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**Customer: PRINCETON PLASMA PHYSICS LAB**

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**Part: / VVSA 2**

Drawing ID: SE120-002

Revision: 1

Customer P.O.: S005243-F/Ln:2  
Qty: 1

Reported By: DOUG MCCORKLE  
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Problem: The profile of the vessel checks from -0.421 / +0.451 or up to 0.233 under low limit and up to 0.263 over the high limit.

The position of the half a boss a checks 0.320 or up to 0.070 out of tolerance.

The position of the half a boss b checks 0.906 or up to 0.656 out of tolerance.

The position of the half a boss c checks 0.686 or up to 0.436 out of tolerance.

The position of the half a boss d checks 0.344 or up to 0.094 out of tolerance.

The position of the half b boss b checks 0.382 or up to 0.132 out of tolerance.

The position of the half b boss c checks 0.789 or up to 0.539 out of tolerance.

The position of the half b boss d checks 0.593 or up to 0.343 out of tolerance.

The height of the nb port checks 98.388 / 98.482 or up to 0.253 under low limit.

The profile of port 12a checks -0.254 / +0.359 or up to 0.066 under low limit and up to 0.171 over high limit.

The length of port 12b checks from 81.220 / 81.320 or up to 0.150 under the low limit.

The profile of port 12b checks from -0.248 / +0.306 or up to 0.060 under the low limit and up to 0.118 over high limit.

The profile of the nb port checks from -0.329 / +0.145 or up to 0.141 under the low limit.

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**Proposed Disposition:**

Propose: USE AS IS

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Number of additional pages: 0

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**Customer Disposition:**    ☐ Use As Is    ☐ Rework    ☐ Repair    ☐ Scrap    ☐ Replace

## Nonconformance Report: Major Tool NC20175

This is for: **VVSA # 2 Profile** SE120-002

### Problem:

The profile of the vessel checks from -0.421 / +0.451 or up to 0.233 under low limit and up to 0.263 over the high limit.  
The position of the half a boss a checks 0.320 or up to 0.070 out of tolerance.  
The position of the half a boss b checks 0.906 or up to 0.656 out of tolerance.  
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The position of the half b boss b checks 0.382 or up to 0.132 out of tolerance.  
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The height of the nb port checks 98.388 / 98.482 or up to 0.253 under low limit.  
The profile of port 12a checks -0.254 / +0.359 or up to 0.066 under low limit and up to 0.171 over high limit.  
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The profile of port 12b checks from -0.248 / +0.306 or up to 0.060 under the low limit and up to 0.118 over high limit  
The profile of the nb port checks from -0.329 / +0.145 or up to 0.141 under the low limit.

### MTM Recommended Disposition:

Use as is.

### Project Disposition:

Use as is.

**From:** Cole, Michael [mailto:colemj@ornl.gov]

**Sent:** Thursday, July 27, 2006 2:56 PM

**To:** Bradley E. Nelson; Paul Goranson; Thomas G. Brown; Phil Heitzenroeder; Frank A. Malinowski

**Subject:** NCR 20175

The following is a review of the information contained in NCR 20175.

Final approval is awaiting on information from MTM regarding the method used to calculate the out of tolerance dimension for the vacuum vessel boss data.

The profile of the vessel checks from -0.421 / +0.451 or up to 0.233 under low limit and up to 0.263 over the high limit.

**This data has been reviewed by Tom Brown and is acceptable (see VVSA2 65678-2 review - Rev1.ppt).**

The position of the half a boss a checks 0.320 or up to 0.070 out of tolerance.

The position of the half a boss b checks 0.906 or up to 0.656 out of tolerance.

The position of the half a boss c checks 0.686 or up to 0.436 out of tolerance.

The position of the half a boss d checks 0.344 or up to 0.094 out of tolerance.

The position of the half b boss b checks 0.382 or up to 0.132 out of tolerance.

The position of the half b boss c checks 0.789 or up to 0.539 out of tolerance.

The position of the half b boss d checks 0.593 or up to 0.343 out of tolerance.

**MTM indicated this information was taken from the latest veri surf data (65678-2-2-70 BOSS FIXT 7-20-06.xls). Requested information on how out of tolerance number was generated from the veri surf data. A review of the veri surf data using Pro E found the boss locations to be acceptable.**

The height of the nb port checks 98.388 / 98.482 or up to 0.253 under low limit.

**The number on drawing se121-004 sht 15 zoneA3 is 98.641inches +/- .125. The number 98.388 was determined by using  $98.641 - .253 = 98.388$ . I understand how this number was obtained and Paul Goranson and I agree that this is acceptable.**

The profile of port 12a checks  $-0.254 / +0.359$  or up to 0.066 under low limit and up to 0.171 over high limit.  
Tom Brown has checked and is acceptable (see VVSA2 65678-2 review - Rev1.ppt).

The length of port 12b checks from 81.220 / 81.320 or up to 0.150 under the low limit.  
Paul Goranson and I reviewed the out of tolerance dimension on the length of port 12b and find this acceptable.

The profile of port 12b checks from  $-0.248 / +0.306$  or up to 0.060 under the low limit and up to 0.118 over high limit.  
Tom Brown has checked and has found this to be acceptable (see VVSA2 65678-2 review - Rev1.ppt).

The profile of the nb port checks from  $-0.329 / +0.145$  or up to 0.141 under the low limit.  
Paul Goranson and I reviewed the .141 lower limit relative to the profile tolerance of .375 ( $.375/2 + .141 = .329$ ) and agree this is acceptable.

**Approvals:**

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Procurement Technical Representative

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Responsible Line Manager: