

Princeton University

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17 January 2006

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

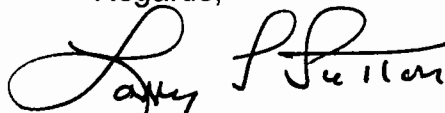
SUBJECT: Subcontract S005242-F
Disposition of Major Tool & Machine Initiated Request for Deviation
(RFD) No. 14-012

Dear Ms. Horton:

Attached for appropriate action is NCSX Project dispositioned Request for Deviation No. 14-012F for Change in Tolerances for Type C Casting.

If there are any questions pertaining to this matter, I may be contacted at (609) 243-2441, telefax (609) 243-2021, or by e-mail lsutton@pppl.gov.

Regards,



Larry L. Sutton
Senior Subcontract Administrator

Attachment: RFD No. 14-012 (4 pages)

cc: M. Tyrrell
B. Simmons
F. Malinowski
P. Heitzenroeder

<i>NCSX RFD</i> <i>Part I</i>	Number: 14-012	RFD Description: Change in Tolerances for Type C Casting
Initiator: Mike Griffin		Organization: Major Tool
List of Impacted Documents: <i>(Specification, MIT/QA Plan, SOW, drawing, etc.)</i> Drawing SE141-116		
Cost Impact: <i>(If none, so state)</i> None		
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> Drawing SE141-116		
<p>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></p> <p>Based on the MTM experience with the Type C-2 casting, request that the following relaxation in tolerances:</p> <ol style="list-style-type: none"> 1. Increase profile of datums –E- and –D- flanges from .020” to .030” 2. Break down the .020 profile of the T section to the following: <ol style="list-style-type: none"> a. Profile of top surface of T = .100” b. Leave sides of T as profile of .010” per PPPL request. 3. Increase profile below the VPI groove from .100” to .200” 4. Increase true position of 96 holes in T section from .010” to .060” 5. Increase true position of holes in –E- and –D- flanges from .010” to .060” and change nominal hole size from 1.88” to 1.885” +/- .003”. <p>These changes are based on experience with the C1 and C2 castings. NCSX has analyzed the impact of these changes and determined that they are acceptable. Adopting these changes will minimize time expenditures that were previously necessary to process repeated NCR’s and will permit both NCSX and EIO to concentrate on more critical tolerances and details.</p>		
<p>Attachments:</p> <ol style="list-style-type: none"> 1. MTM e-mail dated January 16, 2006, including C-2 tolerance assessment. 2. MTM clarifying e-mail dated January 17, 2006 		
Initiator Signature: <u>Mike Griffith</u>		Date: <u>January 16, 2006</u>

From: Griffith, Mike [mgriffith@majortool.com]
 Sent: Monday, January 16, 2006 2:33 PM
 To: NKHFlowen@aol.com; royjratc-aol-com-offsite
 Cc: Bowling, Kevin
 Subject: Proposed changes to SE141-116 rev. 7

Attachments: Tolerance Assessment.xls

Nancy/Roy,

The attached document contains the data from our evaluation of the C2 inspection results. In summary, we are proposing the following changes:

1. Increase profile of datums -E- and -D- flanges from .020" to .030"
2. Break down the .020 profile of the T section to the following:
 - a. Profile of top surface of T = .100"
 - b. Profile of base of T (short legs of the L) = .050"
 - c. Leave sides of T as profile of .010" per PPPL request.
3. Increase profile below the VPI groove from .100" to .200"
4. Increase true position of 96 holes in T section from .010" to .060"
5. Increase true position of holes in -E- and -D- flanges from .010" to .060" and change nominal hole size from 1.88" to 1.885" +/- .003".

#2b Deleted per e-mail from Mike Griffith on Jan 17th.

Mike Griffith
 Major Tool and Machine, Inc
 CFT Engineer
 Tel: (317) 917-2612
 Email: mgriffith@majortool.com

Major Tool "C" Tolerance Proposal
 (2 Data Evaluation

Feature Description	Results from C2 Inspection		Drawing Tolerance	Deviation	Proposed Tolerance
	Calculated Result	Date Range			
Datum -D- Flange	0.022	- .001 to .011	Profile of .020	0.002	.030 Profile
Datum -E- Flange	0.028	- .0056 to .0141	Profile of .020	0.008	.030 Profile
Profile of T section					
Top surface of T	0.086	- .043 to .021	Profile of .020 M -- N	0.068	.100 Profile
Side of T datum -E- side	0.054	- .015 to .027	Profile of .020 M -- N	0.034	N/C per PPPL
Base fo T datum -E- side	0.04	- .0193 to .0148	Profile of .020 M -- N	0.02	.050" Profile
Side of T datum -D- side	0.048	- .024 to .018	Profile of .020 M -- N	0.028	N/C per PPPL
Base fo T datum -D- side	0.044	- .022 to .018	Profile of .020 M -- N	0.024	.050" Profile
Datum -E- Large Wing	0.024	- .012 to .001	Profile of .125		No Change on C casting
Datum -E- Small Wing	0.128	+ .051 to + .064	Profile of .125	0.003	No Change on C casting
Datum -D- Wing	0.072	+ .014 to + .036	Profile of .125		No Change on C casting
Area below VPI Groove	0.15		Profile of .100	0.05	.200 Profile
Inside of datum -D- wing	0.033	+ .026 to + .033	Profile of +.050 / - .100		No Change (N/C)
True Position of T holes	0.088	.002 - .088	True Position of .010	0.076	.060 T.P.
True Position of Datum -D- flange holes	0.096	.004 - .096	True Position of .010	0.088	.060 T.P. and 1.885 +/- .003 Nominal Hole Size
True Position of Datum -E- flange holes	0.002	.020 - .062	True Position of .010	0.062	.060 T.P. and 1.885 +/- .003 Nominal Hole Size

From: Griffith, Mike [mgriffith@majortool.com]
Sent: Tuesday, January 17, 2006 2:14 PM
To: Phil Heitzenroeder; Bowling, Kevin; David E. Williamson; Bob Simmons
Cc: Wayne T. Reiersen
Subject: RE: RFD-14-012

Phil,

It was my impression that the long sides of the "L" were the critical areas. With that assumption, I broke out the two legs of the "L" separately. If that is not something that you want to change we certainly are fine with that. This again was an attempt to reduce the number of rejections that needed to be reported and discussed.

If you still would like us to discuss this, please let me know.

Thanks.

Mike Griffith
Major Tool and Machine, Inc
CFT Engineer
Tel: (317) 917-2612

Clarified that #2b in e-mail of Jan 16 th can be deleted.
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From: Phil Heitzenroeder [mailto:pheitzen@pppl.gov]
Sent: Tuesday, January 17, 2006 1:55 PM
To: Bowling, Kevin; David E. Williamson; Bob Simmons; Griffith, Mike
Cc: Wayne T. Reiersen
Subject: FW: RFD-14-012

Kevin, Mike-

Dave questions why the profile of the base of the T is proposed to be changed. Could we have a brief call at 3 to discuss? Please call in at 1-877-952-1506; passcode 833648. Thanks!

Phil

Mr. Philip Heitzenroeder
Head, Mechanical Engineering Division
Princeton Plasma Physics Laboratory
PO Box 451
Princeton, NJ 08543
Tel. 609-243-3043

<i>NCSX RFD</i> <i>Part III</i>	Number: 14-012	RFD Description: Change in Tolerances for Type C Casting
RLM: Wayne Reiersen (Brad Nelson on travel)		Organization: PPPL
Impact on Interfaces with Other WBS Elements/Items: (If none, so state): NONE except WBS 14		
<p>RLM Recommendation:</p> <p><input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve</p> <p>Additional remarks: Type A and Type B casting drawings to be revised also.</p> <p>Does this Change Impact Material Already Procured or Parts/Assemblies Already Assembled/Manufactured using this Material: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If "Yes", what is the recommended disposition of this material/part/assembly?</p>		
RLM Signature: <u>Wayne Reiersen</u>		<small>Digitally signed by Wayne Reiersen DN: CN = Wayne Reiersen, C = US, O = PPPL Reason: I am approving this document Date: 2006.01.17 16:13:48 -05'00'</small>
<p>Project Disposition:</p> <p><input type="checkbox"/> Approved. No ECP required.</p> <p><input checked="" type="checkbox"/> Approved. ECP -042 assigned. Bob Simmons <small>Digitally signed by Bob Simmons DN: CN = Bob Simmons, C = US Reason: I have reviewed this document Date: 2006.01.17 15:46:58 -05'00'</small></p> <p style="text-align: center;">NCSX Systems Engineering Support Manager</p> <p><input type="checkbox"/> Not Approved. Reason(s) for disapproval:</p>		