

Energy Industries of Ohio

Corrective Action Report/Request ID#\_032206-1P\_\_\_\_\_

Date\_\_\_\_\_03-22-06\_\_\_\_\_

Due\_\_\_\_\_3-22-06\_\_\_\_\_

Initiated By Peter Djordjevich

Issue/Non Conformance

**(EIO, MTM)** Provide NCR for C-5 flange thickness concern raised by MTM in the 3/7 teleconference. Flange may be shifted so “best fit” makes flange too thin when there’s actually enough cast thickness. This more than likely will effect all C coils to varying degrees.

**Root Cause**

**Adjust for best fit by machining. Some cleanup stock being removed on back side of flange (approx .050 - .070 inches) this was not anticipated. Stock seems to be sufficient in as cast state, but variances in casting dimensions require best fit setup which detracts from flange thickness. Castings will vary dimensionally this is typical. Area should have been called out dimensionally on the model stating min/max dimension.**

**Corrective Action**

**Use as is. After evaluating C4 currently being dimensioned at Major Tool, flange thickness was measured at 1.190 inches. This is an existing condition that will more than likely effect all C coils, and possibly run into A & B coils. Also I would like to add that thickness of the flange actually increases moving in towards the casting due to draft and fillet. If required a .050 to .100 gain in flange thickness may be achieved by Eliminating machining on the back side of the flange.**

## Verification of Corrective Action

N/A use as is

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Completion / Verification Date 03-21-06

Signature EIO Quality

Peter Djordjevich

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### NCSX DISPOSITION:

*Note: This is R1 of this CA. It was revised to reflect additional information given by MTM during the Quality conference call of 4/12/06.*

Please refer to the information contained in the attached e-mails. The measured 1.19" flange thickness on C5 (vs. the specified 1.38" thickness) reported in this corrective action report . During the 4/12/06 conference call, MTM noted that C4 and C6 have very similar flange "thinning" in the same areas. Rather than requiring multiple CA's, this disposition was re-written to cover all three winding forms. **Based on the low stress in these flange areas, the local thin flange condition on all three castings (C4, C5, and C6) are Accepted As Is.**

NCSX will also review the flange data for C1-C3 to see if similar conditions exists. If it does, we will write internal NCRs to document this condition.

Approved by:

Technical representative

RLM

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**From:** Williamson, David E. [mailto:williamsonde@ornl.gov]  
**Sent:** Monday, March 13, 2006 8:51 AM  
**To:** Phil Heitzenroeder; Bradley E. Nelson; Frank A. Malinowski  
**Subject:** RE: C-5 flange thickness

Phil,  
The 1.19-in thick measurement is in the lower inboard region of a C-C joint, in an area without bolts that is in compression under EM load. It appears to be ok, based on HM's analysis.  
-David

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**From:** Phil Heitzenroeder [mailto:pheitzen@pppl.gov]  
**Sent:** Sunday, March 12, 2006 10:35 PM  
**To:** Nelson, Brad E.; Williamson, David E.; fmalinowski@pppl.gov  
**Subject:** FW: C-5 flange thickness

Brad, Dave-  
Please see the note below. How is the stress in the 1.19" region? Is it OK to accept this as is? Thanks  
Phil

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**From:** RoyJRATC@aol.com [mailto:RoyJRATC@aol.com]  
**Sent:** Wednesday, March 08, 2006 9:16 AM  
**To:** Phil Heitzenroeder  
**Cc:** NKHFlowen@aol.com; djord@earthlink.net; mgriffith@majortool.com; kbowling@majortool.com  
**Subject:** C-5 flange thickness

Hi Phil - I've attached a PDF of the map created by Mike Griffith showing the flange thickness on C-5- There are 2 areas (see below) where the flange is below both the 1.38" reference dimension on the print & the nominal 1.25" nominal thickness that we discussed for the A coils.

