

# Babcock & Wilcox

Power Generation Group

Cincinnati, Ohio 44203

Telephone: (216) 753-4511

80-537

July 15, 1981



Mr. Victor Stello, Director  
Office of Inspection and Enforcement  
United States Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Stello:

Pursuant to the requirements of 10CFR21 this report, in three copies, is made concerning defects discovered in guide tube assemblies supplied by LAMCO Industries, El Cajon, California for use in the Ex-Vessel Storage Tank, Clinch River Breeder Reactor. The assemblies were shipped from LAMCO to Ishikawajima-Harima Heavy Industries Co. Ltd. (IHI), Yokohama, Japan, B&W's sublet fabricator.

Review of final radiographs of pressure boundary welds made by LAMCO revealed five (5) welds that were not acceptable to ASME Code requirements. Attached is a listing with identification numbers of the guide tubes involved and the applicable drawings. There are a total of five (5) guide tubes in the system. The function of the guide tubes is to serve as sodium level indicators.

The cause of this concern is that the vendor provided a certified fabrication containing a defect which could cause loss of system pressure if installed and operated. Corrective action consists of the following.

1. B&W's evaluation of the LAMCO radiographs has been confirmed by re-radiograph of the rejected welds at IHI. This action was completed on July 13, 1981. Three welds with less than 100% coverage were accepted; one weld with I.D. buildup was accepted; one weld, Mark 27-30 to Mark 27-32 on Guide Tube S/N 1683, initially judged to be a linear indication, was rejected for incomplete fusion.
2. Disposition Instructions to IHI will be provided to make the repair to the defective weld, or, alternatively, the assembly will be returned to LAMCO for repair. Repair is estimated to be complete by October 1, 1981.

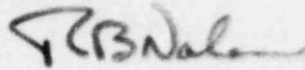
IE19  
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1/1

8107240070 810715  
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IE19

3. The Authorized Inspector at IHI, Yokohama, Japan and B&W's customer, Rockwell-Energy Systems Group, Canoga Park, California has been notified of this concern.
4. B&W will present LAMCO with the radiographic results that verify the non-conforming conditions and request their corrective actions.

Very truly yours,



R. B. Noles  
Manager, Quality Assurance  
Nuclear Equipment Division

RBN/dc

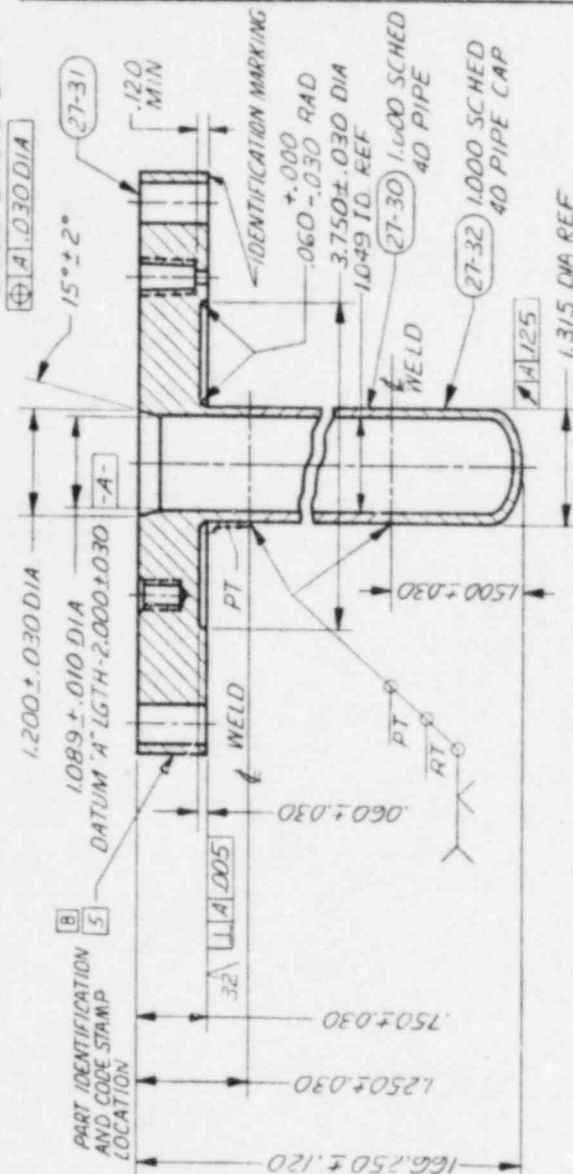
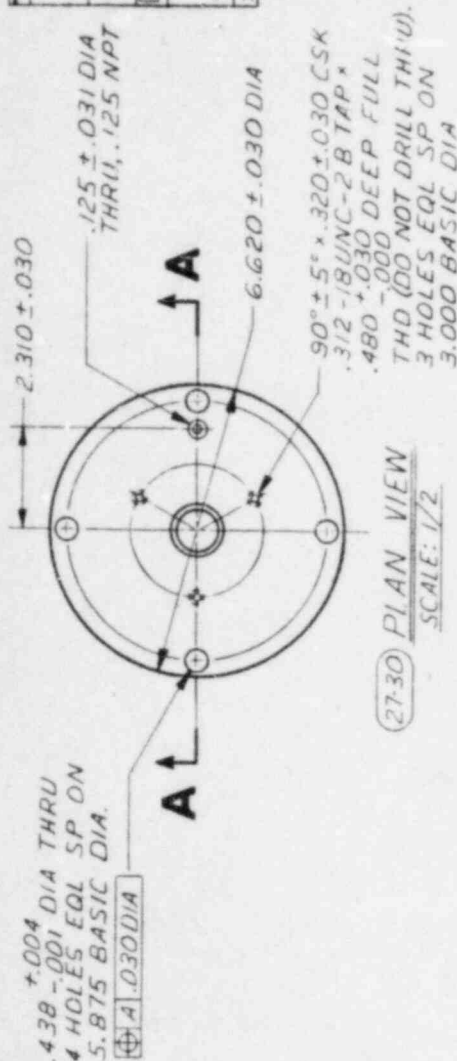
cc: E. S. Gaffney  
Vice President and Plant Manager  
Nuclear Equipment Division  
Babcock & Wilcox Company

R. P. Wallace  
Energy Systems Group  
Rockwell International Corporation  
8900 DeSoto Avenue  
Canoga Park, California 91304

R. Zinns  
Authorized Nuclear Inspector  
No. 6-4, Yamate-Cho  
Naka-Ku, Yokohama  
Kanagawa Pref 231  
Japan

GUIDE TUBE LISTING

<u>Serial Number</u>	<u>B&amp;W Initial Evaluation</u>	<u>IHI Verification</u>
1681	Less than 100% coverage on weld 27-30 to 27-31	Re-radiographed, acceptable.
1682	Excess root reinforcement on weld 27-30 to 27-31	Re-radiographed, acceptable.
1683	Less than 100% coverage on weld 27-30 to 27-31	Re-radiographed, acceptable.
	Linear indication located on centering of weld 27-30 to 27-32	Re-radiographed and visually inspected. Rejected for incomplete fusion on ID of weld 27-30 to 27-32.
1685	Less than 100% coverage on weld 27-30 to 27-31	Re-radiographed, acceptable



SECTION A-A  
SCALE: 1/1

ALL DIMENSIONS AND TOLERANCES UNLESS OTHERWISE NOTED ARE:  
(A) FOR PART TEMPERATURE OF 68°F (B) IN INCHES  
(C) IN ACCORDANCE WITH USASI (ANSI) Y14.5 AND AS FOLLOWS:

- ① - CONCENTRICITY .020 DIA TO ANY RELATED SURFACE
- ② - PERPENDICULARITY .005 MAX
- ③ - PARALLELISM .005 MAX
- ④ - FLATNESS .005 MAX
- SURFACE FINISH: 125 RMR

BREAK SHARP EDGES .005 TO .015 (VISUAL INSPECTION ONLY)  
DEBURR UNMACHINED SHARP EDGES .062 MAX (VISUAL INSPECTION ONLY)  
OVERALL DIMENSIONS APPLY AFTER WELDING

REV	DESCRIPTION	DATE	APPROVAL
1	REVISED NOTES 3, 5 & 6	9/14/74	TLG
2	(C-4) ADDED "AND CODE STAMP LOCATION" 1 ADDED	9/16/74	JCA
3	(B-2) ADDED NOTE 8	REV/TWT	TWT
4	(B-2) ADDED 1.049 ID. REF. 2.5" 1.315 DIA REF WAS 1.315	9/16/74	TWT

# NOTES

- FOR GENERAL NOTES SEE "CLOSURE HEAD ASSEMBLY" DRAWING NO 253802E
- FABRICATION SHALL FOLLOW FABRICATION AND ASSEMBLY PROCEDURE INCLUDING LATEST REVISION
- THIS COMPONENT SHALL BE FABRICATED IN ACCORDANCE WITH THE ASME BOILER & PRESSURE VESSEL CODE SECTION III, CLASS 2, 1974 EDITION AND SUMMER 1975 ADDENDA, AND ATOMICS INTERNATIONAL SPECIFICATION NUMBER N099406200G, AS CERTIFIED BY B & W QA PROCEDURE
- VISUALLY INSPECT THE CONTOUR AND FINISH OF OUTSIDE SURFACES AND THE CONTOUR AND SURFACE CONDITION OF THE INSIDE SURFACE OF WELDS
- IDENTIFY PER 12-3-MIP 500 IMPRESSION STAMP
- CLEAN REQUIREMENTS PER 12-3-CT-500
- SYMBOL DESIGNATION  
PT - LIQUID PENETRANT INSPECTION  
RT - RADIOGRAPHIC INSPECTION
- CODE STAMP DATA SHALL BE STAMPED WITH BLUNT NONED CONTINUOUS STAMP. ALL OTHER STAMPING, MARKING, ETC. SHALL NOT BE WITHIN 2.000 IN. OF THE CODE STAMP DATA.

CONTRACT NO 610-0234-52

CLOSURE HEAD EVST  
GUIDE TUBE ASSY-  
SODIUM LEVEL  
INDICATOR

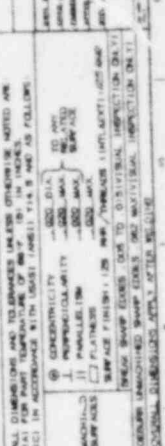
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
WTD	DATE

SCALE NOTED

173173 C 3

[illegible]

CONTRACT NO 610-0234-52	DATE ORDERED 12-1-59	QUANTITY 1	UNIT PRICE \$ 253.86	TOTAL \$ 253.86
ITEM NO	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
1	CELOSURE HEAD	1	253.86	253.86
2	GUIDE TUBE ASSY	1	253.86	253.86
3	SODIUM LEVEL INDICATOR	1	253.86	253.86
4	8 SUPPLEMENT TUBE ASSY	1	253.86	253.86
5	DEEP READING TUBE	1	253.86	253.86
6	INDICATION SET & ASSY	1	253.86	253.86



27-37 GUIDE TUBE ASSY  
SODIUM LEVEL INDICATOR PORT 30  
18F00