

PPPL NONCONFORMANCE REPORT

NO. 3459

QA-005

Rev 2, 4/93

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Page 1 of 1 Status 9 - CLOSED NCR Trend 01-DEVIATION FROM DOC/PROC Date 6/24/1999
Department NSTX Division NSTX PROJECT

Source/Org NSTX PROJECT
Item Drawing/Part# EDB-1051 Rev. 0 Procurement # IP-NSTX-2163 Cost Center _____
RAP # 2796 JOB Document # IP-NSTX-2163 Vendor _____
RAP Title: Assembly of PFC Components Inside of Vacuum Vessel

Hold Tag Applied Yes No

NONCONFORMING CONDITION (include requirement(s) violated):
Passive Plate Bracket Installation on Vessel
1- Magnetic permeability on some welds exceed dwg. note specified limit of 2.0 mu. (see attached weld sheets);
2- Most 1053 and 1055 (vertical straight and curved weldments) not welded per detail. (See attached weld sheets and copy of memo to E. Perry.

Lot Size Recd _____ Sample Size Insp _____ Lot Rejected _____ # Rejected _____
Reported By BOSCOE J Validated By MALSBURY J Validated Date 06/24/99

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DISPOSITION: REWORK* __ REPAIR* __ USE AS IS __ RETURN TO VENDOR __ SCRAP __

USE AS IS

Design Change? Enter Drawing/Spec # _____

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* FOR REWORK OR REPAIR OF VENDOR SUPPLIED EQUIPMENT, FILL IN INFORMATION BELOW:
Hours _____ \$ Est Labor _____ \$ Material _____
\$ Burden _____ \$ G&A _____ \$ Total _____

DISTRIBUTION
COG E. Perry _____
Insp BOSCOE J _____
Project Document Control
QC Files
MALSBURY J
J. Malsbury
J. Chrzanowski
G. Barnes

Disposition By Perry E Date 06/24/99
Supervisor's Signature Neumeyer C Date 06/24/99
Eng. Dept. Head Concurrence Williams M Date 06/24/99

QC SIGNOFF
PQA/QC Mgr Dispo Concur. Boscoe J Date 06/24/99
QC Field Verification By N/A Date _____

From J Boscoe To E Perry

Re: Welding of Vertical Straight (1053) and Vertical Curved Support Brackets (1055)

Because of fit-up - assembly gap issues on the above mentioned components & instructions (verbal) were given per Chrzanowski/Barnes to use $\frac{1}{4}$ " thick $\times \frac{1}{2}$ " ~~wide~~ bridge-transition pieces to overcome these gaps. Due to worries about excessive installation time it was decided that doubling up on weld size, $\frac{1}{8}$ " fillet to $\frac{1}{4}$ " fillet would decrease required weld length by $\frac{1}{2}$, or an increase of weld size from $\frac{1}{8}$ " fillet to $\frac{3}{16}$ " fillet would decrease the required weld length by $\frac{1}{3}$. Welder - Tig torch accessibility for full length welds up both sides of pieces were also a factor in this decision. The design drawing - weld detail in question is EDB-1051.

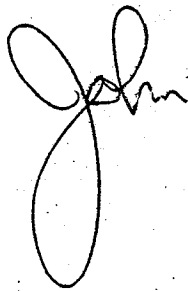
I believe it was intended for CR 70 to cover this (along with many other modifications - tweaking to original design). This change did not get included on CR 70.

In addition, I noticed on inspection of the lower support-brackets that the unwelded portions of the vertical curved brackets #1055 ("bobsleds") are the $\frac{1}{3}$ of length including the curved sections. My most recent concern was the remote possibility that this could adversely affect stress calculations.

for these support brackets. The welds on the vertical straight brackets (1053) are more symmetrical in the finished weldment and would not appear to be as much of an issue.

These welding modifications along with previously discussed above-spec magnetic permeability readings are the current issues of my pending NCR

Any questions please call

A handwritten signature in cursive script, appearing to read "John". The signature is written in black ink and is centered below the text "Any questions please call".

Quality Checklist/Report for Visual Weld Inspections

Q-003, Rev. 0, Attachment 1 Page 1 of 8

RAP No. 2196 CODE: ASME AWS DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. I.P. 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

Upper Supports

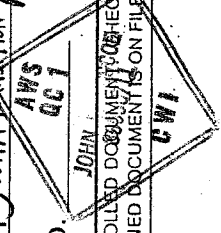
EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RORD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	1	10	*JES				Bay E Left side 2.2u to 2.5u - 1 transition pieces used
1055	2	10			Boorce		
1057	3	10			Boorce		
1059	4	10			Boorce		
1053	5	5					Bay R Left rightside 2.2u to 2.5u
1055	6	5			Boorce		Left side 2.2u to 2.5u
1057	7	5			Boorce		
1059	8	5			Boorce		
1053	9	10					Bay F right side 2.2u to 2.5u
1055	10	10			Boorce		right side 2.2u to 2.5u
1057	11	10			Boorce		
1059	12	10			Boorce		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: *Weld sizes increased or transition pieces used to compensate for assembly gap. 1057 & 1059 not accessible for magnetic permeability measurement See NCR #3459

1053 & 1055 pcs (Vertical curved & straight weldmnt.) with transition pieces only accessible for magnetic permeability measurement (with exceptions noted in remarks)

INSPECTED BY: John Boorce CWINO: _____ DATE: 3-25-96



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RAP No. 2796 CODE: ASME AWS DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. JP 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

Upper Supports

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RQRD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	13	10	*g20		g Brace	Bay G right side 2.5u to 3.0u	
1055	14	10			g Brace 3-25-99		
R 1057	15	10			g Brace 3-25-99		
L 1059	16	10			g Brace 3-25-99		
1053	17	10				Bay H	
1055	18	10			g Brace 3-26-99	no transition pcs used	
R 1057	19	10			g Brace 3-26-99		
L 1059	20	10			g Brace 3-26-99		
1053	21	5			g Brace	Bay A right side 2.5u to 3.0u left side 2.2u to 2.5u	
1055	22	5			g Brace	left side 2.2u to 2.5u	
1057	23	5			g Brace 3-26-99		
1059	24	5			g Brace 3-26-99		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: Weld sizes increased or transition pcs used to make up assembly 399.
1057 & 1059 not accessible for magnetic permeability measurement See NCR # 3459

1053 & 1055 pcs (vertical curved & straight weldment) with transition pieces are only areas accessible for Magnetic permeability measurement (with exceptions noted in remarks)
 INSPECTED BY: John Borace CWINO: DATE: 3-26-99

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RAP No. 2796 CODE: ASME AWS DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. IP 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

Upper Supports

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RQRD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	25	5	*ggs		g Boorue		Bay L Left & right side 2.2u to 2.5u
1055	26	5			g Boorue		Left & right side 2.2u to 2.5u
1057	27	5			3-26-99 g Boorue		
1059	28	5			3-26-99 g Boorue		
1053	29	5			g Boorue		Bay B Left & right side 2.5u to 3.0u
1055	30	5			g Boorue		Right side 2.2u to 2.5u
1057	31	5			3-26-99 g Boorue		
1059	32	5			3-26-99 g Boorue		
1053	33	5			g Boorue		Bay C Left side 2.5u to 3.0u right 2.2u to 2.5u
1055	34	5			g Boorue		Left & right side 2.2u to 2.5u
1057	35	5			3-26-99 g Boorue		
1059	36	5			3-26-99 g Boorue		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: *Weld sizes increased or transition pcs used to make up assembly gap.

1057 & 1059 not accessible for magnetic permeability measurement See NCR # 3459

1053 & 1055 pcs (vertical curved & straight weldment) with transition pieces are only areas accessible for magnetic permeability measurement (with exceptions noted in remarks)

INSPECTED BY: John Boorue

CWINO.

DATE: 3-26-99

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RAP No. 2796 CODE: ASME AWS DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. JP2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

Upper Supports

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RQRD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	37	10 & S	g		g		Bay D no transition pps used
1055	38	10			g		Left #right side 2.2u to 2.5u
1057	39	10			g		
1059	40	10			g		
1053	41	10			g		Bay I Left #right sides 2.2u to 2.5u
1055	42	10			g		Left #right sides 2.2u to 2.5u
1057	43	10			g		
1059	44	10			g		
1053	45	10			g		Bay J Left side 2.2u to 2.5u
1055	46	10			g		Left #right side 2.2u to 2.5u
1057	47	10			g		
1059	48	10			g		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: *Weld sizes increased on transition pps. used to make up assembly gsp.
1057 & 1059 not accessible for magnetic permeability measurement See NCR#

1053 & 1055 pps (vertical curved & straight weldment) with transition pps are only areas accessible for magnetic permeability measurement (with exceptions noted in remarks)

INSPECTED BY: John Boree CWINO. _____ DATE: 3-26-99



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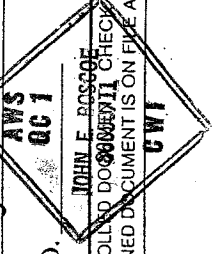
RAP No. 2796 CODE: ASME AWS IP 2163 DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. IP 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel
Lower Supports

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RQRD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	49	10	* JES		g Pass		Bay A Left and right side 2.2u to 2.5u
1055	50	10			g Pass		Left side 2.2u to 2.5u - Right side
1057	51	10			g Pass		Left side 2.5u to 3.0u - No trans pins used
1059	52	10			g Pass		
1053	53	10			g Pass		Bay B Left & right sides 2.2u to 2.5u
1055	54	10			g Pass		Left & right sides 2.2u to 2.5u not trans pins used
1057	55	10			g Pass		
1059	56	10			g Pass		
1053	57	10			g Pass		Bay C Left side 2.5u to 3.0u
1055	58	10			g Pass		Right side 2.2u to 2.5u
1057	59	10			g Pass		Left & right sides 2.2u to 2.5u
1059	60	10			g Pass		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: Weld sizes increased or transition pieces used to make up assembly 99P-1057 & 1059 not accessible for permeability measurement

1053 & 1055 pcs (Vertical curved & straight weld mats) with transition pieces only access accessible for magnetic permeability measurement
 See NCR # 3459
 DATE: 6-17-99 (with exceptions noted in remarks)



INSPECTED BY: John Boscoe CWINO.

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RAP No. 2796 CODE: ASME X AWS — DRAWING # NSTX- EOB 1051 REVISION 0
 JOB/WORK ORDER No. IP 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel
Lower Supports

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF REQD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	61	10	* <u>gEP</u>		<u>gBore</u>		Bay D Left & right sides 2.2u to 2.5u Left side 2.5u to 3.0u Right side 2.2u to 2.5u no trans. pres. used
1055	62	10			<u>gBore</u>		
1057	63	10			<u>gBore</u>		
1059	64	10			<u>gBore</u>		
1053	65	<u>gEP</u> 10 5			<u>gBore</u>		Bay E Left & right sides 2.2u to 2.5u
1055	66	<u>gEP</u> 10 5			<u>gBore</u>		Left & right sides 2.2u to 2.5u no trans. pres. used
1057	67	<u>gEP</u> 10 5			<u>gBore</u>		
1059	68	<u>gEP</u> 10 5			<u>gBore</u>		
1053	69	<u>gEP</u> 10 5			<u>gBore</u>		Bay F Left & right sides 2.2u to 2.5u
1055	70	<u>gEP</u> 10 5			<u>gBore</u>		Left side 2.5u to 3.0u Right side 2.2u to 2.5u no trans. pres. used
1057	71	<u>gEP</u> 10 5			<u>gBore</u>		
1059	72	<u>gEP</u> 10 5			<u>gBore</u>		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: *Weld sizes increased at transition pres used to make up assembly ggp
 1057 & 1059 not accessible for magnetic permeability measurement See NCR # 3459

1053 & 1055 (vertical straight & curved weldments) with transition pres only areas accessible for magnetic permeability measurement (with exceptions noted in remarks)

INSPECTED BY: John Bore CWINO: JOHN E. BOSSOE 86050711 DATE: 6-18-99

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RAP No. 2796 CODE: ASME AWS DRAWING # NSIX-EOB1051 REVISION 0
 JOB/WORK ORDER No. IP 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

Lower Supports

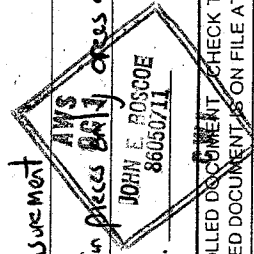
EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RQRD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	73	5	* GEB		g Boorue		Bay G Left side 2.5u to 3.0u Right side 2.2u to 2.5u
1055	74	5			g Boorue		Left & right side 2.5u to 3.0u no tens pas used
1057	75	5			g Boorue		
1059	76	5			g Boorue		
1053	77	5			g Boorue		Bay H Left side 2.5u to 3.0u Right side 2.2u to 2.5u
1055	78	5			g Boorue		Left & right side 2.5u to 3.0u no tens pas used
1057	79	5			g Boorue		
1059	80	5			g Boorue		
1053	81	10			g Boorue		Bay I Left & right sides 2.2u to 2.5u
1055	82	5			g Boorue		Left & right sides 2.2u to 2.5u no tens pas used
1057	83	10			g Boorue		
1059	84	5 & 10			g Boorue		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: *Weld sizes increased or transition pieces used to make up assembly gap
 1057 & 1059 not accessible for magnetic permeability measurement See NCR # 3459

1053 & 1055 (Vertical straight & curved weldment) with transition pieces BAJ are accessible for magnetic permeability measurement.

INSPECTED BY: John Boorue CWINO. DATE: 6-21-99



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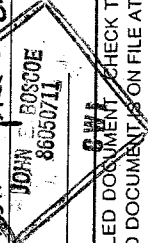
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RAP No. 2796 CODE: ASME AWS DRAWING # NSTX-EOB1051 REVISION 0
 JOB/WORK ORDER No. Jp 2163 JOB DESCRIPTION Passive Plate Bracket Installation on Vessel

EQUIPMENT IDENTIFICATION FROM TO	WELD NO.	WELDER'S SYMBOL NUMBER	FITUP (if inspection required)		FINAL INSPECTION		REMARKS/COMMENTS REWELD/REPAIR NCR NO. (IF RORD.)
			Accept	Reject	Accept	Reject	
1053 Vessel	85	5	* JFB				Buy J Left & right sides 2.5u to 3.0u Left side 2.5u to 3.0u Right side 3.0u No trans. ps used
1055	86	5			Boorae		
1057	87	5			Boorae		
1059	88	5			Boorae		
1053	89	5			Boorae		Buy K Left side 2.5u to 3.0u Right side 2.2u to 2.5u
1055	90	5			Boorae		Left side 2.5u to 3.0u Right side 2.2u to 2.5u No trans ps used
1057	91	5			Boorae		
1059	92	5			Boorae		
1053	93	10			Boorae		Buy L Left & right sides 2.2u to 2.5u
1055	94	10			Boorae		Left & right sides 2.5u to 3.0u No trans ps used
1057	95	10			Boorae		1055 welded almost full length
1059	96	10			Boorae		

NOTE: All columns of each line entry must be completed. Enter "N/A" if not applicable.

LIST CODE EXCEPTIONS OR COMMENTS, IF APPLICABLE: Weld sizes increased at transition pieces used to make up assembly 99P.
1057 & 1059 not accessible for magnetic permeability measurement
1053 & 1055 (vertical straight & curved weldments) with transition pieces only areas accessible for permeability measurement
 See NCR # 3459



INSPECTED BY: John Boorae CWI NO. _____ DATE: 6-22-99 (with exception noted in remarks)

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