Princeton University   **Plasma Physics Laboratory**
James Forrestal Campus
P.O. Box CN17
Princeton, N.J. 08543

8 December 2006

Ms. Nancy Horton
Energy Industries of Ohio
6100 Oak Tree Boulevard, Suite 200
Independence, Ohio 44131

SUBJECT: Subcontract S005242-F for NCSX Modular Coil Winding Forms
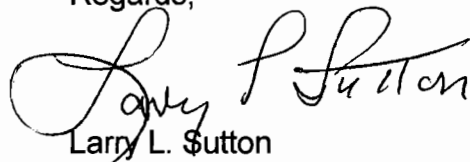   PPPL Non-Conformance Report (NCR) 3684

Dear Ms. Horton:

Attached *for information* is dispositioned Princeton Plasma Physics Laboratory
(PPPL) Non-Conformance Report 3684, dated 30 November 2006 titled NCSX –
Modular Coil Winding Forms.

The "corrective action" required by the NCR will be performed by PPPL. Subject
Report is provided to EIO for information only.

If there are any comments pertaining to this matter I may be contacted at (609)
243-2441 and by e-mail lsutton@pppl.gov.

Regards,

Larry L. Sutton
Senior Subcontract Administrator

Attachment

PPPL NONCONFORMANCE REPORT NO: 3684   Open Date   11/30/06

Status	5 - Corrective Action Needed	**Trend**	01-Deviation From Doc/Proc
Department	NCSX	**Division**	WBS 141
Source/Org	VENDOR		

Item Dwg/Part# SE141-114, r8 - MCWF A-4   **Procurement #** S005242-F   **Cost Center** 9450 1*** 1404

RAP# 3209   **Job Doc #** S005242-F   **Vendor** Energy Industries of Ohio

RAP Title NCSX - Modular Coil Winding Forms

☐ HoldTag Applied

Nonconforming Condition (include requirement(s) violated):

MCWF A-4 shows the following conditions (photos attached) 📎 exceeding the tolerances of SE141-114, R8:

1) Between Holes #86 to #94 the legs of the Tee (septum) have a step down area that dips, on the long leg, .008" to .028" from the flat portion of the leg. MTM's measurements of the long leg in this area show it .002" to .003" above nominal, so the "gully" ranges from .010", just at the upper limit of the tolerance of .020" profile equally distributed bilaterally (+/- .010"), to as much as .020" below that tolerance. There is a similar, though more shallow, "gully" on the short leg.

2) Between Holes #48 & #52 the radius between the long and short legs of the Tee exceeds the specified .11" +/- .01".

Lot Size Recd 1   **Sample Size Insp** 1   ☐ Lot Rejected   **# Rejected** 1

Reported By Phelps C   **Validated By** Malinowski F   **Validated Date** 11/27/06

Disposition: Rework*__ Repair*__ Use As Is*__ Return To Vendor*__ Scrap*___ | **Rework**

The "gully" areas should be filled in with CTD 540 epoxy / glass bead to provide an even surface and support for the winding. This condition will be discussed with EIO/MTM during the next Quality call to avoid this condition with future castings.

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

#Hours _____	**$Est Labor** _____	**$G&A** _____
$Material _____	**$Burden** _____	**$Total** $425

Disposition By	Heitzenroeder P	**Date**	11/30/06
Supervisor's Concur	Nelson B	**Date**	11/30/06
Eng. Dept. Head Concur	Williams M	**Date**	12/01/06
WCO/Other	N/A	**Date**	

PQA/QC Mgr Dispos Concur	Malinowski F	**Date**	12/08/06
QC Field Verification By		**Date**	

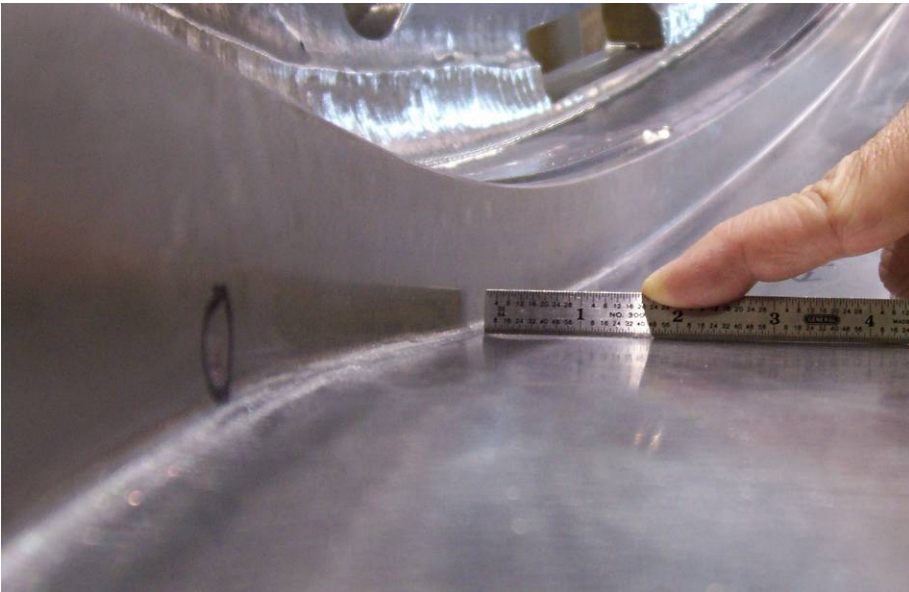**Distribution**

Cog Heitzenroeder P
Insp Chrzanowski
Proj. Doc Control (when closed)
QC Files
Malsbury J
Boscoe J
Sutton L
Nelson B
Reiersen W
Williams m
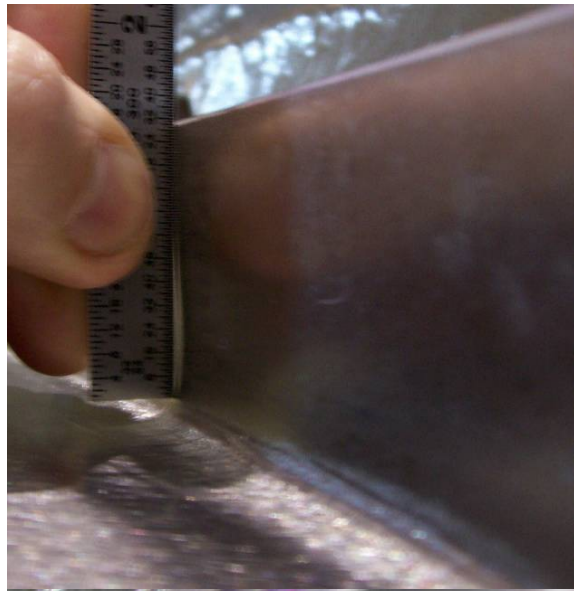Lumberger J
Tyrrell M
Malinowski F
Phelps C

09/01

This photo shows the location - between Holes #86 to #94 on the side of the casting facing up on the shipping skid.

The next one shows a straight edge reference.

Note in both photos the shadow along the base of the tee. This is step, readily detected by hand, from the flat of the tee down toward the radius.
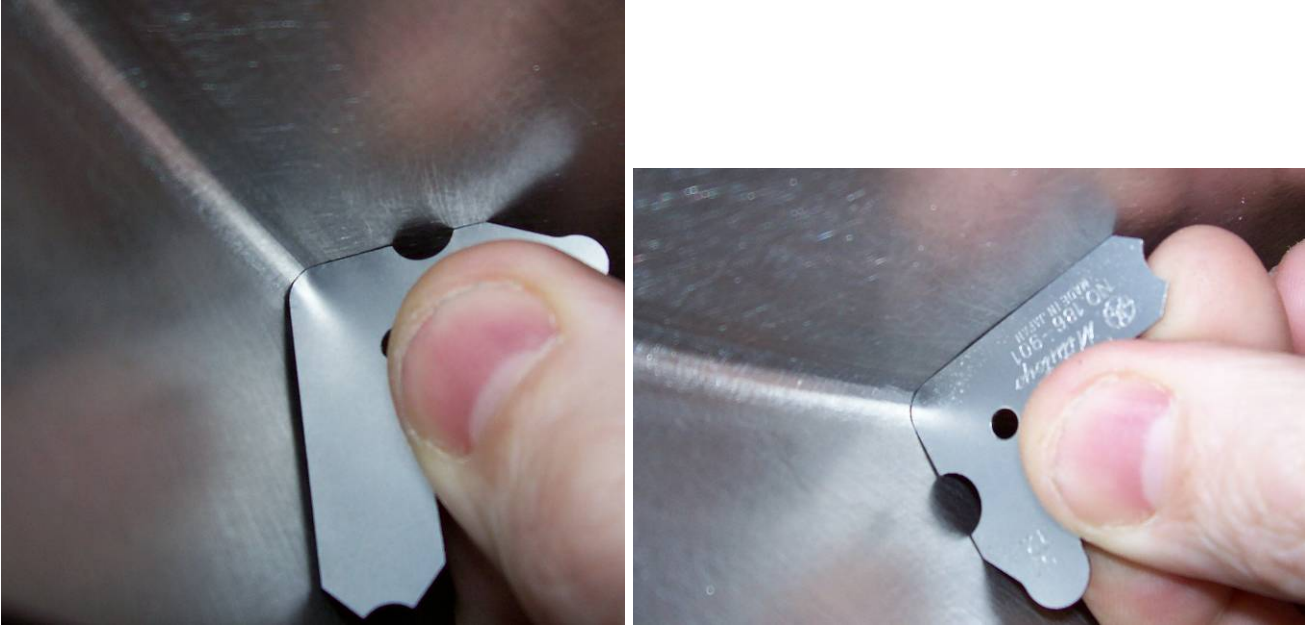
More shots of the straight edge on the long and short legs of the tee.

The first photo shows a 5/32" gauge. The second is the required 1/8" radius gauge

A4 "gully" by Tee Radius

These photos show a short area, between holes #48 & #52 on the bottom side (as-shipped) of the casting, where the radius did not pass the gage check.

The first shows the required 1/8" gauge and the second shows the next size bigger 5/32" gage.