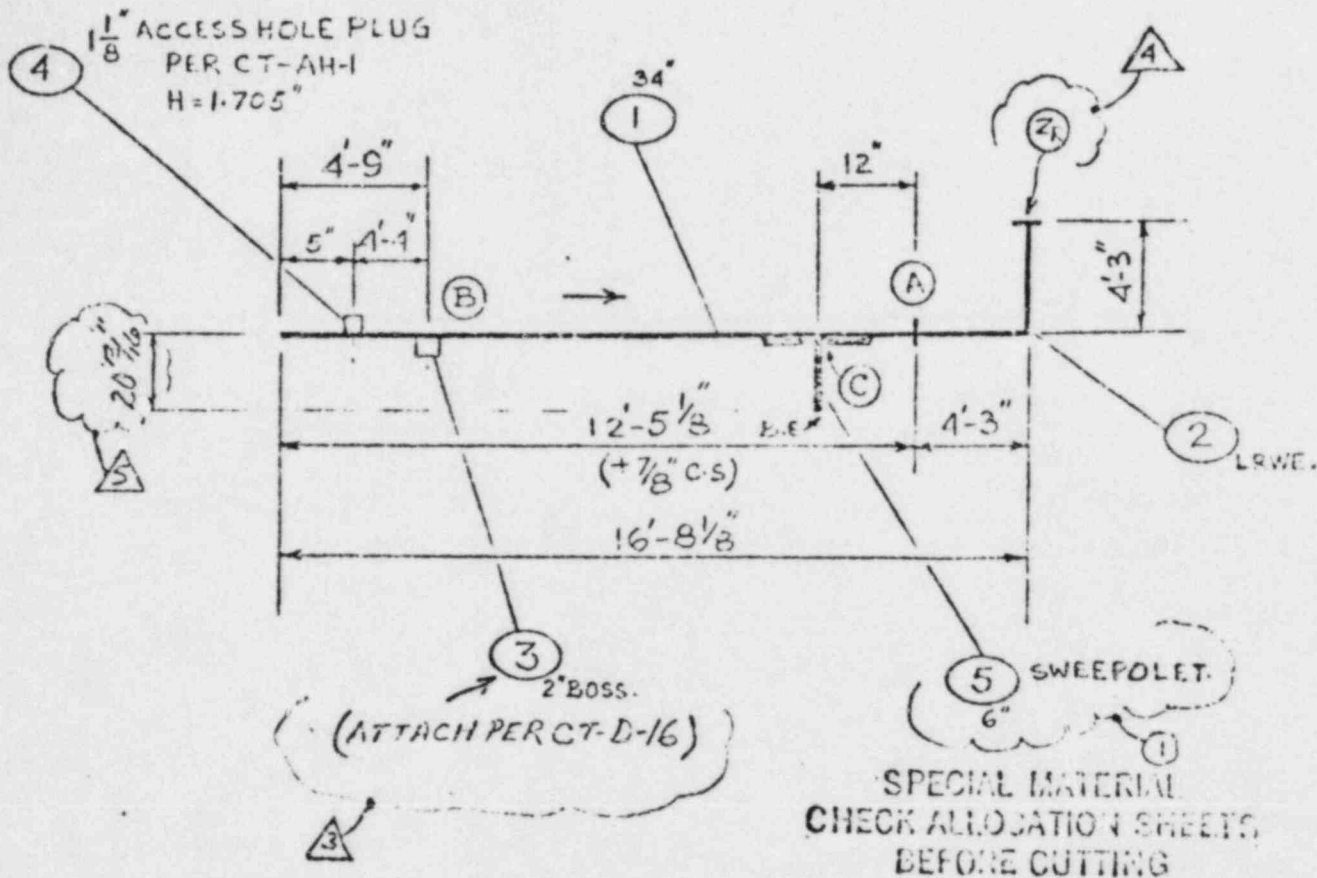
CHK'D PG

CHK'D PG

CHK'D PG

PG.

SL



QUALITY CONTROL

MAINT FLOW ARROWS

{ USE BAR# 15, LOT# 4121,
{ HT.# L 3123, (13'-0 3/16")

MACHINE ENDS
PER SKETCH CT-D-2
EXCEPT AS NOTED.

Nuclear Safety Related

CLASS DUKE B LINE SPEC. PS 1500-5 (OI) APP. CODE Spec. Sec. III, CL 2 NO. REQ'D 1

| | | | | | | | |
|----------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | | Mill Test Reports | ✓ |
| Leak. Penetrant (PT) | | Painting | ✓ | Cod. Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM. (SM) FAB. SPECS. 1 S 118

REF. DRWG NO. CN-1401-SM CO2 (PLV) PRESS. 1185 PSI. TEMP. 600 °F. WT. 10472 LBS.

WELD MARK CT-SM-5B REGISTER CT-01-16X

KERNERSVILLE, N. C.

Register No. CT-01-16XMATERIALS RECORD
PRODUCTION PLANNERSheet 3 Of 4Piece Mark CT-SM-5BJob Name DUKE POWER COMPANY
CATAWBA UNIT #1
CHARLOTTE, N.C.Revision No. ASMRevision Date 5-23-78Contract No. 7127

Location _____

PART NUMBER

SYSTEM- MAIN STEAM

DESCRIPTION

QUAN
OR
LENG

QUALITY CONTROL

ACCOUNTING/MATERIAL

HEAT
NUMBER

DOCUMENT IN PROCESS

STATUS

U/M

UNIT PRICE
P.O.DIS.
VENDOR

NET

CT-01-11-1 3.4 31.425" I.D.X1-375" MW. SMLS
CS, PIPE TO ASME SA-106
GR.C
USE BAR #15, LOT #4121 HT. #L3123
(13'-0 1/2")

12.5'

F

CT-01-17-1 3.4 31.425" I.D.X1-375" MW, 90° LRWE
TO SA-234 WPB-W, MADE
FROM SA-515 GR. 70 PLATE,
(70,000 PSI TENSILE), OR
SA-234 VPC SEAMLESS,
ENDS PER DETAIL CT-D-2.

1

E

CT-2002-3 2 3000# CS. SP. WELD BOSS
TO SA-105, PER DET. SK#
CT-WB-1
(ATTACH PER CT-D-16)

1

E

SEE ATTACHED
SHEETS

CT-4012-2 1.12 1 1/2" ACCESS HOLE PLUG
PER CT-AH-1, H=1.705"
MAT. TO SA-105

1

E

Code ASME Sec. III, Cl. 2

Class

DUKE 'B'Job Supplement JS 118

MFG. Code

Nuclear Safety Related

KERNERSVILLE, N. C.

Register No. CT-01-16XMATERIALS RECORD
PRODUCTION PLANNERSheet 24 Of 24Revision No. Δ SM Revision Date 5-23-73Piece Mark CT-SM-5BJob Name DUKE POWER COMPANY
CATAWBA UNIT #1
CHARLOTTE, N.C.Contract No. 7127

Location _____

PART NUMBER

SYSTEM- MAIN STEAM

DESCRIPTION

QUAN
OR
LENG

QUALITY CONTROL

HEAT

NUMBER (DOCUMENT) IN PROCESS

STATUS

U/M

ACCOUNTING/MATERIAL

UNIT PRICE
P.O.DIS.
VENDOR

NET

3.4

SP. END PROT. PER CT-LP-I

2

E

3.4

SPIDER BRACING PER

2

E

CT-ES-1

3.4

X BALCA X 3.4" 6" 34"(1.375" MW) X 6"(S-80)

1

E

SWEEP OLET, TO SA-105,
3 1/2" BE.

6"

B.E. PROT.

1

E

SEE ATTACHED
SHEETS

2"

END PROT.

1

E

Code Ext. Sec. III, Cl. 2Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS 118

MFG. Code _____

Register No. CT-01-16X

MATERIALS RECORD PRODUCTION PLANNER

 Sheet 1 Of 2

 Revision No. (1) SM Revision Date 11-11-77

 Piece Mark CT-SM-5B

 Job Name DUKE POWER COMPANY
CATAWBA UNIT #1

 Contract No. 7127

Location _____

| ITEM | PART NUMBER | | DESCRIPTION | QUAN OR LENG | QUALITY CONTROL | | | | ACCOUNTING/MATERIAL | | | | |
|------|-------------|------|-----------------------------------|--------------------|-----------------|-----|------|---------|---------------------|-----|--------------------|----------------|-----|
| | | | | | HEAT NUMBER | DOC | INTN | PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| 1 | PAD* | 3.4 | 31.438" I.D X 1.375" MW. SML'S | 12.5 | L3123 | | | | | E | 5-18-78 | | |
| | CT-01-11-1 | | CS, PIPE TO ASME, SA-106 | | SN-24622 | | | | | | | | |
| | | | GR.C | | | | | | | | | | |
| | | | USE BAR#15, LOT#4121 HT#L3123 | | | | | | | | | | |
| | | | (13-0%) | | | | | | | | | | |
| 2 | LAA* | 3.4 | 31.438" I.D X 1.375" MW, 90° LRWE | 1 | ARBT | | | | | E | | FY.B | |
| | CT-01-17-1 | | TO SA-234WPB-W, MADE | | | | | | | | | | |
| | | | FROM SA-515GR.70 PLATE, | | | | | | | | | | |
| | | | (70,000 PSI TENSILE), OR | | | | | | | | | | |
| | | | SA-234WPC SEAMLESS, | | | | | | | | | | |
| | | | ENDS PER DETAIL CT-D-2. | | | | | | | | | | |
| 3 | Y*AA | 2 | 3000# CS, SP. WELD BOSS | 1 | AAI | | | | | E | | BOX #9 | |
| | CT-3002-3 | | TO SA-105, PER DET. SK# | | | | | | | | | | |
| | | | CT-WB-1 | | | | | | | | | | |
| 4 | X*X*X* | 1.12 | 1" ACCESS HOLE PLUG | 1 | ABF | | | | | E | Rec. 5/10 7/12 | | |
| | CT-4012-2 | | PER CT-AH-1, H=1.705" | | | | | | | | | | |
| | | | MAT. TO SA-105 | | | | | | | | | | |
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SUPERCEDED

 Code Amc. Sec. III, Cl. 2

 Class DUKE B

Nuclear Safety Related

 Job Supplement JS118

MFG. Code _____

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 3

1. Fabricated by ITT Grinnell Industrial Piping, Inc. Order No. 7127
(Name and Address of Fabricator) Kernersville, N. C.
2. Fabricated for Duke Power Company Charlotte, N. C. Order No. C-12517
(Name and Address)
3. Owner Duke Power Company 4. Location of Plant Newport, S. C.
5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)
(a) Drawing No. CT-01-26X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A
6. The material, design, construction, and workmanship complies with ASME Code Section III, Class Nuc. 2
Edition 1974, Addenda Date Winter 1974, Case No. N/A
Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)
Supplemental Sheets #2 --- Drawings
#3 --- Bill(s) of Material
7. Shop Hydrostatic Test Field psi.
8. Description of piping inspected Piece Mark Number CT-SM-5C
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 9-13-77 Signed ITT Grinnell Industrial Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-77 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Maryland and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 9-15-77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Company
By signing this certificate, neither the inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-15-77 1977 Commission md. 77
(Inspector) National Board, State, Province and City

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in them is not less than that required by the Code.

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FORM EH-101 REV 1/76
Q.A. FORM 2.1C

Sheet 2 of 3

CONT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION CATAWBA UNIT #1

DRW'N 11-1-76

CHK'D PG 11-1-76

REV. 1 SM 4-21-77

CHK'D PG

REV. 2 SM 6-27-77

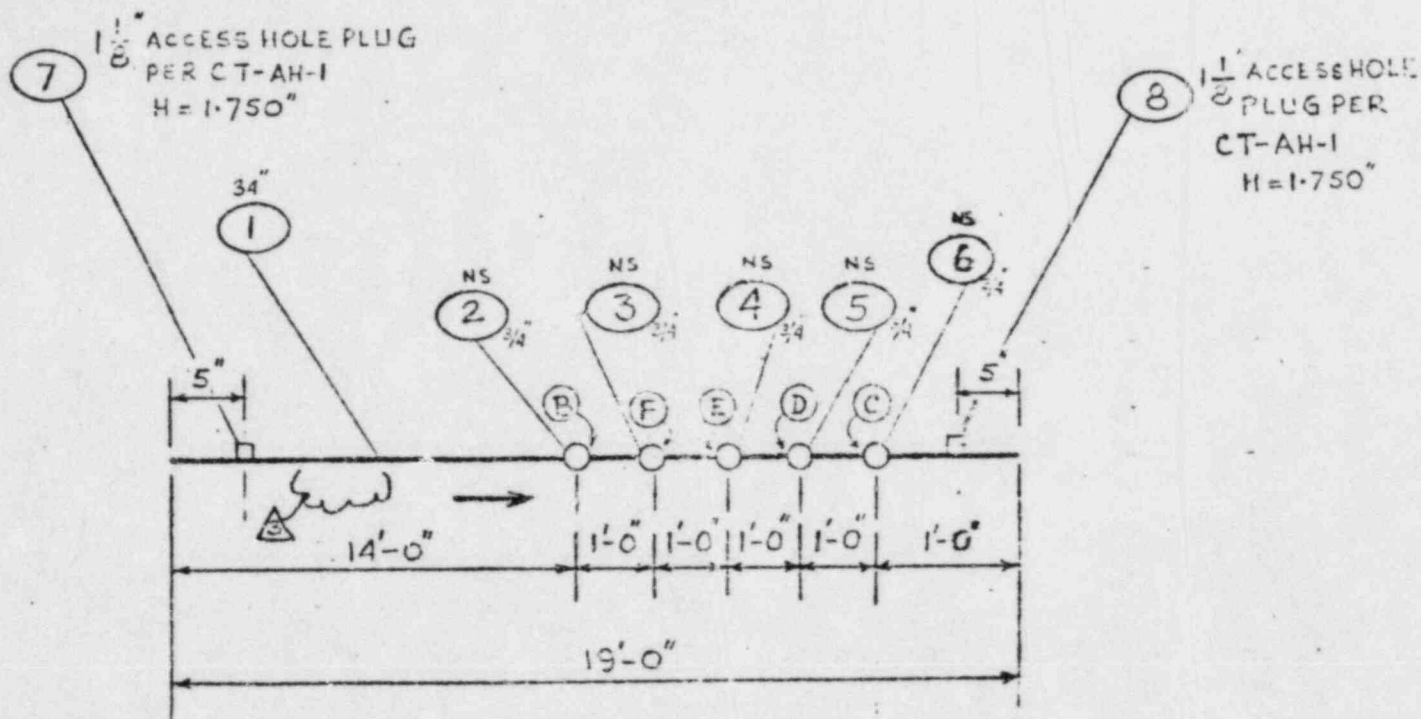
CHK'D PG

REV. 3 SM 7-25-77

CHK'D L

NOTE: - LENGTH OF A-H-PLUG SHALL
BE $\pm \frac{1}{16}$ " OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT, IF REQ'D.

DUKE POWER COMPANY
CHARLOTTE, N.C.
C-12517



MACHINE ENDS
PER SKETCH CT-D-2

Nuclear Safety Related

CLASS DUKE B LINE SPEC PS 1500.5 (01) APP. CODE 2 SM III CL 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|--------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Magn. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | Mill Test Reports | ✓ |
| Liq. Penetrant (PT) | | Painting | ✓ | Code Marking | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM (SM) FAB. SPECS. JS 115
REF. DRWG NO. CIL 1411-SM001 PRESS. 1275 PSI TEMP. 622 °F WT. 1434 LBS.
PIECE MARK CT SM-5C REGISTER CT-CH-26X

DUKE POWER COMPANY / CHARLOTTE, NC. / C-12517

Register No. C.T.-Q1-26X MAIN STEAM CT-5M-5C Job Name CATAWBA UNIT #1 Contract No. 7127 Location
 Sheet 3 of 3 Revision No. A-5M1 Revision Date 1-11-77
 MATERIALS RECORD
 PRODUCTION PLANNER
 DUKE POWER COMPANY
 CATAWBA UNIT #1

| PART NUMBER | DESCRIPTION | QTY OR LNG | HEAT NUMBER | QUALITY CONTROL | | STATUS | U/M | ACCOUNTING/MATERIAL | | |
|---------------|--------------------------------|------------------|----------------|-----------------|--------------|--------|-----|---------------------|------|-----|
| | | | | DOCUMENT | PROCESS | | | UNIT PRICE | DIS. | NET |
| 11B, CT-5M-5C | 36.438" I.D. X 1.750 MW. SMLS | 10'-0" | 1 | J-6000 | 2165410 | 222 | F | F-7 | | |
| CT-5M-5C | CS. PIPE TO ASMF, SA-106 C | | | | | | | | | |
| CT-5M-5C | 3/4" 3000 PSI CS, SPECIAL WELD | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | BOSS TO SA-105, PER DET. | | | | | | | | | |
| CT-5M-5C | SK. TH CT-WB-1 | | | | | | | | | |
| CT-5M-5C | DITTO | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | DITTO | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | DITTO | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | DITTO | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | DITTO | | 1 | AUA | SWF-1 SUM | | E | | | |
| CT-5M-5C | 1" ACCESS HOLE PLUG PER | | 1 | ABF | PP-1 SUM | | E | | | |
| CT-5M-5C | CT-5M-5C, SA-105, H-1750 | | | | | | | | | |
| CT-5M-5C | DITTO | | 1 | ABF | PP-1 SUM | | E | | | |
| CT-5M-5C | DITTO | | | | | | | | | |

Code 2600 5M CL2 Class DUKE B Nuclear Safety Role
 Job Supplement AT 5119 MFG. Code 51-4 7/11

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*
(As Required by the Provisions of the ASME Code Rules)

Sheet 1 of 3

1. Fabricated by ITT Grinnell Industrial Piping, Inc. Order No. 7127
(Name and Address of Fabricator) Kernersville, N. C.
2. Fabricated for Duke Power Company Charlotte, N. C. Order No. C-12517
(Name and Address)
3. Owner Duke Power Company 4. Location of Plant Newport, S. C.
5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)
- (a) Drawing No. CT-01-35X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A
6. The material, design, construction, and workmanship comply with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A
- Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and Identifying stamp)
- Supplemental Sheets 2 ---Drawings
3 ---Bill(s) of Material
7. Shop Hydrostatic Test Field psi.
8. Description of piping inspected Piece Mark Number CT-SM-5D
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length

See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 8-31-77 Signed ITT Grinnell Industrial Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N 1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 9-7-77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Company By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-7-77
Barry K. Bolser
(Inspector)

C. E. R. A. S. I. O. N. N.C. - No. 878
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided they are properly identified.

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FORM N-101 REV 1/76
Q.A. FORM H2.1C

20F3

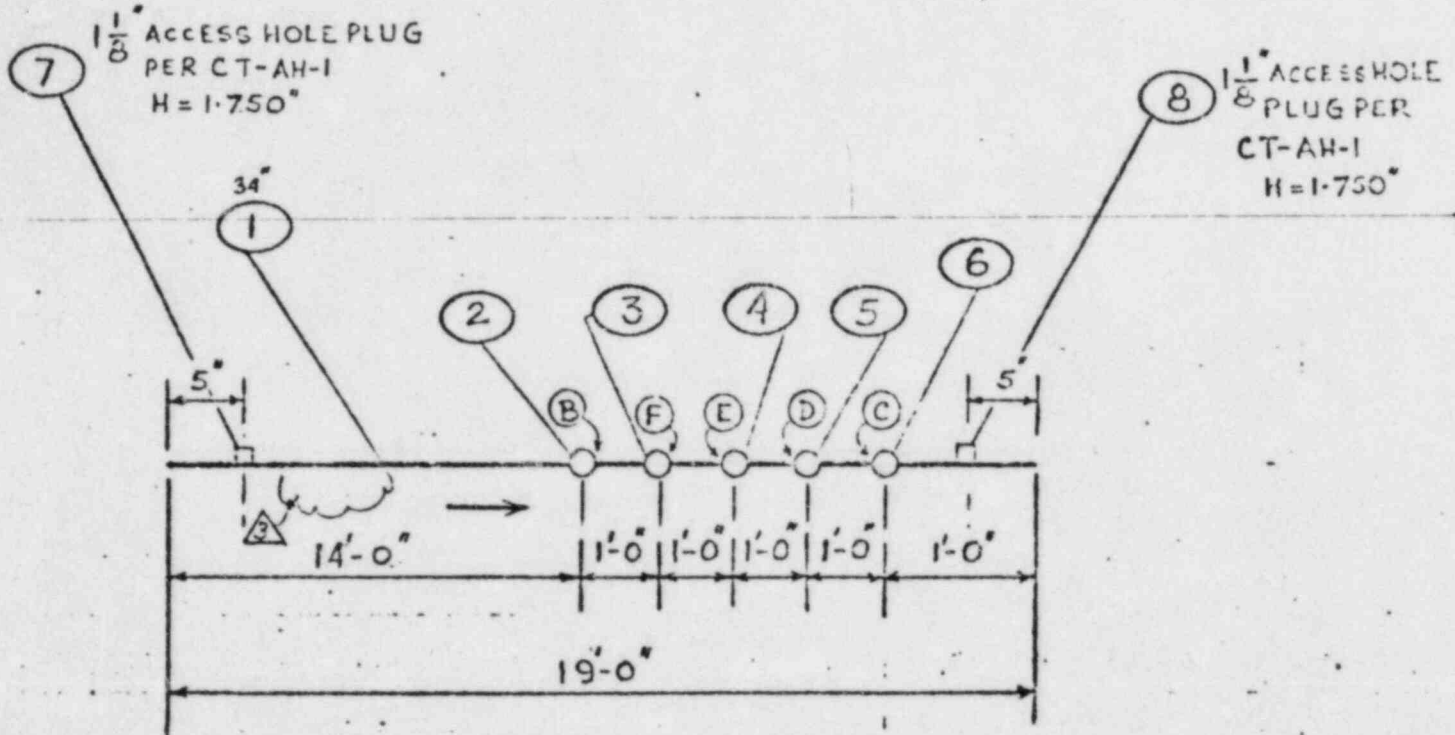
CONT. NO. 7127

NAME DUKE POWER COMPANY, CHARLOTTE, N. C.
LOCATION CATAWBA UNIT #1 P.O. C-12517

DRW'N SM 4-21-76
REV. SM 4-21-77
REV. SM 6-19-77
REV. SM 7-25-77

CHK'D. P.G. 11-1-76
CHK'D. P.G.
CHK'D. P.G.
CHK'D. P.G.

NOTE: - LENGTH OF A.H. PLUG SHALL
BE $\pm \frac{1}{16}$ " OF ACTUAL WALL THK.
SHOP SHALL GRIND TO FIT, IF REQ'D.



QUALITY CONTROL

MACHINE ENDS
PER SKETCH CT-D-2

Nuclear Safety Related

| | | | |
|-------------------------------------|--------------------------------|--------------------------------------|-----------------------|
| CLASS <u>DUKE B</u> | LINE SPEC <u>PS 1500:5(01)</u> | APP. CODE <u>ASME Sec. III, CL 2</u> | NO. REQ'D <u>1</u> |
| Radiography (RT) <u>N/A</u> | Special Marking | Preheat | ✓ Cert. of Compliance |
| Dag. Particle (MT) <u>✓</u> | Special Cleaning | Heat Treat | ✓ Mill Test Reports |
| Dag. Penetrant (PT) | Painting | Code Stamp | ✓ Data Reports |
| SYSTEM <u>MAIN STEAM (SM)</u> | FAB. SPECS. <u>JS 118</u> | | |
| REF. DRWG NO. <u>CH-1491-SM.004</u> | PRESS. <u>1230 PSI</u> | TEMP. <u>600 °F</u> | WT. <u>14924 LBS.</u> |
| ICE MARK <u>CT-SM-5D</u> | REGISTER <u>CT-01-35X</u> | | |

GRINNELL INDUSTRIAL PIPING, INC., KERNERSVILLE, N.C.

FORM 10-1-77
O.A. FORM 10-1-77

JUL 7 1977

Duke Power Co., Charlotte, N.C.

Register No. C.T.-01-35X P.O. C12517 MATERIALS RECORD
Production Planner
System: Main Steam DUKE POWER COMPANY
Process Mark CT-SM-5D Job Name CATAWBA UNIT #1 Contract No. 7127 Location _____
Revision No. 1 Revision Date 7-21-77

| PART NUMBER | DESCRIPTION | CUAN OR LENG | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | |
|----------------------------|---|--------------------|-----------------|---------------------|--------|---------------------|--------------------|----------------|-----|
| | | | HEAT NUMBER | DOCUMENT IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| SECT CD: 3.4 21-01-15-1 | 31.438" I.D. X 1.750" MW. SML'S CS PIPE TO ASME, SA-106 C | 17'-0" | J-600 | 215434 | OK | F | P-9 | | |
| Y X A SE-X CT-3002-1 | 3/4" 3000# CS, SPECIAL WELD BOSS TO SA-105, PER DET. SK-# CT-WB-1 | 1 | AUA | SWF-4 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | AUA | SWF-4 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | AUA | SWF-4 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | AUA | SWF-4 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | AUA | SWF-4 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | ABF | R.P.-1 SSM | OK | E | | | |
| Y X A SE-X CT-3002-1 | DITTO | 1 | ABF | R.P.-1 SSM | OK | E | | | |

SHOP COPY LAYOUT
DELIVERED
JUL 27 1977

Code 2 Sec. III, Cl. 2 Class DUKE 'B'

Job Supplement TS118

MFG. Code

Nuclear Safety Related

E-1-4

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 3

1. Fabricated by ITT Grinnell Industrial Piping, Inc. Order No. 7127
(Name and Address of Fabricator) Kernersville, N. C.

2. Fabricated for Duke Power Company Charlotte, N. C. Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, S. C.

5. Piping System Identification TEW 8-18-77 MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-7X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class NUC.2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name and identifying stamp)

Supplemental Sheets #2 --- Drawings
#3 --- Bill(s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-6A
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length

See Attached Sheets

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 8-18-77 Signed ITT Grinnell Ind. Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. 11-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Maryland and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 8/23/77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Company By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8/23/77 Richard W. Stork Commission Maryland-94
(Inspector) National Board State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size 11" x 17", (2) information in items 1, 2 and 5

KEENEVILLE, N. C.

Sheet 2 of 3

REVISION

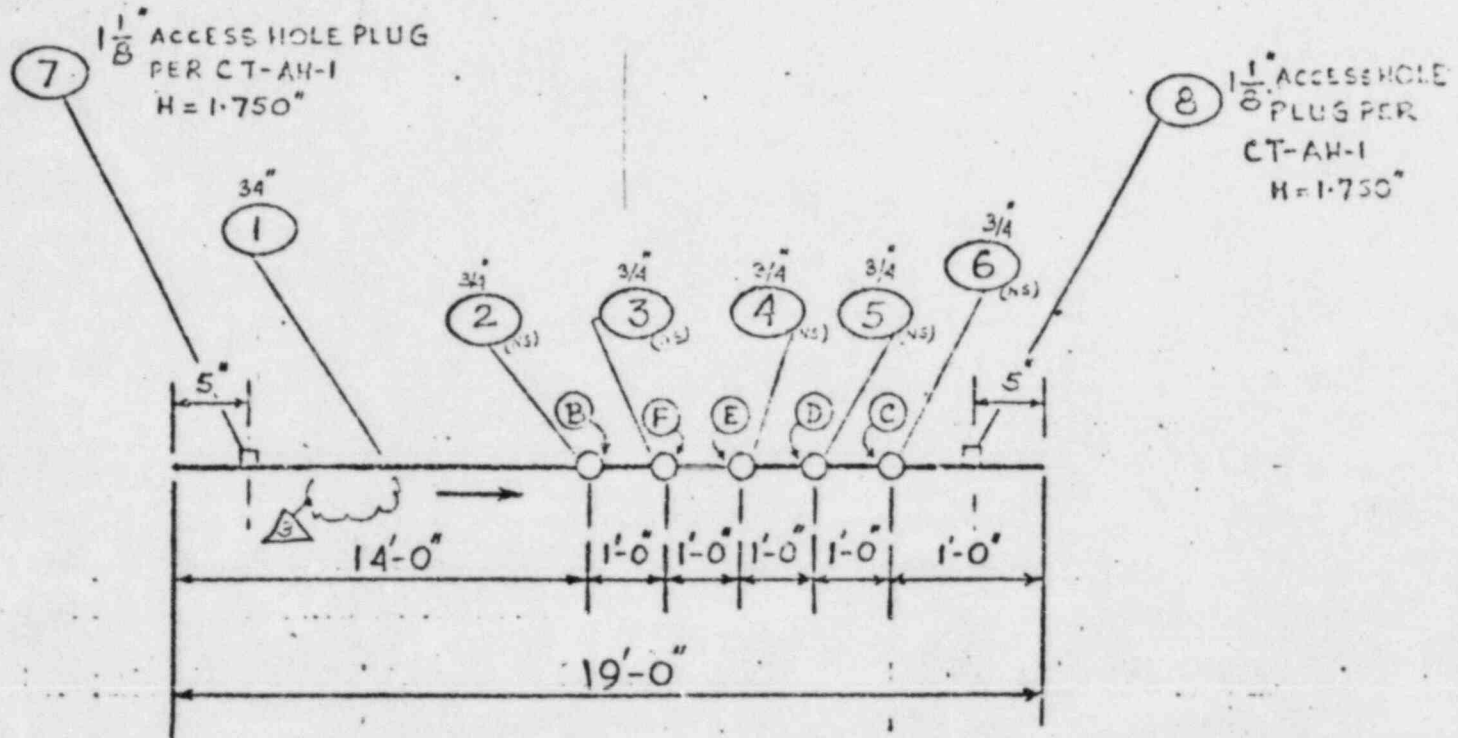
DRW'NS: 10-21-76
REV. Δ SM 4-21-77
REV. Δ SM 6-29-77
REV. Δ SM 7-25-77

CHK'D 100, W-1-76
CHK'D 100
CHK'D 100
CHK'D 100

QUALITY CONTROL

1 1/8" ACCESS HOLE PLUG
PER CT-AH-1
H = 1.750"

1 $\frac{1}{8}$ " ACCESS HOLE
PLUG PER
CT-AH-1
H=1.750"



Nuclear Safety Related

ASS DUKE B LINE SPEC PS 1500.5 (01) APP. CODE ATG 5-3, III, CL 2 NO. REQ'D 1

| | | | | | | | |
|-------------------|-----|------------------|---|------------|---|---------------------|---|
| adiography (RT) | N/A | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| ag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | Mill Test Reports | ✓ |
| g. Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

FAB SPECS. JS 118

PRESS. 1230 PSI. TEMP. 600 °F. WT. 4934 LBS.

REGISTER CT-01-7X

Register No. CT-01-7X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet B of 3

Revision No. 1 SM Revision Date 7-77

Piece Mark CT-SM-6A

Job Name CATAWBA UNIT #1

Contract No. 7127

Location _____

| ITEM | PART NUMBER | | DESCRIPTION | QUAN OR LENG | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | | |
|------|----------------------------|------|--|--------------------|-----------------|----------|------------|---------------------|-----|--------------------|----------------|-----|
| | | | | | HEAT NUMBER | DOCUMENT | IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| 1 | P.B.C.T.C.D. CT-01-15-1 | 3.4 | 31.438" I.D. x 1.750" MW. SMLS CS, PIPE TO ASME, SA-106 C | 10'-0" | | | | | F | | | |
| 2 | Y*A-SE CT-3002-1 | 0.75 | 3/4", 3000# CS, SPECIAL WELD BOSS TO SA-105, PER DET. SK.# CT-WB-1 | 1 | | | | | E | | | |
| 3 | Y*A-SE CT-3002-1 | 0.75 | ———— DITTO ——— | 1 | | | | | E | | | |
| 4 | Y*A-SE CT-3002-1 | 0.75 | ———— DITTO ——— | 1 | | | | | E | | | |
| 5 | Y*A-SE CT-3002-1 | 0.75 | ———— DITTO ——— | 1 | | | | | E | | | |
| 6 | Y*A-SE CT-3002-1 | 0.75 | ———— DITTO ——— | 1 | | | | | E | | | |
| 7 | ***** CT-4005-4 | 1.12 | 1 1/8" ACCESS HOLE PLUG PER CT-AH-1, SA-105, "H"=1.750" | 1 | | | | | E | | | |
| 8 | ***** CT-4005-4 | 1.12 | ———— DITTO ——— | 1 | | | | | E | | | |

Code Sec. III, Cl. 2

Class DUKE 'B'

Job Supplement JS118

MFG. Code _____

Nuclear Safety Related
MAIN STEAM

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 3

1. Fabricated by ITT Grinnell Industrial Piping, Inc. Order No. 7127
(Name and Address of Fabricator) Kernersville, N. C.

2. Fabricated for Duke Power Company Charlotte, N. C. Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, S. C.

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant, etc.)

(a) Drawing No. CT-01-17X Prepared by ITT Grinnell Industrial Piping, Inc.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class Nuc.2

Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets #2 --- Drawings

#3 --- Bill(s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-62
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length

See Attached Sheets

- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 9-13-77 Signed ITT Grinnell Industrial Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. 1-1756

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Maryland and employed by * of Hartford, CT.

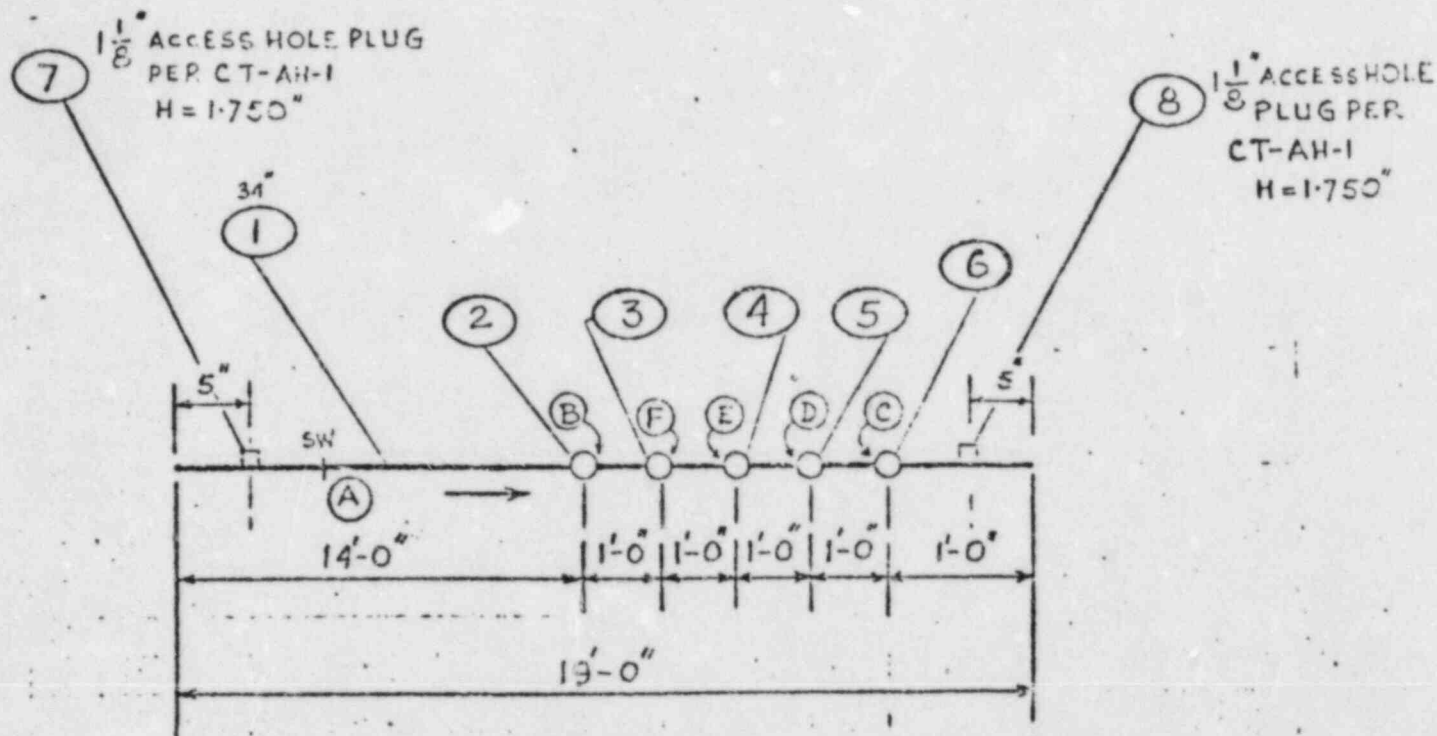
have inspected the piping described in this Data Report on 9-15-77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Company
By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-15-77 Inspected by [Signature] Commissioned 9/77
(Inspector) National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2, and 5 on this data report is included on each sheet, and (3) each sheet is numbered and numbered sheets are placed in the order of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

DRW'NS. 4-2-76 CHK'D PG 11-1-76
 REV. △ 4-21-77 CHK'D PG
 REV. △ 5-16-77 CHK'D PG
 REV. _____ CHK'D _____

DUKE POWER COMPANY
CHARLOTTE, N.C.
C-12517 -



Nuclear Safety Related

| | | | | | | | |
|--------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | Mill Test Reports | ✓ |
| Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

STEM MAIN STEAM (SM) _____ FAE SPECS. JS US _____
E. DRWG NO. CH-1491-SM 002 _____ PRESS. 1230 PSI TEMP. 600° F. WT. 14924 LBS. 4X
CE MARK CT-SM-6B _____ REGISTER CT-CH-17X _____

W.D.

DUKE POWER COMPANY/CARRIETTE, NC / C-12517

Part No. C.T-01-17X

FROM STEAM

DUKE POWER COMPANY

Part Mark C.T-SM-6B

Job Name CATAPWA UNIT #1

MATERIALS RECORD
PRODUCTION PLANNING

Sheet

3 of 3

Revision No. A.C.M.

Revision Date

Contract No. 7127

Location

| PART NUMBER | DESCRIPTION | QUANTITY OR LENGTH | QUALITY CONTROL | | STATUS | UNIT | ACCOUNTING RATE | | NET |
|-------------|-----------------------------|--------------------------|-----------------|---------------------|--------|------|--------------------|----------------|-----|
| | | | PLANT NUMBER | DOCUMENT PROCESS | | | UNIT PRICE P.O. | D.S. V.P.O. | |
| 1 | 31.438" J.DX1750NW, SMLS | 19.0 | 3-600 | 1A | 17 | F | | P-7 750 | |
| 2 | C.S. PIPE TO ASME, SA-106 C | | 3-100 | 1B | (10) | | | P-7 750 | |
| 3 | 3/4" 3000# CS, SPECIAL WELD | | | ✓ | | E | | 9-6-77 | |
| 4 | BOSS TO SA-106, PER DET. | | | | | | | | |
| 5 | SKIFF C.T-WB-1 | | | | | | | | |
| 6 | DITTO | 1 | 1 AUA | ✓ | 10P | E | | | |
| 7 | DITTO | 1 | 1 AUA | ✓ | | E | | | |
| 8 | DITTO | 1 | 1 AUA | ✓ | | E | | | |
| 9 | DITTO | 1 | 1 AUA | ✓ | | E | | | |
| 10 | DITTO | 1 | 1 AUA | ✓ | | E | | | |
| 11 | 1" ACCESS HOLE PLUG, PER | 1 | 1 ABF | ✓ | | E | | | |
| 12 | C.T-ALL-1, SA-106, H=1750 | | | | | | | | |
| 13 | DITTO | 1 | 1 ABF | ✓ | | E | | | |

Code 300, Sec. III, Cl. 2

Class DUKE 'B'

Nuclear Safety Related

Job Supplement J S 118

MFG. Code

7/11

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*
(As Required by the Provisions of the ASME Code Rules)

10F3

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator) NC

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-27X Prepared by ITT GRINNELL INDUSTRIAL PIPING CO. INC.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2

Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturer's Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 ---Drawings

3 ---Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-6C
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length

See Attached Sheets

- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 3-23-78 Signed ITT Grinnell Ind. Piping, Inc. By Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N 1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of MD and employed by Hartford, CT. have inspected the piping described in this Data Report on 3/24/78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 3/24/78 (Inspector) Dom Donal Commission MD128
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".

ITT Grinnell Industrial Piping Inc.

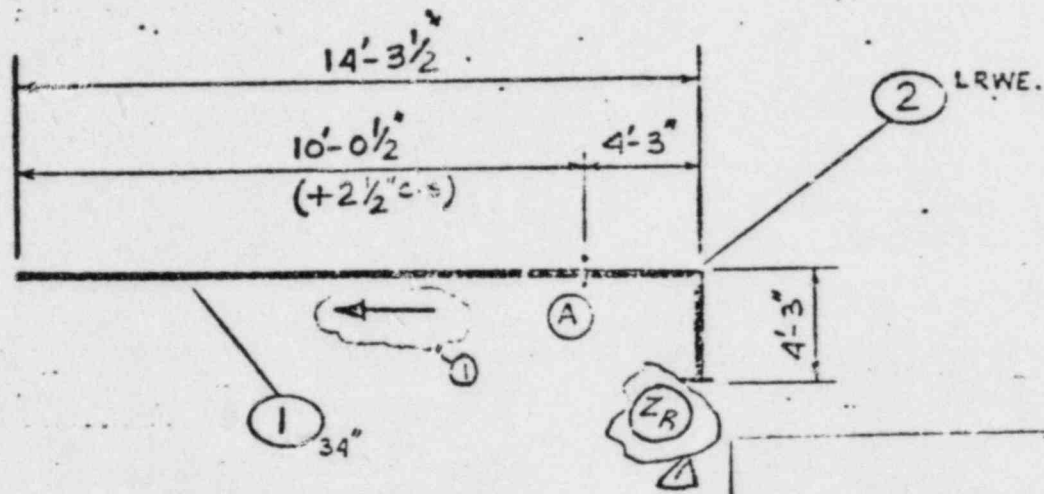
KERNERSVILLE, N. C.

FORM EN-101 REV 7/7
QA FORM N21C

20F3

CONT. NO: 7127
NAME DUKE POWER COMPANY
LOCATION CATAWBA UNIT #1
Charlotte NC.
PO C 12517

→ REDRAWN 10-23-77
REV. 11 PG 2-24-78
REV. _____
REV. _____
CHK'D PG
CHK'D 78-3-2-78
CHK'D _____
CHK'D _____



REVISION

PIPE: 31-4381 DXI-750 MW.
SA-106C
FLG:
E. W. FITG: SA-234 WPB-W
OR SA-234 WFC
F. S. FITG:

PAINT FLOW ARROWS

MACHINE ENDS
PER SKETCH CT-D-2

Nuclear Safety Related

CLASS DUKE B LINE SPEC. PS 1500.5 (91) APP. CODE III CL 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | Mill Test Reports | ✓ |
| Liq. Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAN STEAM (SM) FAB. SPEC. JS 118
REF. DRWG NO. CN-1491-SM201 REV 2 PRESS. 118.5 PSI TEMP. 600 °F. WT 1200 LBS.
PIECE MARK CT-SM-6C REGISTER CT 01-27X

Register No. CT-OL-27X

MATERIALS RECORD

PRODUCTION PLANNER

Sheet 3 of 3

Revision No. _____ Revision Date _____

Piece Mark CT-SM-6C Job Name DUKE POWER COMPANY
CATAWBA UNIT # 1

Contract No. 7127 Location _____

| ITEM | PART NUMBER | | DESCRIPTION | QUAN OR LNG | QUALITY CONTROL | | ACCOUNTING/MATERIAL | | | | |
|------|-------------|------|---|-------------------|--------------------|---------------------------------|---------------------|-----|--------------------|----------------|------|
| | | | | | HEAT NUMBER | DOCUMENT IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| 1 | PBCTCD | 3.4" | 31-438" I.D X 1-750" MW. SMLS CS PIPE TO ASME SA-106C | 10 | L3274 SN-26914Y | Q.C. IPI 150 2-10-78 | 2-14-78 | F | | | |
| 2 | LAATCY | 3.4" | 31-438" I.D X 1-750" M.W. 90° L.P.W. TO SA-234WPC-W MADE FROM SA-515 GR. 70 PLATE (70,000 PSI TENSILE), OR TO SA-234WPC SMLS ENDS PER DET. CT-D-2. | 1 | ARAR | Bwf-19 IPI 150 2-20-78 | | E | | | HEAD |
| | | 3.4 | SP. END PROT. PER CT-EP-1 | 2 | | | | E | | | |
| | | 3.4 | SPIDER BRACING PER CT-ES-1 | 2 | | | | E | | | |
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Code Arms, S.c. III CL 2

Class DUKE B

Job Supplement

JS 118

MFG. Code

Nuclear Safety Related

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

10F3

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-36X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 3 9 ---Drawings
---Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-6D
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 5-23-78 Signed ITT GRINNELL Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Maryland and employed by * Hartford, CT. have inspected the piping described in this Data Report on 5/31/78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5/31/78 Inspector Richard L. Shurley Commission Md. Ins. Bd. - 94
(Inspector) (National Board, State, Province and No.)

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 3 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".
Printed in U.S.A. (7/73) This form (E62) is obtainable from the ASME, 345 E. 47th St., New York, N.Y. 10017

CT-SM-6D

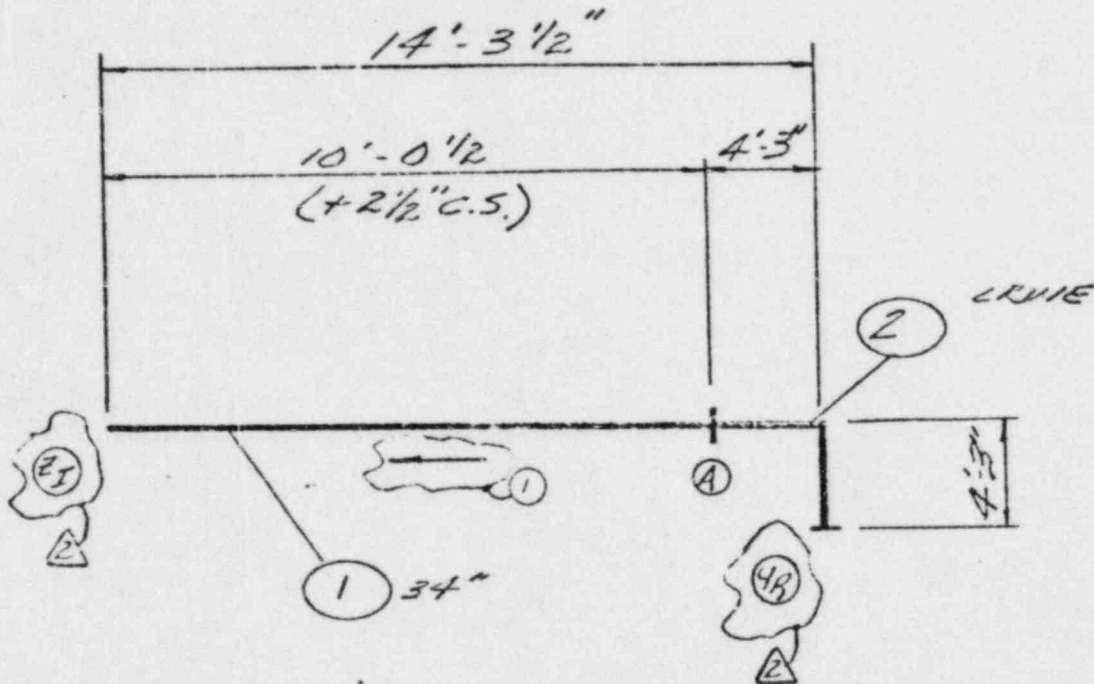
ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FORM ITT 10-1-77
Q. A. FORM N2.1C
2113

CONT. NO. 7127
NAME DUKE POWER COMPANY
LOCATION CATAWBA UNIT #1
Charlotte NC.
P.O. C12517

REV. 153-17-78 CHK'D 153-17-78
REV. _____ CHK'D _____
REV. _____ CHK'D _____
REV. _____ CHK'D _____



PIPE: 31.438" ID X 1.750" WALL
SA-106C
FLG: _____
B. W. FITG: SA-234 WPB-VI
F. S. FITG: OK SA-234 WPB.

PAINT FLOW ARROWS

QUALITY CONTROL

MACHINE SNDS
PER. SKETCH CT-D-2

Nuclear Safety Related

CLASS DUKE "B" LINE SPEC. PS 1500.5(01) APP. CODE Sec. III, CL 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|-------------------------------------|------------------|-------------------------------------|------------|-------------------------------------|---------------------|-------------------------------------|
| Radiography (RT) | <input checked="" type="checkbox"/> | Special Marking | <input type="checkbox"/> | Preheat | <input checked="" type="checkbox"/> | Cert. of Compliance | <input type="checkbox"/> |
| Mag. Particle (MT) | <input checked="" type="checkbox"/> | Special Cleaning | <input checked="" type="checkbox"/> | Heat Treat | <input checked="" type="checkbox"/> | Mill Test Reports | <input checked="" type="checkbox"/> |
| Liq. Penetrant (PT) | <input type="checkbox"/> | Painting | <input checked="" type="checkbox"/> | Code Stamp | <input checked="" type="checkbox"/> | Data Reports | <input checked="" type="checkbox"/> |

SYSTEM UNIT 1 STEAM (S111) FAB. SPECS. JS-113
REF. DRWG NO. C11-1411-SM-1-REV 2 PRESS. 1125 PSI. TEM. 600 °F. WT 122 LBS.

PIECE MARK CT-SW-6D

REGISTER

| | | | |
|---|----|----|----|
| 1 | 17 | 15 | 15 |
|---|----|----|----|

GRINNELL INDUSTRIAL PIPING, INC.

KERNERSVILLE N.C.

FORM EN-102 REV 7/75
Q.A. FORM N2.1F

H.P.

Register No. CT-01-36X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 3 of 3

Revision No. _____ Revision Date _____

Piece Mark CT-SM-6D

Job Name DUKE POWER COMPANY
CATAWBA UNIT #1

Contract No. 7127 Location _____

| ITEM | PART NUMBER | | | DESCRIPTION | QUAN OR LENG | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | | |
|------|---------------|------|--|--------------------------------|--------------------|-----------------|----------|------------|---------------------|-----|--------------------|----------------|-----|
| | | | | | | HEAT NUMBER | DOCUMENT | IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | D/S. VENDOR | NET |
| 1 | P.B.C.T.C.D.* | 3.4" | | 31.438" I.D X 1.750" MW. SMLS | 10'-0 1/2" | | | | | F | | | |
| | CT-01-15-1 | | | CS PIPE TO ASME SA-106C | | | | | | | | | |
| 2 | L.A.A.T.C.* | 3.4" | | 31.438" I.D X 1.750" M.W. 90° | 1 | | | | | E | | | |
| | CT-01-18-1 | | | L RWE TO SA-234 WPB-W | | | | | | | | | |
| | | | | MADE FROM SA-515 GR. 70 | | | | | | | | | |
| | | | | PLATE (70,000 PSI TENSILE), OR | | | | | | | | | |
| | | | | TO SA-234 WPC SMLS, ENDS | | | | | | | | | |
| | | | | PER DET. CT-D-2. | | | | | | | | | |
| | | 3.4" | | SP. END PROT. PER CT-EP-1 | 2 | | | | | E | | | |
| | | 3.4" | | SPIDER BRACING PER | 2 | | | | | E | | | |
| | | | | CT-ES-1 | | | | | | | | | |
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SHOP COPY LAYOUT



See E.P. 5/21/79
Outstanding

Code Amc. Sec. III, Cl. 2 Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS 118 MFG. Code _____

FORM NP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

1. Fabricated by ITT Grinnell Piping, Inc. Kernersville Order No. 7128
(Name and Address of Fabricator)
2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)
3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-Ex Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 --- Drawings
3 --- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-7A
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE

Date 10-27-78 Signed ITT GRINNELL Ind. Piping, Inc. by [Signature]
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N.C. and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 10-30-78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III.*The Hartford Steam Boiler Inspection and Insurance Co.
By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 10-30-78
[Signature]
(Inspector)

Commission N.C. - No. 878
National Board, State, Province and No.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 7, "Remarks".
Printed in U.S.A. (2/73)

CT-SM-7A

Grinnell Industrial Piping Inc.

BLISSVILLE, N.C.

ISSUED BY NAME
DATE

Sheet 2 of 2

INT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION CATAWBA UNIT #1

Charlotte, N.C.

Co. C-12517

→ PDRWNS 06-12-77

REV. ① 06-12-77

REV. ② PC 06-29-78

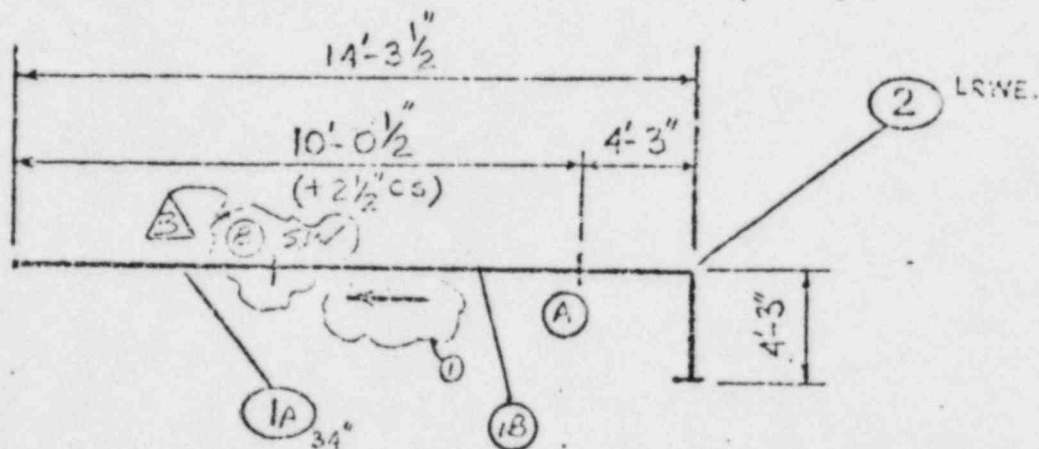
REV. ③ 07-16-78

CHK'D PG

CHK'D PG

CHK'D PG

CHK'D PG



PIPE: 31-435 XI-750MW
SA-106C.

FL3:

D. W. FTIG: SA-234WFB-W, OR

F. S. FTIG: SA-234WFC

PAINT FLOW ARROWS

QUALITY CONTROL

MACHINE ENDS

PER SKETCH CT-D-2

Nuclear Safety Related

ASS DUKE B LINE SPEC PS 1500.5(01)

APP. CODE App 2 Sec III, Cl 2 NO. REQD. 1

| | | | | | | | |
|-----------------|---|------------------|---|------------|---|---------------------|---|
| Autography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | MHI Test Reports | ✓ |
| Preheat (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM (SM)

FAB. SPEC. JSJ18

DRAWING NO. CH-179-SMOC3(2EEZ)

PRESS. 1135 PSI TEMP. 600.°F. WT. 12281 LBS

REMARK CT-SM-7A

REGISTER CT-01-8X

GRINNELL INDUSTRIAL PIPING, INC.

ITT GRINNELL IND. PIPING

KENNESVILLE, N. C.

Register No. CT-01-2X

MATERIALS RECORD
PRODUCTION PLANT

Sheet

3

OF

3

DUKE POWER COMPANY

Face Mark CT-SM-7A

Job Name CHATWICK UNIT #1

Contract No. 7127

Location

Revision No.

Revision Date

PARTICULARS

24" - Main Steam

DESCRIPTION

PC-C-12517

QAM

UPPER

QUALITY CONTROL

HEAT

NUMBER

DOCUMENT

DATE

ACCOUNTING

ATTENTION

31-413" I.D. X 1.750" S.W. SMLS

CS PIPE TO ASME SA-106C

31-413" I.D. X 1.750" S.W. 90°

LRWE TO SA-234WFB-VI

MADE FROM SA-SIS GR 70

PLATE (70000 PSI TENSILE), OR

TO SA-234WPC SMLS ENDS

PER NET CT-D-2

SP END PROT PER CT-E-1

SPIDER BRAGUES PER 2

CT-E-5-1

See Attached

Code 2400000000

Class

DUKE 'B'

Nuclear Safety Related

Job Supplement

TSJ12

MFG. CODE

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 3

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator)
2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)
3. Owner Duke Power Company 4. Location of Plant Newport, SC
5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)
- (a) Drawing No. CT-01-18X Prepared by ITT Grinnell Industrial Piping, Inc.
(b) National Board No. N/A
6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A
- Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and Identifying stamp)
- | | |
|---------------------|-----------------------------|
| Supplemental Sheets | 2 ---- Drawings |
| | 3 ---- Bill (s) of Material |
7. Shop Hydrostatic Test Field psi.
8. Description of piping inspected Piece Mark Number CT-SM-7B
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length - fittings - flanges, etc.)
See Attached Sheets

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 5-17-78 Signed ITT GRINNELL Ind. Piping, Inc. by Thomas A. Smith
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission/issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Maryland and employed by * Hartford, CT. have inspected the piping described in this Data Report on 5/18/78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III. *The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 5/18/78 Inspector Richard L. Shorkey Commission Maryland-94
(Inspector) National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 3 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 7, "Remarks".
Printed in U.S.A. (2/73)

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FORM EN-101 REV 1/76
Q.A. FORM H2.1C

sheet 2 of 3

CONT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION C. TAWBA UNIT #1
Charlotte, N.C.
C-12517

→ REDRAWN SM 10-25-77

REV. ① SM 12-14-77

REV. ② PG 2-21-78

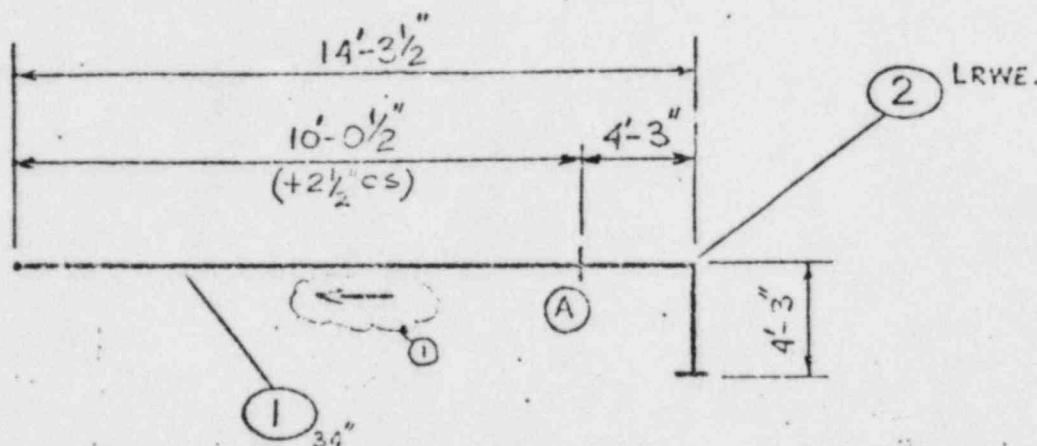
REV.

CHK'D PG

CHK'D PG

CHK'D 78 5-2-78

CHK'D



PIPE: 31-435 I-DYI-750MW
SA-106G

FLG:

B. W. FTTC: SA-234WPS-W

F. S. FTTC: CREA-234WPC

QUALITY CONTROL

PAINT FLOW ARROWS

MACHINE ENDS

PER SKETCH CT-D-2

REVISION

Nuclear Safety Related

CLASS DUKE B LINE SPEC PS 1500-5 (OI) APP. CODE Ver. Sec. III, Cl. 2 NO. REQ'D 1

| | | | | | | | |
|---------------------|---|------------------|---|------------|---|---------------------|---|
| Radiography (RT) | ✓ | Special Marking | | Preheat | ✓ | Cert. of Compliance | |
| Mag. Particle (MT) | ✓ | Special Cleaning | ✓ | Heat Treat | ✓ | Mill Test Reports | ✓ |
| Liq. Penetrant (PT) | | Painting | ✓ | Code Stamp | ✓ | Data Reports | ✓ |

SYSTEM MAIN STEAM (SM)

FAB. SPEC JS 118

REF. DRWG NO. CN-1491-SMOO2 (SM)

PRESS 1135 PSI TEMP. 600 °F. WT 12,051 LBS.

PIECE MARK CT-SM-7B

REGISTER CT-01-18X

| Register No. | CT-01-15X | Sheet | 3 | Of | 3 | Revision No. | Revision Date |
|--|-------------------------------|--------------|-------|---------------------|---|--------------|---------------|
| Materials Record Production Planner | | | | | | | |
| Duke Power Company | | | | | | | |
| Job Name | CATAWBA UNIT #1 | Contract No. | 7127 | Location | | | |
| Part Number | 34 | Heat Number | 13274 | Quality Control | | | |
| Description | 31.435" I.D X 1.750" MW SM'S | Unit Price | | Accounting/Material | | | |
| CT-01-15X | CS PIPE TO ASME SA-106C | Unit Price | | Accounting/Material | | | |
| CT-01-15X | 31.435" I.D X 1.750" MW 90° | Unit Price | | Accounting/Material | | | |
| CT-01-15X | 1 PIPE TO SA-234 WPB-W | Unit Price | | Accounting/Material | | | |
| CT-01-15X | MADE FROM SA-515 GR 70 | Unit Price | | Accounting/Material | | | |
| CT-01-15X | PLATE (10000 PSI TENSILE), OR | Unit Price | | Accounting/Material | | | |
| CT-01-15X | TO SA-234 WPC SM'S, ENDS | Unit Price | | Accounting/Material | | | |
| CT-01-15X | PER DET. CT-D-2 | Unit Price | | Accounting/Material | | | |
| CT-01-15X | SP. END PROT. PER CT-EP-1 | Unit Price | | Accounting/Material | | | |
| CT-01-15X | SPIDER BRACING PER | Unit Price | | Accounting/Material | | | |
| CT-01-15X | CT-ES-1 | Unit Price | | Accounting/Material | | | |

Nuclear Safety Related

MFG. Code

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES*
(As Required by the Provisions of the ASME Code Rules)

SHEET 1 OF 5

1. Fabricated by ITT Grinnell Ind. Piping, Inc., Kernersville Order No. 7127
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN STEAM
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-01-37X Prepared by ITT Grinnell Industrial Piping, Inc.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for
the following items of this report NA
(Name of Part - Item number, Manufacturer's name, and Identifying stamp)

Supplemental Sheets 2 --- Drawings
345 --- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-SM-7D
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length
See Attached Sheets
- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms
with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 1-26-79 Signed ITT GRINNELL
Ind. Piping, Inc. (Fabricator)

Certificate of Authorization Expires 7-16-79

Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors
and/or the State or Province of N.C. and employed by * of Hartford, CT.
have inspected the piping described in this Data Report on 1-26-79, and state that to the best of my knowledge
and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code,
Section III. *The Hartford Steam Boiler Inspection and Insurance Co.
By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concern-
ing the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner
for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 1-26-79
Barry K. Bobo
(Inspector)

Commission N.C. - No. 878
National Board, State, Province and No.

GRINNELL INDUSTRIAL PIPING, INC.

Kernersville, N.C.

FORM EN-102 REV 7/76

O.A. FORM N2.1F

H-P

Register No. CT-01-37X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 3 Of 35

System: Main Steam

DUKE POWER COMPANY Charlotte, N.C.

Revision No. 2 SM Revision Date 5-10-78

Piece Mark CT-SM-7D

Job Name

CATAWBA UNIT #1

Contract No. 7127

Location

ORDER # 12517

| ITEM | PART NUMBER | | DESCRIPTION | QTY ON HND | QUALITY CONTROL | | | ACCOUNTING/MATERIAL | | | | |
|------|-----------------|---------------|---|------------------|-----------------|----------|------------|---------------------|-----|--------------------|----------------|-----|
| | | | | | HEAT NUMBER | DOCUMENT | IN PROCESS | STATUS | U/M | UNIT PRICE P.O. | DIS. VENDOR | NET |
| 1 | X X X X X X X X | 3 L 5 1 2 3 7 | 31.5" NOM. I.D. X 2.375" NW. X 13'-0" LONG SAFETY VALVE. HEADER MANIFOLD W/4- 10" O.D. X 1 1/2" NOM. W. OUTLETS. ALL OUTLETS AND HEADER ENDS I.D. MACHINED PER (DRG. # 42148) | 1 | | | | | E | | | |
| 2 | X X X X X X X X | 3 L 5 1 2 3 7 | --- DITTO --- EXCEPT MANIFOLD WILL BE 18'-6" LONG W/2-10" O.D. X 1 1/2" NW. OUTLETS. | 1 | | | | | E | | | |
| 3 | X X X X X X X X | CT-20 05- | 10" X 6" O.D. FORGED CS TRANSITION PC. MATERIAL TO ASME SA-105 HT. (1) ¹ (L = LENGTH = 6") (PER DET. CT-SM-2) | 1 | | | | | E | | | |

See Attached Specs

Nuclear Safety Related

Code ASME Sec III, Cl 2

Class DUKE 'B'

Job Supplement 1118

MFG. Code

REVISION

THE GRINNELL INDUSTRIAL PIPING, INC.

KANSASVILLE, N.C.

Register No. CT-01-37X

System: Main System

Piece Mark CT-SM-7D

MATERIALS RECORD

DUKE POWER COMPANY CHARLOTTE, N.C.

CATAWBA UNIT #1

Sheet 24

Revision No. A

Contract No. 7127

01 35

Revision Date 1-6-78

Location

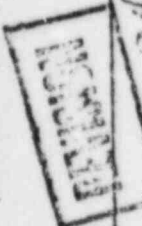
| ITEM | PART NUMBER | DESCRIPTION | QTY | OR LUNG | QUALITY CONTROL | | | STATUS | U/M | ACCOUNTING/MATERIAL | | |
|------|-------------|--|-----|---------|-----------------|----------|---------|--------|-----|---------------------|------------|------|
| | | | | | HEAT NUMBER | DOCUMENT | PROCESS | | | UNIT PRICE P.O. | DIS VENDOR | NET. |
| 4 | CT-2095-2 | 10" X B-70-D FORGED C.S. TRANSITION PC; MATERIAL TO ASME (SA-105 HT. 3) (L = LENGTH = 6") (PER DET. CT-SM-3) | 1 | 1 | | | | | E | | | |
| 5 | CT-2095-2 | DITTO | 1 | 1 | | | | | E | | | |
| 6 | CT-2095-2 | DITTO | 1 | 1 | | | | | E | | | |
| 7 | CT-2095-2 | DITTO | 1 | 1 | | | | | E | | | |
| 8 | CT-2095-2 | DITTO | 1 | 1 | | | | | E | | | |
| 9 | CT-3002-2 | 1" CS. SP. WELD BOSS TO SA-105, PER DET. SK-CT-WB-1 | 1 | 1 | | | | | E | | | |
| 10 | CT-3002-2 | DITTO | 1 | 1 | | | | | E | | | |
| 11 | CT-3002-2 | DITTO | 1 | 1 | | | | | E | | | |
| 12 | CT-3002-2 | DITTO | 1 | 1 | | | | | E | | | |

Code 7mm. Sec. III, Cl. 2 Class DUKE B

Nuclear Safety Related

Job Supplement JS 118

MFG. Code



GRINNELL INDUSTRIAL PIPING, INC.

FORM IN 102 REV 5-78
O.A. FORM 112.1F

Kanawha, W.C.

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 35 of 35

Register No. CT-01-37X

System: MAIN STEAM

DUKE POWER COMPANY CHARLOTTE, NC

Revision No. 1 Revision Date 5-10-78

Piece Mark CT-SM-7D

Job Name CATAWBA UNIT #1
ORDER # C-12517

Contract No. 7127 Location _____

| ITEM | PART NUMBER | | | DESCRIPTION | QTY OR LENG | QUALITY CONTROL | | | STATUS | U/M | ACCOUNTING/MATERIAL | | |
|------|--------------------|-----|---|--|-------------------|-----------------|----------|------------|--------|-----|---------------------|----------------|-----|
| | | | | | | HEAT NUMBER | DOCUMENT | IN PROCESS | | | UNIT PRICE P.O. | DIS. VENDOR | NET |
| 13 | ***** CT-4012-3 | 112 | 1 | 1" ACCESS HOLE PLUG PER SK. CT-AH-1, TO ASME, SA-105, H=2.609" | 1 | | | | | E | | | |
| 14 | ***** CT-4012-3 | 112 | 1 | ———— DITTO ——— | 1 | | | | | E | | | |
| 15 | ***** CT-4012-3 | 112 | 1 | ———— DITTO ——— | 1 | | | | | E | | | |
| | | | | 35" O.D. SP. END PROT. PER SK. # CT-EP-1 | 2 | | | | | E | | | |
| | | | | 8-750" D. BEVEL END PROT. | 5 | | | | | E | | | |
| | | | | 6" PIPE SIZE B.E. PROT. | 1 | | | | | E | | | |
| | | | | 35" SPIDER BRACING PER CT-ES-1 | 2 | | | | | E | | | |

Nuclear Safety Related

Code Time Sec. III, Cl. 2

Class DUKE 'B'

Job Supplier JS 118

MFG. Code _____

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING ASSEMBLIES*

(As Required by the Provisions of the ASME Code Rules)

1. Fabricated by ITT Grinnell Ind. Piping, Inc. Kernersville Order No. 7128
(Name and Address of Fabricator)

2. Fabricated for Duke Power Company, Charlotte, NC Order No. C-12517
(Name and Address)

3. Owner Duke Power Company 4. Location of Plant Newport, SC

5. Piping System Identification MAIN - Steam
(Brief description of intended use, main coolant etc.)

(a) Drawing No. CT-11-258 Prepared by ITT Grinnell Industrial Piping, Inc.

(b) National Board No. N/A

6. The material, design, construction, and workmanship complies with ASME Code Section III, Class N-2
Edition 1974, Addenda Date Winter 1974, Case No. N/A

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report N/A
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

Supplemental Sheets 2 --- Drawings
3, 4, 5 --- Bill (s) of Material

7. Shop Hydrostatic Test Field psi.

8. Description of piping inspected Piece Mark Number CT-5M-7C
(Include - mark no. - material spec. - nom. pipe size - schedule or thickness - length)

See Attached Sheets

- fittings - flanges, etc.)

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date 10-30-78 Signed ITT GRINNELL Ind. Piping, Inc. By [Signature]
(Fabricator)

Certificate of Authorization Expires 7-16-79 Certificate of Authorization No. N-1456

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission, issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Connecticut and employed by * of Hartford, CT. have inspected the piping described in this Data Report on 10/30/78, and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III.*The Hartford Steam Boiler Inspection and Insurance Co. By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 10/30/78, 1978
(Inspector) [Signature] Commission N-1456
National Board, State, Province and No.

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in Items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 7, "Remarks".
Printed in U.S.A. (2/73)

CT-5M-7C

ITT Grinnell Industrial Piping Inc.

KERNERSVILLE, N. C.

FORM 1001 REV. 1
Q.A. FORM 210

CONT. NO. 7127

NAME DUKE POWER COMPANY

LOCATION CATAWBA UNIT #1

Charlotte, N.C. 1/15" OF ACCESS HOLE PLUG SHALL
C-12517 5/102 SHALL BE TO CT-AH-1 REQUIRED.

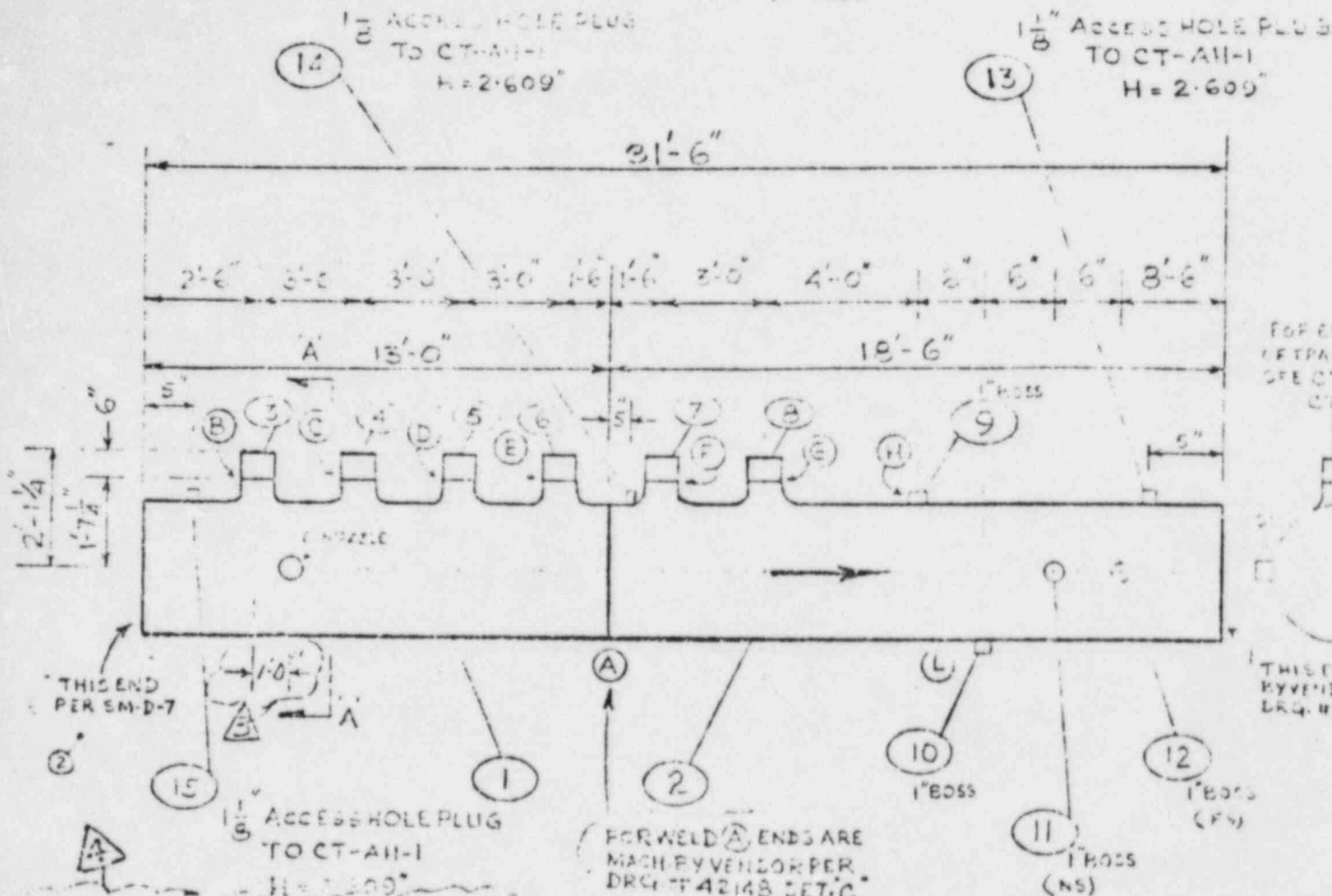
REDRAWN 10-24-77 CHK'D

REV. 10-12-77 CHK'D

REV. 10-23-78 CHK'D

REV. 10-23-78 CHK'D

REV. 10-23-78 CHK'D



NOTE: C-T-AH-1 IS ALWAYS TO BE USED FOR ALL ACCESS HOLE PLUGS.

MACHINE MARK
PER SKETCH SM-D-7
EXACT AS NOTED

SECTION A-A

Nuclear Safety Related

CLASS PIPE LINE SPEC. DS 100-5 (10) APP. CODE ITA, Sec. III, Cl. 2 NO. REQ'D

| | | | | | |
|---------------------|---|------------------|------------|---|---------------------|
| Radiography (RT) | ✓ | Special Marking | Preheat | ✓ | Cert. of Compliance |
| Mag. Particle (MT) | ✓ | Special Cleaning | Heat Treat | ✓ | MHI Test Reports |
| Liq. Penetrant (PI) | ✓ | Painting | Code Stamp | ✓ | Data Reports |

SYSTEM 100-5 (10) FAB. SPECS. 100-5 (10)

REF. DRWG NO. CT-112-SM-D-7 (REV) PRESS. 1180 PSI. TEMP. 22 °F. WT. 4 LBS.

PIECE MARK CT-SM-7C REGISTER CT-01-2-A

H. GRINNELL INDUSTRIAL PIPING, INC. H. GRINNELL IND. PIPING

KERNERSVILLE, N. C.

Register No. CT-01-28X

MATERIALS RECORD
PRODUCTION PLANNER

Sheet 3 of 5

Piece Mark CT-SM-7C

Job Name

DUKE POWER COMPANY

CATAWPA UNIT #1

Charlotte, N.C.

Contract No. 712

Location

C-12517

DESCRIPTION

PART NUMBER

SYS- MAIN STEAM

QUAN
OR
LENG

QUALITY CONTROL

HEAT
NUMBER

DOCUMENTATION

STATUS

UNIT

UNIT FIRST
P.O.

DIS
SENDING

NET

CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

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CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

CT-01-2 2.1.5 2.3.7 13'-0" LG. SAFETY VALVE

Code Spec. III, Cl. 2

Class DUKE 'B'

Nuclear Safety Related

Job Supplement JS 118

MFG. Code

GRINNELL INDUSTRIAL PIPING, INC. ITT GRINNELL IND. PIPING

Register No. CT-01-28X **KERNERSVILLE, N.C.** Sheet 4 of 5

MATERIALS RECORD **PRODUCTION PLANNER**

Duke Power Company
CATAWBA UNIT #1
Charlotte, N.C.

Piece Mark CT-SM-7C Job Name PO-C-12517 Revision No. 1 Revision Date 7-12-71 Location PO-C-12517

| PART NUMBER | SYNOPSIS | DESCRIPTION | QUANTITY OR LENG | QUALITY CONTROL | | STATUS | ACCOUNTING MATERIAL | |
|-------------|----------|-----------------------------|------------------|-----------------|--------------------|--------|---------------------|-----------------|
| | | | | HEAT NUMBER | DOCUMENT PROCESSED | | UNIT PRICE P.O. | DUS. INDOOR NET |
| 1 | 1 | 10" X 8750-D FORGED C.S. | 1 | | | | | |
| 2 | 1 | TRANSITION PC MATERIAL | 1 | | | | | |
| 3 | 1 | TO ASME SA-105 HT. Δ | 1 | | | | | |
| 4 | 1 | (L = LENGTH = 6") | 1 | | | | | |
| 5 | 1 | (PER DET. CT-SM-3) | 1 | | | | | |
| 6 | 1 | DITTO | 1 | | | | | |
| 7 | 1 | DITTO | 1 | | | | | |
| 8 | 1 | DITTO | 1 | | | | | |
| 9 | 1 | DITTO | 1 | | | | | |
| 10 | 1 | DITTO | 1 | | | | | |
| 11 | 1 | 1" X 8750-D SPANWELD BOSS | 1 | | | | | |
| 12 | 1 | TO SA-105 PER DET. CT-SM-3 | 1 | | | | | |
| 13 | 1 | DITTO | 1 | | | | | |
| 14 | 1 | DITTO | 1 | | | | | |
| 15 | 1 | DITTO | 1 | | | | | |
| 16 | 1 | DITTO | 1 | | | | | |
| 17 | 1 | DITTO | 1 | | | | | |
| 18 | 1 | DITTO | 1 | | | | | |
| 19 | 1 | DITTO | 1 | | | | | |
| 20 | 1 | DITTO | 1 | | | | | |

Code KT-200, III, Cl. 2 Class DUKE B MFG. Code 1

Job Supplement JS 118

Nuclear Safety Related

WILLIAMS INDUSTRIAL PILING, INC. 111 CHURCH ST. WILMINGTON, N.C.

KERNERSVILLE, N.C.

Register No. CT-01-28X MATERIALS RECORD Sheet 5 OF 5

DUKE POWER COMPANY

Piece Mark CT-SM-7C Job Name SATURN UNIT #1 Revision No. 1 Revision Date 7/12/71

Charlotte, N.C.

| PART NUMBER | DESCRIPTION | QTY OR LBS | QUALITY CONTROL NUMBER DOCUMENT # | STATUS | ACCOUNTING MATERIAL | |
|-------------|--|------------------|--------------------------------------|--------|---------------------|----------------|
| | | | | | UNIT PRICE | DHS STOCK # |
| 1142 | 1" ACCESS HOLE PLUG PER SM. CT-AH-1, TO ASME, SA-105, H=2.609" | 1 | | E | | |
| 1142 | DITTO | 1 | | E | | |
| 1142 | DITTO | 1 | | E | | |
| 1142 | 35" O.D. SPIDER BRACING PER SKIFF CT-EP-1 | 2 | | E | | |
| 1142 | 35" O.D. BEVEL END PROT. | 5 | | E | | |
| 1142 | 6" PIPE SIZE B.E. PROT. | 1 | | E | | |
| 1142 | 35" SPIDER BRACING PER CT-ES-1 | 2 | | E | | |

all checked

Nuclear Safety Related

Code Time Sec. III, CI 2 Class DUKE 'B' MFG. Code

Job Supplement J'S 118