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TEDESCO,R.L. Assistant Director for Licensing

SUBJECT: Requests relief from ASME Section XI requirements re welds found to be partially inaccessible during first 90% of preservice insp baseline. Remaining 10% of baseline exams should be completed before June 1982.

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Washington Public Power Supply System
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Docket No. 50-397

January 28, 1982
G02-82-121

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

Attention: R. L. Tedesco
Assistant Director for Licensing
Division of Licensing

Subject: NUCLEAR PROJECT 2
ASME SECTION XI INSERVICE INSPECTION
REQUEST FOR RELIEF NO. PSI-2-001

References: a) G02-81-545, dated December 23, 1981, GD Bouchey (Supply System) to RL Tedesco (NRC), "Response to NRC Questions on the WNP-2 Preservice Inspection Program"

b) Draft Memorandum, WV Johnson (NRC) to RL Tedesco (NRC), "Meeting with WPPSS Concerning the Preservice Inspection Program on October 9, 1981"

Reference a) transmitted the Supply System's responses to the Reference b) questions. This letter transmits a copy of Request for Relief from ASME Section XI requirements, PSI-2-001, which supplements responses to items 1, 2, and 13 in Reference b).

This Request for Relief represents welds found to be partially inaccessible during the first 90 percent of the Preservice Inspection (PSI) baseline. The remaining ten percent of the PSI baseline exams should be completed

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before June 1982. At that time, Request for Relief PSI-2-001 will be updated to include all welds that did not meet Section XI examination requirements.

G. D. Bouchey - 370
Deputy Director,
Safety and Security

DPR/sms

Attachment

cc: R. Auluck, NRC
H. R. Canter, B&R RO
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A. I. Cygelman, B&R RO
R. Feil, NRC Site
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J. A. Forrest, B&R RO
O. Lageraaen, B&R NY
N. D. Lewis, EFSEC
F. A. MacLean, GE
A. Schwencer, NRC
R. E. Snaith, B&R NY
L. Santos, GE
J. J. Verderber, B&R NY

NOTES TO FOLLOWING WELD TABLES

A. Isometric drawing numbers (Iso. No.) which start with a "1" such as MS-101 are Code Class 1 and Section XI Category B-J.

B. Isometric drawing numbers (Iso. No.) which start with a "2" such as MS-201 are Code Class 2 and Section XI Category C-F.

C. The entire reactor pressure vessel (RPV) was completely examined except for the small areas identified under remarks on the following RPV (category B-A) weld tables.

REQUEST FOR RELIEF NO. PSI-2-001

Component or System

ASME Class 1, Section XI Category B-A* pressure retaining welds in reactor pressure vessel. List attached.

ASME Class 1, Section XI Category B-J pressure retaining welds in piping. List attached.

ASME Class 2, Section XI Category C-F pressure retaining welds in piping. List attached.

Code

All of the subject welds were designed and fabricated to ASME Section III Class 1 or 2. The Preservice Inspection is to be performed to the 1974 Edition Summer 1975 Addenda of ASME Section XI.

Number of Welds

Category	No.
B-A	13
B-J	5
C-F	4

Section XI Requirements

Section XI requires examination of 100% of the pressure retaining welds in Categories B-A*, B-J and C-F be performed completely as a Preservice Inspection before initial plant startup. The following examinations are required:

B-A*

All pressure retaining welds in Reactor vessel.	volumetric

B-J

Circumferential and longitudinal piping welds.	volumetric
Branch pipe connection welds exceeding 6-inch diameter.	volumetric
Branch pipe connection welds 6-inch diameter and smaller.	surface
Socket welds.	surface

C-F

Circumferential butt welds.	volumetric
Longitudinal welds joints in fittings.	volumetric
Branch pipe-to-pipe welds joints.	volumetric

Basis for Requesting Relief

Relief is required from ASME Section XI examination requirements on the basis of partial inaccessibility of the weld due to plant design. The specific inaccessibility problem for each weld is explained under remarks on the attached tables.

Alternative Examinations

The welds (except for the following) in this request for relief are partially inaccessible to all examination methods.

20 RHR(1) A-4 (RHR-201)
20 RHR(1) B-4 (RHR-207)

These two welds will be examined by UT in the areas where PT was not possible.

Impact on Plant Quality and Safety

There will be no adverse impact on plant quality and safety by doing only a partial code examination of these welds.

1. The Class 1 piping welds have passed radiographic and dye penetrant examinations in accordance with Section III.

2. The Class 2 piping welds have passed radiographic examination in accordance with Section III.

3. The Class 1 RPV welds have passed radiographic, magnetic particle and ultrasonic examinations in accordance with Section III.

4. All of the identified welds will be subject to a system pressure test in accordance with Section XI Class 1 or 2 requirements.

5. Leak detection systems identify significant leakage in the areas of the subject piping welds. Appropriate operator action would occur due to leak detection system alarms.

6. Alternate systems can bring the reactor to a safe shutdown.

7. Other similar welds in the vessel or same piping run will receive full code examinations. The integrity of the pressure boundary can thus be verified by sampling.

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*Category B-A per 1977 Edition Summer 1978 Addenda, this includes both Category B-A and B-B welds per 1974 Edition, Summer 1975 Addenda. Category B-A and B-B have been combined into B-A in later codes. The WNP-2 PSI Program considers these Category B-A so the PSI Program will be consistent with the ISI Program.

CATEGORY B-A

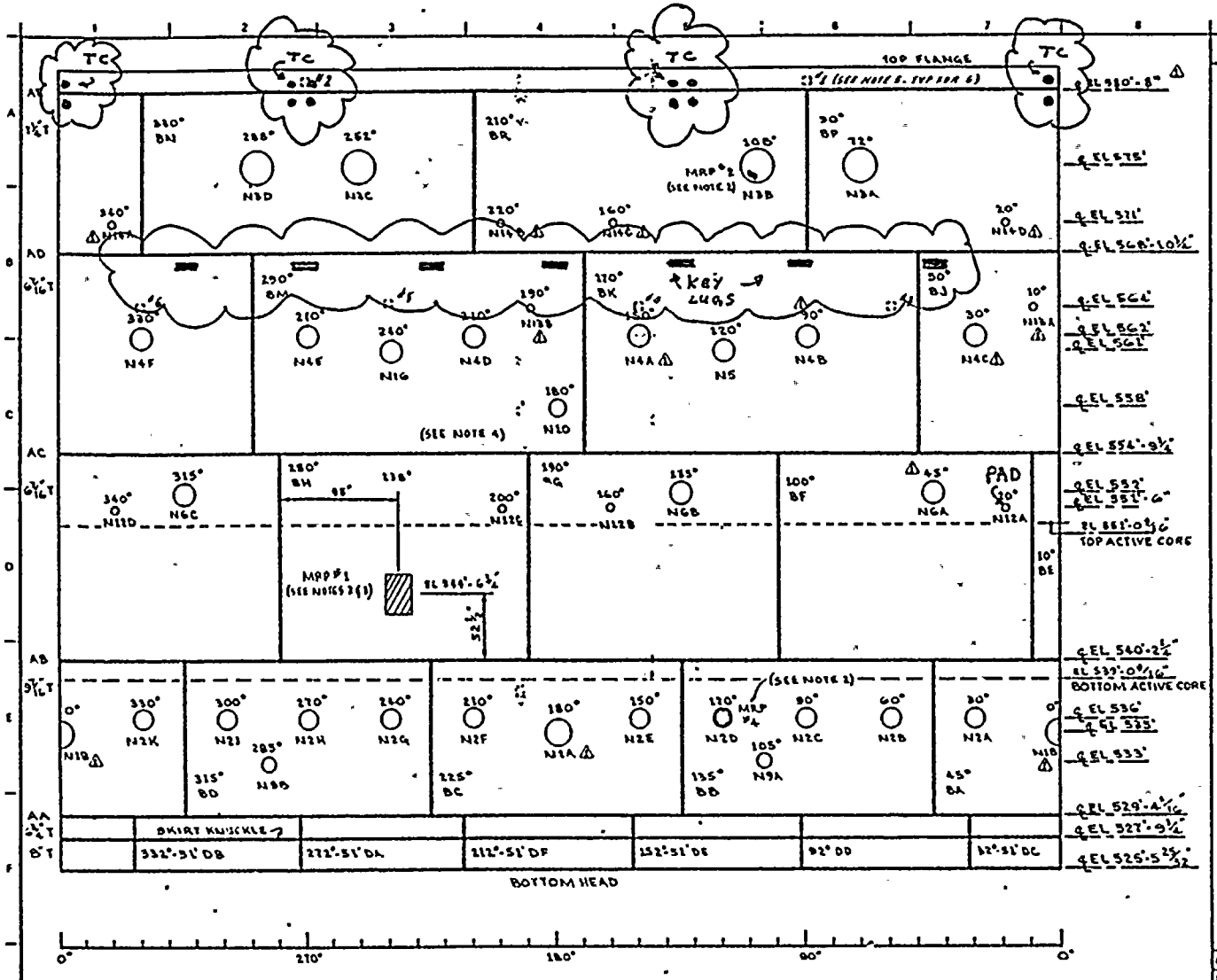
ISO. NO.	WELD NUMBER	DATA SHEET	DESCRIPTION	SECTION III EXAM	REMARKS
RPV-101	AE	1210-1, 1A, 2, 2A, 3	Vessel to Flange	MT, UT, RT	Thermocouples at 135°, 270°, and 360°
RPV-101	AD	1210-13, 14, 15, 5, 9, 7, 8, 16	#3-#4 SC-CRC WD	MT, UT, RT	7 2-foot long key lugs obstruct weld @ 45° intervals
RPV-101	BJ	1210-5, 7, 8	#3 SC VRT WD @ 50°	MT, UT, RT	Key lug at weld AD intersection
RPV-101	BK	1210-6, 46, 16, 21	#3 SC VRT WD @ 170°	MT, UT, RT	Key lug at weld AD intersection
RPV-102	DA	1210-35, 38, 42	BTM HD MRD @ 272	MT, UT, RT	Thermocouples at weld AA intersection Note: The above UT exams were done by NES before the vessel was installed.
RPV-102	DG	RPU-085, 075, 094, 126	BOT HD DOL @ 270°	MT, UT, RT	See Note 1
RPV-102	DR	RPU-086, 076, 095, 127	BOT HD DOL @ 90°	MT, UT, RT	See Note 1
RPV-102	DA	RPU-088, 116, 078, 110, 104, 106	BOT HD MRD @ 272°	MT, UT, RT	See Note 2
RPV-102	DB	RPU-089, 117, 079, 111, 099, 107	BOT HD MRD @332	MT, UT, RT	See Note 2

CATEGORY B-A

ISO. NO.	WELD NUMBER	DATA SHEET	DESCRIPTION	SECTION III EXAM	REMARKS
RPV-102	DC	RPU-090, 118, 080, 112, 100, 108	BOT HD MRD @ 32	MT, UT, RT	See Note 2
RPV-102	DD	RPU-091, 119, 081, 113, 101, 109	BOT HD MRD @ 92	MT, UT, RT	See Note 2
RPV-102	DE	RPU-092, 120, 082, 114, 102, 122	BOT HD MRD @ 152	MT, UT, RT	See Note 2
RPV-102	DF	RPU-093, 121, 083, 115, 103, 123	BOT HD MRD @ 212		See Note 2

Note 1: Only 12" to 23" on each end of the weld, starting from the intersection of weld AJ, can be examined due to CRD penetrations and housings.

Note 2: Only 21" starting from the intersection of weld AA and 14" starting from the intersection of weld AJ can be examined due to vessel support skirt. (Approximately one foot is not being examined on each weld.)



NOTES:

1. REFER TO PROGRAM PLAN & SCHEDULE TABLES FOR EXAMINATION & CALIBRATION BLOCK REQUIREMENTS.
2. "MRP" INDICATES MAJOR REPAIR AREA. MRP #3 AT N2E NOZZLE TO SAFE END WELD PREP IS NOT SHOWN.
3. MRP #1 IS 2¾" TO 3⅛" IN DEPTH & IS 15" WIDE BY 30" HIGH. NOTE THAT MRP #1 AREA CENTER IS DIMENSIONALLY REFERENCED.
4. FOR DETAILS OF NOZZLE ASSEMBLY SEE RPV-115.
5. CLADDING PATCH LOCATIONS: #1 @ 90° AZ., #2 @ 210° AZ ARE 21" BELOW FLANGE LIP. #3 @ 60° AZ., #4 @ 150° AZ., #5 @ 240° AZ., #6 @ 330° AZ ARE 24" ABOVE THE N4 NOZZLES.

REFERENCES

BURNS & ROE DRAWING
. M886 REV L

NO	DATE	REVISION	BY	CHKD	APPVD
3	12-2-81	EL 551'-6" WAS 551' LOWERED ALONG CORE LINE TO COINCIDE	KMA	DWR	RA
2	11-5-80	ADDED ELEVATIONS - ACTIVE CORE	KMA	WFR	RA
1	5-13-79	REVISED NOTE LETTERS, PER AS BUILT, ADDED NOTES 4 & 5	KMA	RA	RA
0	11-27-78	ISSUED FOR USE	KMA	RA	RA
A	5-23-78	ISSUED FOR INFORMATION ONLY	KMA	DWR	DWR

PIPING SYSTEM	NOM DIA (IN)	SCH	NOM WALL THK	MATERIAL SPECIFICATION	MATL TYPE	CAL BLOCK NO
REACTOR PRESSURE VESSEL	251	N.A.	6 1/16 - 9 15/16	SA 533 GR B	CS	NOTE 1

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY.

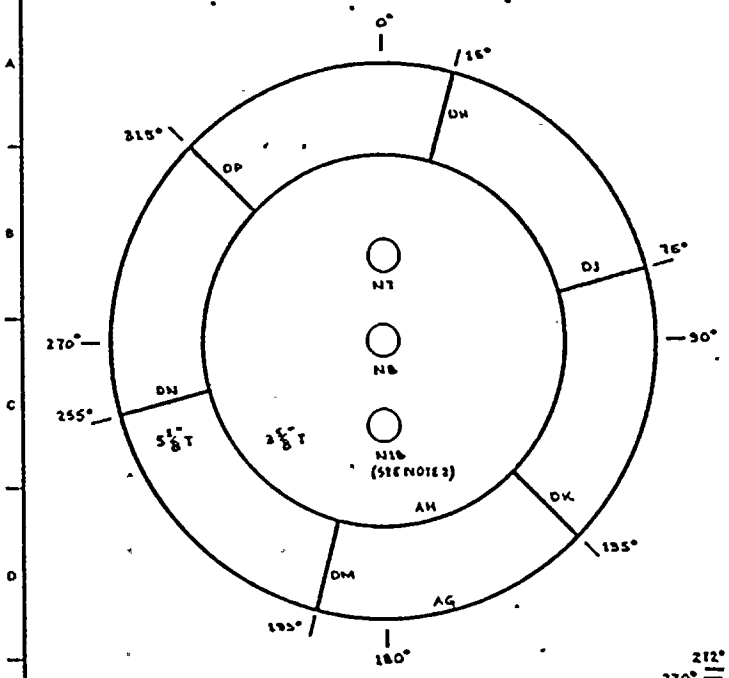
QUALITY CLASS. 1	ASME CODE CLASS - 1
ENGR. K HANNAH	DRAWN: K.M.A.
DATE. 2-23-78	

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
RICHLAND WASHINGTON 99352

WNP 2
WELD & COMPONENT IDENTIFICATION DIAGRAM

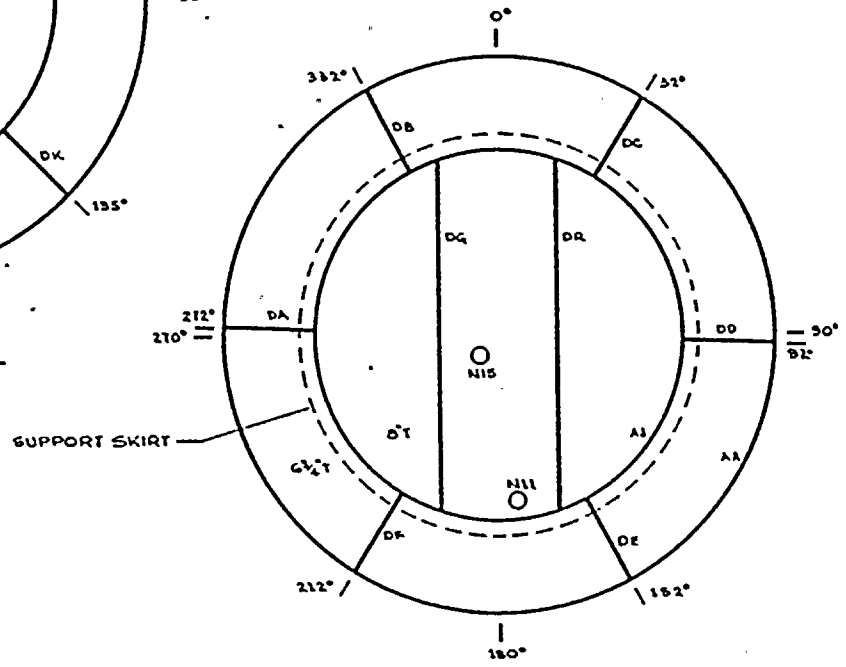
TITLE:
REACTOR PRESSURE VESSEL ROLL-OUT

DWG NO. RPV-101 REV B



TOP HEAD ASSEMBLY (RPV)

PLAN VIEW



BOTTOM HEAD ASSEMBLY (RPV)

INSIDE PLAN VIEW

NOTES

1. REFER TO PROGRAM PLAN & SCHEDULE TABLES FOR EXAMINATION CALIBRATION BLOCK REQUIREMENTS.
2. FOR DETAILS OF NOZZLE ASSEMBLY SEE RPV-111

REFERENCES

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY.

PIPING SYSTEM	NOM DIA (IN)	SCH	NOM WALL THK	MATERIAL SPECIFICATION	MATL TYPE	CAL *BLOCK NO
TOP HEAD	251	NA	$3\frac{5}{8}$, $5\frac{1}{8}$	SA 508 GR B	CS	NOTE 1
BOTTOM HEAD	251	NA	$6\frac{1}{2}$, 8	SA 508 GR B	CS	NOTE 1

NO	DATE	REVISION	BY	CHKD	APPVD
2	12-2-81	INDICATED VESSEL SKIRT (DASHED)	KMA	[illegible]	[illegible]
1	8-30-79	ADDED NOTE 2.	KMA	[illegible]	[illegible]
0	11-22-78	ISSUED FOR USE	KMA	[illegible]	[illegible]
A	6-15-78	ISSUED FOR INFORMATION ONLY	KMA	[illegible]	[illegible]

QUALITY CLASS. | ASME CODE CLASS:

ENGR: G. AKRE | DRAWN: K.M.A. | DATE 2-28-78

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

RICHLAND, WASHINGTON 99352

WNP-2

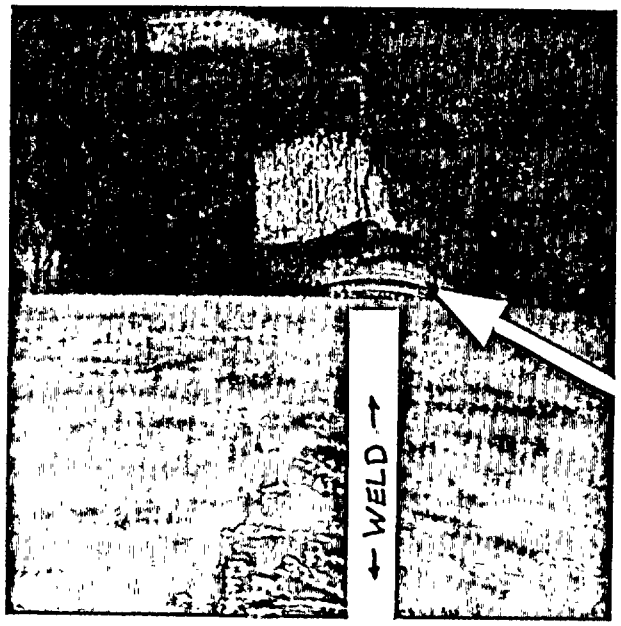
WELD & COMPONENT IDENTIFICATION DIAGRAM

TITLE: REACTOR PRESSURE VESSEL TOP & BOTTOM HEAD WELDS

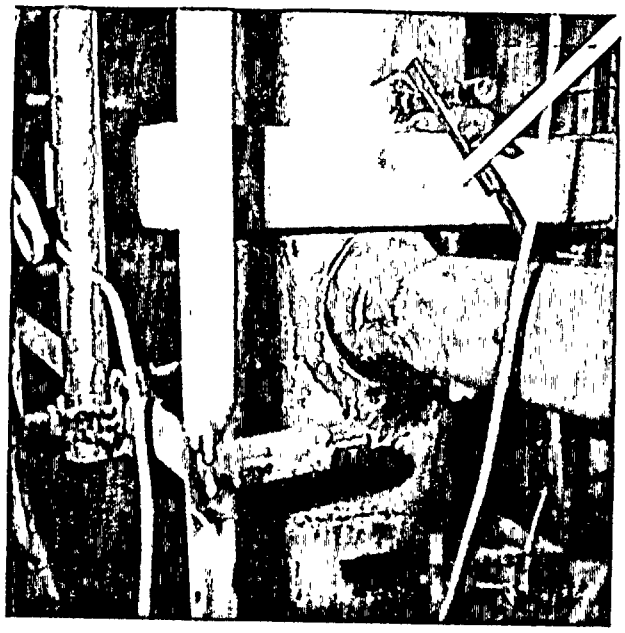
DWG NO. RPV-102 | REV 2

CATEGORY B-J and C-F

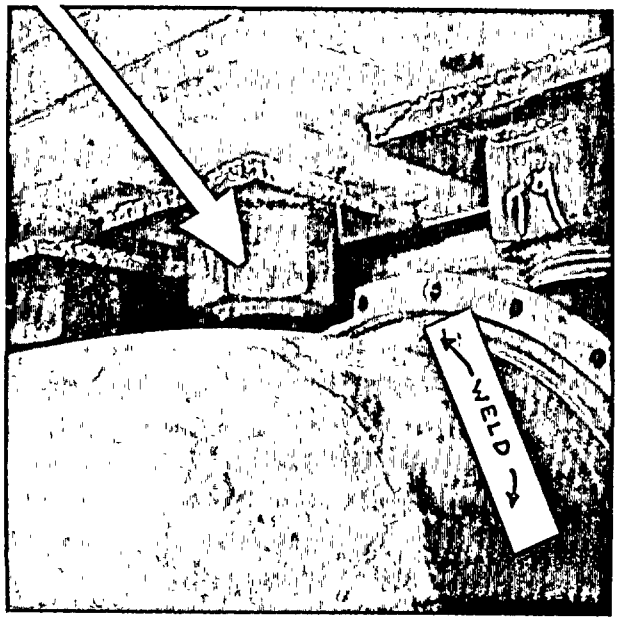
ISO. NO.	WELD NUMBER	DATA SHEET NO.	SEC. XI EXAM	DESCRIPTION	SECTION III EXAM	REMARKS
RHR-201	20 RHR(1) A-4	RHP-190	PT	Pipe to Reducer	RT	No surface exam 330°-30° due to permanent obstruction (6" not examined). Alternate exam UT from 1 side.
RHR-207	18 RHR(1) B-7/ 6 RHR(7)-2	RHP-154	PT	Branch Connector	RT	1½" around 0° not examined due to permanent (welded hanger) interference.
RHR-207	20 RHR(1) B-4	RHP-201	PT	Pipe to Elbow	RT	No surface exam 330°-0°-30° due to permanent obstruction (6" not examined). Alternate exam UT from 1 side.
RHR-207	18 RHR(1) B-42	RHP-201	PT	Pipe to Elbow	RT	No exam 4" around 180° obstructed by permanent hanger.
RFW-101	18 RFW(1) A-4	FWP-046	PT	Pipe to Reducer	RT/PT	2½" around 0° not examined-welded "N" stamp.
RHR-106	12 RHR(1) B-11LDO	RHU-075	UT	Elbow Seam	RT/PT	No exam 4" to 5½" due to branch connection (1½" not examined).
RRC-101	24 RRC(2) A-8LDI	RRU-101	UT	Elbow Seam	RT/PT	No exam 18" to 19" due to instrument line interference (1" not examined).
RRC-101	24 RRC(2) A-8LDO	RRU-101	UT	Elbow Seam	RT/PT	No exam 38" to 40" due to branch connectio (2" not examined).
RRC-102	24 RRC(1) B-6LDI	RRU-112	UT	Tee Seam	RT/PT	No exam 17" to 18" due to fitting (1" not examined).



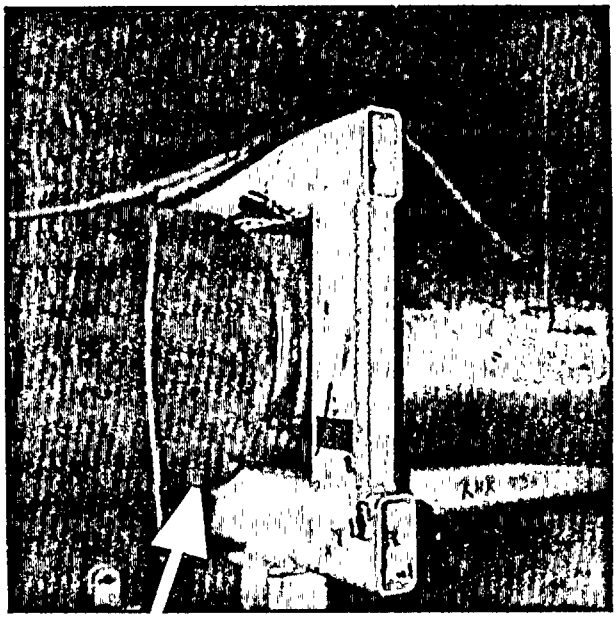
20 RHR (1) A-4



18 RHR (1) B-7/6 RHR (7)-2

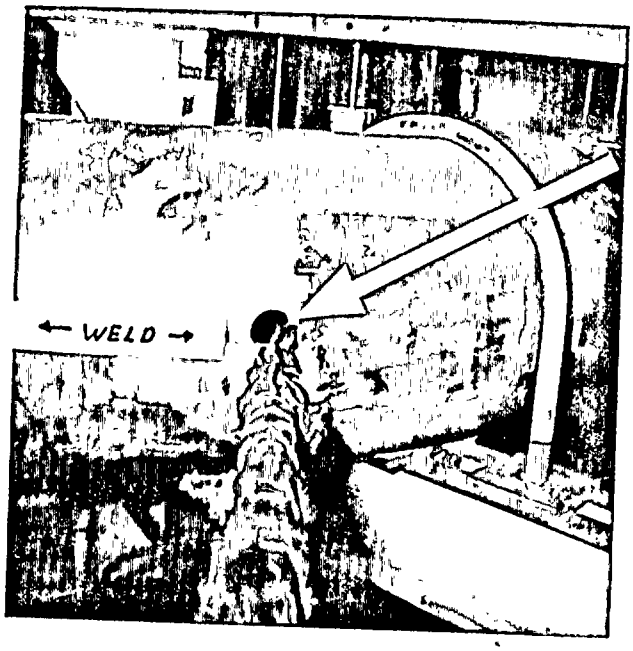


20 RHR(1) B-4

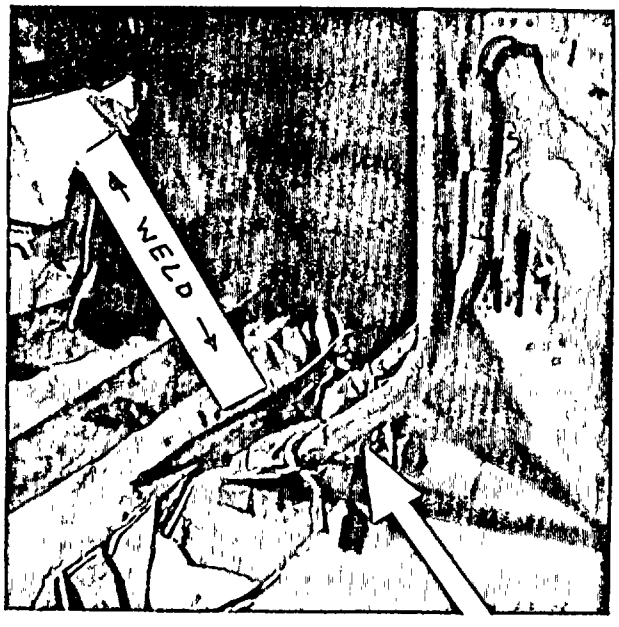


18 RHR(1) B-42

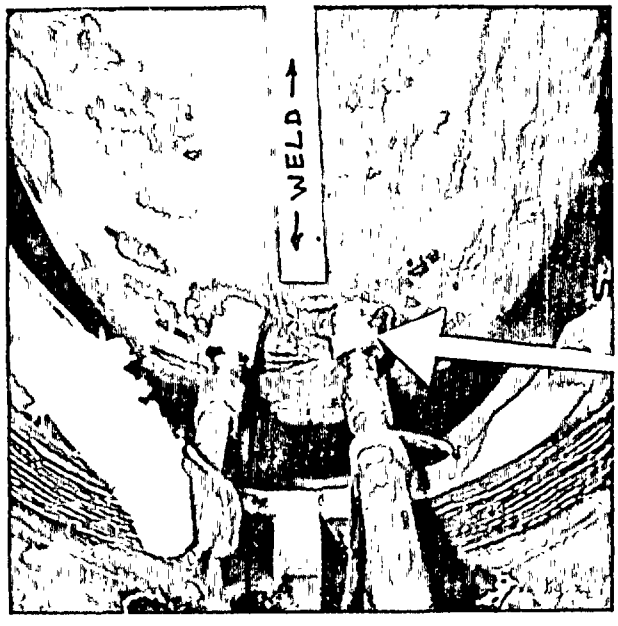
18 RFW(1) A-4



12 RHR(1) B-11LDO



24RRC(2)A-8LDI



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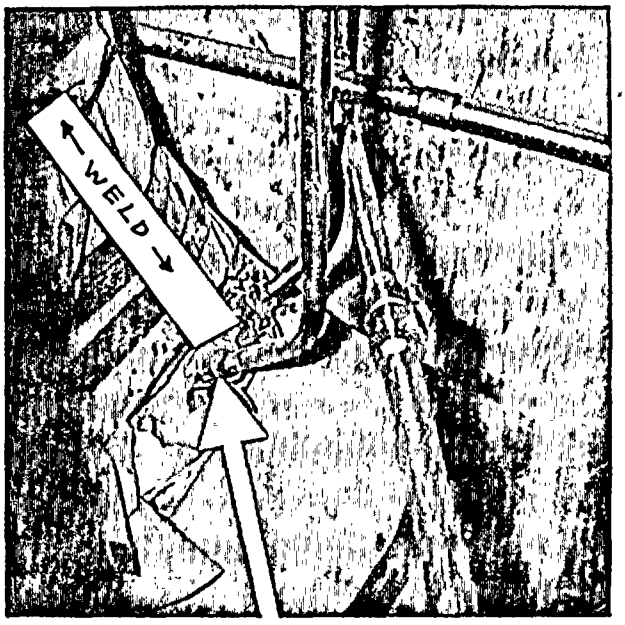

24 RRC(1)B-6 LDI