

**PPPL NONCONFORMANCE REPORT NO: 3655**      **Open Date 05/31/06**

<b>Status</b>	2 - Disposition Needed		<b>Trend</b>	07-Out Of Tolerance	
<b>Department</b>	NCSX		<b>Division</b>	NCSX Project	
<b>Source/Org</b>	VENDOR				
<b>Item Dwg/Part#</b>	NCSX-CSPEC-121-02-06	<b>Procurement #</b>	S005243-F	<b>Cost Center</b>	
<b>RAP#</b>	3245	<b>Job Doc #</b>	S005243-F	<b>Vendor</b>	MAJOR TOOL AND MACHINE, INC.
<b>RAP Title</b>	Field Period Assembly Component Receipt Inspection				

HoldTag Applied

**Nonconforming Condition (include requirement(s) violated):**

VVSA-1, The attached port to vessel fillet welds (Attachment 1) were found to be undersize in accordance with AWS D1.6 paragraph 6.29.1 and Annex II. All of the undersize areas are where the angle between the port and the vessel is greater than 90°. Annex II of AWS D1.6 requires a larger fillet weld size than indicated on the weld symbol in areas greater than 90° in order to produce a weld of equal strength. Annex II (Attachment 2) and pictures of effected areas (Attachment 3) are also attached. This NCR covers the weld inspection on the vessel only and does not include welds on the individual ports.

<b>Lot Size Recd</b>	0	<b>Sample Size Insp</b>	0	<input type="checkbox"/> Lot Rejected	<b># Rejected</b>	0
<b>Reported By</b>	Phelps C	<b>Validated By</b>	Boscoe J	<b>Validated Date</b>	05/30/06	

**Disposition:** Rework\*\_\_ Repair\*\_\_ Use As Is\*\_\_ Return To Vendor\*\_\_ Scrap\*\_\_

**For rework or repair of vendor supplied equipments, fill in information below:**

<b>#Hours</b>	_____	<b>\$Est Labor</b>	_____	<b>\$G&amp;A</b>	_____
<b>\$Material</b>	_____	<b>\$Burden</b>	_____	<b>\$Total</b>	_____

<b>Disposition By</b>	_____	<b>Date</b>	_____
<b>Supervisor's Concur</b>	_____	<b>Date</b>	_____
<b>Eng. Dept. Head Concur</b>	_____	<b>Date</b>	_____
<b>WCO/Other</b>	_____	<b>Date</b>	_____

<b>PQA/QC Mgr Dispos Concur</b>	_____	<b>Date</b>	_____
<b>QC Field Verification By</b>	_____	<b>Date</b>	_____

- Distribution**
- Cog** M. Viola
  - Insp** Phelps C
  - Proj. Doc Control (when closed)
  - QC Files
  - Malsbury J
  - Boscoe J
  - Malinowski F
  - Edwards J
  - Nelson B
  - Reiersen W
  - Williams M
  - Tyrrell M

Disposition: Rework\_\_\_ Repair \_\_\_ Use As Is\_\_\_ Return to Vendor\_\_\_ Scrap\_\_\_

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For rework or repair of vendor supplied equipment, fill in information below:

# Hours \_\_\_\_\_ \$ Est Labor \_\_\_\_\_ \$ G&A \_\_\_\_\_  
\$ Material \_\_\_\_\_ \$ Burden \_\_\_\_\_ \$ Total \_\_\_\_\_

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Disposition by \_\_\_\_\_

Supervisor's Concurrence \_\_\_\_\_

Eng. Dept. Head Concurrence \_\_\_\_\_

Other (i.e., WCO/FPE) Concurrence \_\_\_\_\_

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PQA/QC Mgr Disposition Concurrence \_\_\_\_\_

QA Field Verification by \_\_\_\_\_

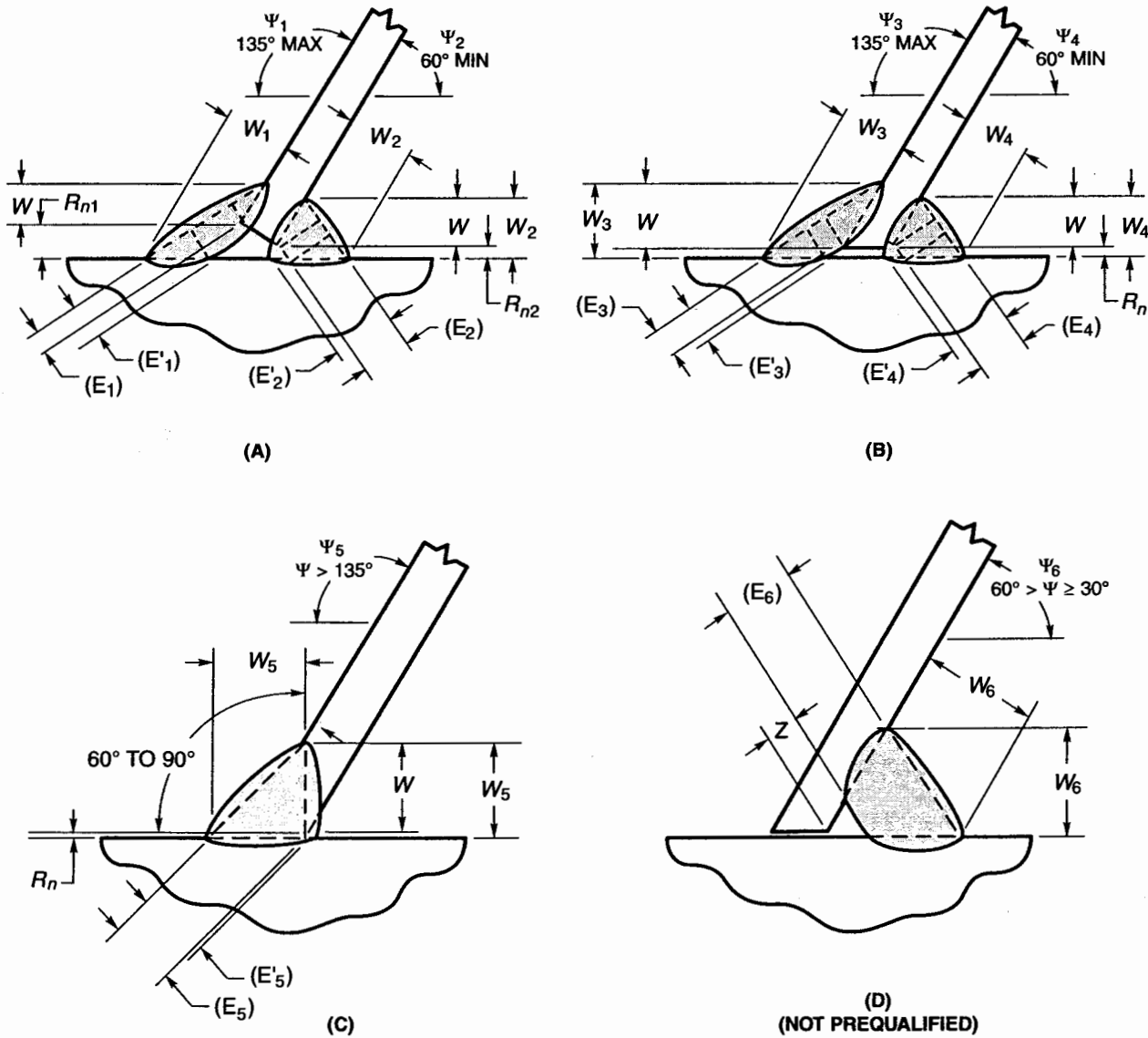
## NCR 3655 - Attachment 1

### Port to Vessel Fillet Welds

Port No.	Dwg Weld Size	Length of Undersize	Actual Weld Size	Angle Port to Vessel	Annex II Weld Size
9B	3/16"	1 area 5"	1/8"	125°	0.23"
4A	3/16"	1 area 2", 1 area 2.5"	1/8"	1 area 135°, 1 area 125°	0.23" to 0.25"
NB	3/16"	2 areas 2" ea.	1/8"	1 area 135°, 1 area 125°	0.23" to 0.25"
11A	3/16"	1 area 3.5"	1/16"	155°	> 0.25"
11B	3/16"	1 area 3"	1/16"	155°	> 0.25"
10A	3/16"	1 area 3"	1/8"	110°	0.22"
Dome B	3/16"	1 area 2"	1/8"	Not able to measure	> 3/16"

**Table II-1**  
**Equivalent Fillet Weld Leg Size Factors for Skewed T-Joints (see Annex II)**

Dihedral angle, $\Psi$	60°	65°	70°	75°	80°	85°	90°	95°
Comparable fillet weld size for same strength	0.71	0.76	0.81	0.86	0.91	0.96	1.00	1.03
Dihedral angle, $\Psi$	100°	105°	110°	115°	120°	125° <td 130°	135°	
Comparable fillet weld size for same strength	1.08	1.12	1.16	1.19	1.23	1.25	1.28	1.31



Notes:

1.  $(E)_{(n)}$ ,  $(E')_{(n)}$  = Effective throat dependent on magnitude of root opening ( $R_n$ ) (see 5.4.1). ( $n$ ) represents 1 through 5.
2.  $t$  = thickness of thinner part.
3. Not prequalified for gas metal arc welding using short circuiting transfer.

**Figure II-1—Details for Skewed T-Joints<sup>1,2,3</sup> (see 2.17)**

VVSA-1 Undersize fillet weld areas – port to vessel welds – 5/30/06













4A-1



4A-2



