

**Status** 2 - Disposition Needed **Trend** 01-Deviation From Doc/Proc  
**Department** NCSX **Division** WBS 114  
**Source/Org** FABRICATION, OPERATIONS & MAINTENANCE  
**Item Dwg/Part#** SE142C-270 Rev. 0 **Procurement #** \_\_\_\_\_ **Cost Center** \_\_\_\_\_  
**RAP#** 3234 **Job Doc #** D-NCSX-MCF-004 **Vendor** VARIOUS  
**RAP Title** Modular Coil Fabrication - Post VPI Activities

HoldTag Applied

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

The first shipment of NCSX modular coil final winding clamp assemblies, and related purchased hardware exhibits a magnetic permeability higher than the maximum allowed per NCSX-ASPEC-GRD-03 paragraph 3.3.1.1 (permeability shall not exceed 1.02). Unless otherwise noted all material is type 316 stainless steel See attached list for details.  
 REV 1: Parts 3 and 6 are silverplated and were verbally reported as not being able to be annealed without damage.  
 SEE PAGE 2 FOR ADDITIONAL REVISIONS.  
 REV 2: Final winding clamp assembly redesigned, see attachment for revision details. Also see NCR 3639 as it deals with this same issue.

**Lot Size Recd** 0 **Sample Size Insp** 0  Lot Rejected **# Rejected** 0  
**Reported By** Phelps C **Validated By** Boscoe J **Validated Date** 04/16/07

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

(Rev 0) Rework by removing permeability using vacuum oven cycle 800-1000 deg. C @ 1 hour. (Labor = 40 hours)  
 (Rev 1) Awaiting test results from outside laboratory to determine whether the permeability of the 316ss parts can be used "as is" without further work.

*Please use p. 2 for disposition and approvals .*

~~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** J. Chrzanowski  
**Insp** C. Phelps  
 Proj. Doc Control (when closed)  
 QC Files  
 Malsbury J  
 Boscoe J  
 T. Meighan  
 Williams M  
 Dudek L  
 Tyrrell M  
 Reiersen W

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 \_\_\_\_\_

<u>Part #</u>	<u>Part Type</u>	<u>Quantity</u>	<u>Sample Size</u>	<u>Results</u>
2	Bar, Clamp	175	21	(12) >1.10, <1.15 (4) >1.15, <1.2 (5) >1.2, <1.8
3	Bushing Spacer (Silver Plated 316)	1	1	(1) >1.06, <1.08
4	Washer, Convex	1610	100	(40) <1.02 (60) >1.02, <1.03
5	Washer, Concave	1610	100	(6) >1.02, <1.03 (9) >1.03, <1.04 (30) >1.04, <1.05 (30) >1.05, <1.06 (25) >1.06, <1.08
6	Keeper Screw (Silver Plated)	4	4	(1) >1.02, <1.03 (1) >1.03, <1.04 (2) >1.04, <1.05
7	Clamp Swivel	1	1	(1) >1.03, <1.04
10	3/8-16 x 1 ¼ SH	882	44	(41) >1.02, <1.03 (3) <1.02
11	3/8 x 3/8 shoulder	188	20	(1) >1.02, <1.03 (1) >1.03, <1.04 (3) >1.04, <1.05 (6) >1.05, <1.06 (6) >1.06, <1.08 (3) >1.08, <1.09

The following parts were found to be acceptable.

<u>Part #</u>	<u>Part Type</u>	<u>Quantity</u>	<u>Sample Size</u>	<u>Results</u>
8	Belleville Washers	~10,000	~200	(~200) <1.02 (Inconel)
12	¼-20 x ½ BH	1850	100	(100) <1.02

REV 2: The final winding clamp has been redesigned eliminating parts 4, 5, and 11. Parts 3 and 7 have been redesigned, the new shipments of parts 3 and 11 are below 1.02 Mu (see sampling results below). Parts 2 and 10 have been annealed in accordance with Rev 0 disposition and are all below 1.02 Mu. Part 6 remains unchanged and cannot be annealed due to the silver plating. See results above and NCR 3639 for additional permeability readings on the balance of Part 6.

<u>Part #</u>	<u>Part Type</u>	<u>Quantity</u>	<u>Sample Size</u>	<u>Results</u>
New - 3	Bushing Spacer	910	72	(72) <1.02 Mu
New - 7	Clamp Swivel	920	80	(80) <1.02 Mu