

Non-conformance: 19081		Occurred: 01/18/06 Identified By: 775-D.MCCORKLE	
		Reported: 01/18/06 By: 77	5-D.MCCORKLE
Customer:	PRINCETON PLASMA PHYSICS LAB	Part: SE120-002 / PP	PL NCSX VVSA
Serial Number:	QTY - 3	Drawing ID: SE120-005	Rev 0
Links:	1-Type:W: 65678/1.0 Sub: 0 Op: 10	Vendor:	
Problem:	roblem: REFERENCE DRAWING SE121-014, SHEET 1, ZONE F-6.		
	WELD SYMBOL REQUIRES THE ARROW SIDE (OUTSIDE OF THE PART) TO BE SKIP WELDED (1/8"		
	FILLET, 1/2" X 90 DEGREES).		
	THE ENTIRE OUTSIDE SURFACE WAS WELL	DED CONTINUOUSLY.	
Where Detecte	704-IN-PROCESS INSPECTION	Defect: 154-WELD FE	ATURES
N/C Type:	1-STANDARD	Target Dim: 2.0000	Max Dev:10.6000
•••		Reference:	
Last Edited:	01/20/06 By: 775-D.MCCORKLE	Document:	
Disposition:	924-CUSTOMER - USE AS IS - NON-RECO	Due: 02/27/06 By: 77	75-D.MCCORKLE
Submitted Doc:	19081	Completed: 02/27/06 By: 77	5-D.MCCORKLE
Act OK Due:	By:	Approval Due: 01/19/06 By: 92	27-M.MANUEL
	5	Approved: 04/28/06 By: 92	7-M.MANUEL / Cft Leader
Rework:			
		Inspected: By:	
Instructions:	customer use as is		
Last Edited:	04/28/06 By: 927-M.MANUEL		
Root Cause / Co	orrective Action	Due: 01/25/06 By: 77	5-D.MCCORKLE
		Completed: 01/19/06 By: 77	5-D.MCCORKLE
Root Cause 1:	802-MANAGEMENT DECISION		
Resource:	715-SILVER TEAM ENGINEERING	Approval Due: 01/19/06 By: 92	7-M MANUEL
Equipment:		Approved: 01/20/06 By: 92	7-M MANUEL
Equipment: Employee	775-D MCCORKLE	11pp10/ed. 01/20/00 Dy: 92	
Description:	AS REQUESTED BY MTM_BASED ON FARLY WELD DISTORTION RISK MITIGATION		
Description	EVALUATIONS, THE WELD JOINT CONFIGURATION FOR ALL PRIMARY VESSEL PORT ATTACHMENT WELDS WAS CHANGED FROM WELDING THE ENTIRE JOINT FROM THE OUTSIDE, TO BORING THE HOLE IN THE VESSEL LARGE ENOUGH TO SLIDE THE TUBE THROUGH TO THE INTERIOR SIDE OF THE VESSEL AND WELD THE JOINT FROM THE INSIDE OF THE VESSEL. THE ORIGINAL CONFIGURATION WAS A FULL PENETRATION WELD WITH A CONTINUOUS FILLET. THE SPACER SUB-ASSY WAS APPARENTLY OMITTED FROM THE DESIGN CHANGE AND IS UNIQUE. WELDING A FULL PENETRATION GROOVE TO ENSURE FULL DEPTH EFFECTIVE THROAT, IT IS NECESSARY TO BACK-GRIND THE OUTSIDE TO SOUND MATERIAL AND FILL THE REMAINDER OF THE JOINT FROM THE OUTSIDE. WHEN ONE MEMBER EXTENDS BEYOND THE FACE (THE TUBE PROTRUDES OUTWARD), THE OUTSIDE OF THE FULL PENETRATION WELD IS IN THE CONFIGURATION OF A FILLET (PERPENDICULAR), THE BACK GRINDING PROCESS INHERENTLY REMOVES SOME MATERIAL FROM BOTH MATING DETAILS (IN THIS CASE, THE VESSEL WALL AND PORT TUBE). MERELY FILLING THE GROOVE TO OBTAIN 3/8" EFFECTIVE THROAT WOULD LEAVE THE SIDEWALL OF THE TUBE UNDER CUT. NOT BACK GRINDING THE OUTSIDE WOULD		
	LEAVE THE SIDEWALL OF THE TUBE UNDI	ON CROOVE WELD (OR AT I	
	PARTIAL PENETRATION. THIS CONDITION INCREASES WHEN THE WELD POSITION CHANGES (E.G. HIGHLY SHAPED PROFILE). BY NECESSITY ADDITIONAL WELDING WAS PERFORMED TO FILL THE GROUND AREA ON THE OUTSIDE OF THE TUBE. THIS CREATED A CONTINUOUS FILLET AROUND THE ENTIRE TUBE. THIS WELD COULD HAVE BEEN GROUND OUT LEAVING THE FOUR 1/2" LONG AREAS WHICH WOULD CONFORM TO THE DRAWING. BUT MTM CHOSE TO I FAVE THE		
	ENTIRE CIRCUMEERENTIAL WELD THE O	RIGINAL WELD SYMBOL WA	S THE BASIS FOR THIS
	DECISION.	NOTIVIE TOLD STRIDUE WA	



Corr Actn: 1:

Correction Due 01/25/06 By: 775-D.MCCORKLE Action: 04/28/06 By: 775-D.MCCORKLE Completed: 01/18/06 Description: EARLIER CUSTOMER NOTIFICATION / CLARIFICATION WOULD BE BENEFICIAL IN FUTURE CERCUMSTANCES.

> UPDATE 28Apr2006: ALL FUTURE DEVIATIONS FROM DRAWING REQUIREMENTS WILL BE SUBMITTED IN WRITING TO PPPL (VIA RFD) PRIOR TO IMPLEMENTATION. MANUFACTURING WILL NOT CONTINUE UNTIL WRITTEN AUTHORIZATION IS RECEIVED.

> > Verify Due: 01/25/06 By: 927-M.MANUEL Completed: 04/28/06 By: 927-M.MANUEL

Verify Notes: COMPLETE

RC Last Edited 01/20/06 By: 927-M.MANUEL CA Last Edited By:

Documents: 1)

Last Edited: 02/27/06 By: 775-D.MCCORKLE

Closure:

Comments: Last Edited: 04/29/06 By: 596-D.KNAUB Completed: 04/29/06 By: 596-D.KNAUB