

<i>NCSX RFD</i> <i>Part I</i>	Number: 14-023R1	RFD Description: Vacuum Vessel Support Boss
Initiator: Peter Djordjevich		Organization: EIO
List of Impacted Documents: (<i>Specification, MIT/QA Plan, SOW, drawing, etc.</i>) SE141-115R9		
Cost Impact: (<i>If none, so state</i>) No cost impact to either EIO. No cost impact to PPPL/ORNL due to revising the drawing since NCSX Project will utilize “stamp” process to identify approval of this RFD. However, there will be a cost impact to NCSX (~\$5000) to weld studs in place of the undersize bosses.		
Schedule Impact: (<i>If none, so state</i>): NONE		
Quality Impact: (<i>If none, so state</i>): NONE		
State Requirement Deviation is Requested For: (<i>Specification, MIT/QA Plan, SOW, drawing, etc.</i>) SE141-115R9 will be annotated with RFD stamp to identify changes to B3-B6 castings, including one (1) undersized pad on B3 casting.		
Full Description of the Deviation Requested: (<i>Use continuation pages, e-mails, letter, sketches, etc. as needed and include amplifying information as appropriate to support deviation request.</i>) EIO CAR 090606 (see attached), dated September 6, 2006, identified that the support boss for B3 and B6 were undersized leaving insufficient material for mounting. This problem was initially identified by EIO 8/2/06 and offered several viable alternatives. PPPL responded by e-mail on 8/7/06, with direction to omit the holes on castings B3 - B6. By that point, however, the holes had already been drilled into the one proper sized pad on B-3. After further discussion with NCSX, the corrective action agreed upon is that the holes will not be drilled on castings B4, B5 & B-6, as well as on the one (1) undersized pad on B-3 and in lieu of the holes, PPPL will weld studs in place of the undersize bosses. This MRB action covers the B-castings as described herein. Rev 1 - Following further discussions with MTM, the following amended corrective action was approved: The number of tapped and drilled holes in the VV support bosses (pads) as shown in the drawings should be provided to the maximum extent possible, given the undersize condition of some of the pads. To help in this regard, MTM is requested to offset the hole pattern relative to the cast pads as necessary to permit more (or all) of the tapped holes in the pads to be provided.		
Attachments: (1) EIO CAR 090606 (2) Modified PPPL Response to CAR 090606		
Initiator Signature: <u>See CAR 090606</u>		Date: <u>9/6/2006</u>

Energy Industries of Ohio
CORRECTIVE ACTION REQUEST (CAR) FORM

1. Person Initiating CAR: Peter Djordjevich Date: 9/6/06

2. CAR Source: Employee Customer Feedback Management Review

3. Problem: Customer Complaint Documentation Product or Process Other _____

4. Deficiency, Discrepancy, or Undesirable Condition, e.g., comment, customer complaint, process problem.

B3 & B6 V V support boss undersized leaving insufficient material for mounting.

Attach additional sheet if needed.

5. CAR Number: 090606 QPM/ISO Reference: Drawing violation

Assigned To: Energy Industries of Ohio

6. CAR Completion Due Date (include explanation if beyond 30 days): 09/06/06

7. Is this a repeat problem? If yes, previous CAR # references: N/A CAR previously not issued

8. Root Cause: *Why the issue originally occurred.*

Bosses were located in areas of defects, and or excessive material buildup. During foundry grinding operations excessive material was removed without regard to Boss dimensions.

9. Corrective Action: *What was done to correct the issue(s) and avoid reoccurrence?*

EIO issued a report on 8/2/06 offering several viable alternatives. PPPL responded by e-mail on 8/7/06, with direction to omit the holes on castings B3 – B6. By that point, the holes had already been drilled into the one proper sized pad on B-3.

After further discussion with NCSX, the corrective action agreed upon is that the holes will not be drilled on castings B4, B5 & B-6, as well as on the one (1) undersized pad on B-3 and in lieu of the holes, PPPL will weld studs in place of the undersize bosses. This MRB action covers the B castings as described herein.

Drawings will be revised by PPPL to reflect these changes.

Regarding corrective action at the foundry for over grinding the bosses, the matter has been fully communicated to MTK Quality Manager and it has been noted in our files. No further corrective action is useful at this time since the castings have already been delivered to MTM.

10. CAR Completed by: Peter Djordjevich Date: 09/06/06

11. Verified for Effectiveness by: EIO QA Peter Djordjevich Date: 09/06/06

Attachment

Amendment to Corrective Action on CAR 090606

The corrective action as originally written in the attached is rejected due to a re-appraisal of the interfacing hardware with these bosses (i.e., not yet designed or built) and due to the fact that acceptance of the CA as written would increase the already heavy work load at PPPL.

Accordingly, the revised corrective action below is to be implemented. The number of tapped and drilled holes in the VV support bosses (pads) as shown in the drawings should be provided to the maximum extent possible, given the undersize condition of some of the pads. *To help in this regard, MTM is requested to offset the hole pattern relative to the cast pads as necessary to permit more (or all) of the tapped holes in the pads to be provided.*

Mike Griffith provided the assessment and proposed machine for performing this work in an e-mail to P. Heitzenroeder and Frank Malinowski on 10/4/06:

- B1 – all holes present
- B2 – all holes present
- B3 – 1 out of 2 pads has holes (could be finished on 40' Mitsu)
- B4 – neither pad has holes (could be performed on 40' Mitsu)
- B5 – neither pad has holes (could be performed on 40' Mitsu)
- B6 – not started (could be added back to 40T operation)

<i>NCSX RFD</i> <i>Part III</i>	Number: 14-023R1	RFD Description: Vacuum Vessel Support Boss
RLM: Brad Nelson		Organization: ORNL
Impact on Interfaces with Other WBS Elements/Items: <i>(If none, so state)</i> : NONE		
<p>RLM Recommendation:</p> <p><input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve</p> <p>Additional remarks:</p> <p>Should the impacted drawings be formally revised or should the “stamp” process outlined in NCSX Procedure PROC-007 be utilized?</p> <p><input type="checkbox"/> Formal revision required (Note if > 3 stamps (RFD or ECN), then a formal revision to the drawing is required)</p> <p><input checked="" type="checkbox"/> “Stamp” process outlined in PROC-007 is authorized. This is a relatively minor change and it is not anticipated that the drawing will have to be revised.</p> <p>Does this Change Impact Material Already Procured or Parts/Assemblies Already Assembled/Manufactured using this Material: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If “Yes”, what is the recommended disposition of this material/part/assembly? Accept as is. EIO CAR addresses issues with casting B3.</p>		
RLM Signature: _____		
<p>Project Disposition:</p> <p><input checked="" type="checkbox"/> Approved. No ECP required. _____ NCSX Systems Engineering Support Manager</p> <p>RFD stamp will be placed on SE141-115R9 => will become SE141-115R9-a.</p> <p><input type="checkbox"/> Approved. ECP - assigned and processed.</p> <p><input type="checkbox"/> Not Approved. Reason(s) for disapproval:</p>		