

PPPL ENGINEERING CHANGE NOTICE (ECN) ECN # 5026

COGNIZANT INDIVIDUAL: D. Williamson
ECN TITLE: MCWF Type-C Revision Following C1 Inspection
ASSOCIATED ECP: ECP-038
CC/WP/Job: 1403 AREA OR PROJECT: NCSX

LIMITATION OF SCOPE - NOTE: A Work Planning Form is NOT required if the total change to be accomplished (ENG-032):

- Is not large or complex or does not represent a new installation into a usable space
- Does not have a significant ES&H impact
- Does not involve tritium or other radioactive contaminated or activated equipment
- Does not impact multiple projects, systems, or groups

OR does not change the scope or intent of the original design.

Responsible Line Manager CONCURRENCE: _____
 (Signature indicates that no Work Planning form is required.)

If non-concurrence or associated with a work planning form, enter the WP Number:

DRAWING(S) AFFECTED NUMBER:	NEW Revision	TITLE
SE141-103	3	MOD COIL WINDING FORM ASM TYPE-C
SE141-078	2	POLOIDAL BREAK SHIM ASM TYPE-C
SE141-116	7	PRODUCTION WINDING FORM TYPE-C
DS141-036	2	STUD, 1.375 DIA x 9.5 LG
DS141-060	1	NUT, 1.375-6UNC 12 PT HEX
DS141-079	N/A	WASHER, 2.75 OD x 1.66 ID x 0.5 THK
SE141-137	0	MCWF POL BREAK BEARING PLATE
SE141-138	0	MCWF POL BREAK BEARING PLATE

<p>DESCRIPTION OF CHANGE: (State Drawing No., Zone/Group, or List Attachments)</p> <p>See RFD-14-009 attachment, "Meeting notes, review of MCWF C1 at PPPL, 10/14/2005", for detailed sketches depicting changes. Drawing DS141-079 is no longer used by the modular coil winding form assembly. Table of changes from the attachment follows:</p>

Item	Drawing	Sheet	Zone	Issue	Resolution
1	SE141-103	1 2	C2 D5	Washer not suitable for thin flange, required bolt preload.	Replace washer with bearing plates, SE141-137 and SE141-138.
2	SE141-078	1	F7	Shim edges are flush with insulator, making it difficult to seal for VPI. Also, potential for voltage breakdown.	Add instruction to chamfer all shim edges 1/16".
3	DS141-036 (stud) DS141-060 (nut)	1 1	N/A N/A	Material specification is incorrect (both drws) and stud length must match revised drawing to accommodate bearing plates.	Revise material to ASTM A453, Grade 660B.
4	SE141-116	5	E8	Tapped and thru hole were not positioned according to latest model/drawing revision.	Adopt latest rev for hole position, change tapped hole from thru to 1.25" blind due to flange radius.
5	SE141-116	5	F7	Spherical seat size tolerance +/- .01 is not suitable for intended use.	Change size tolerance to +.002/- .003. Pilot hole up to 3/8" is acceptable. Lap finish to final size tolerance of +.002/-.000.
6	SE141-116	6	D3	Poloidal break edge is flush with insulator.	Add instruction for 1/16 chamfer all surfaces and edges of break.
7	SE141-116	9	C7 F3	Cooling inlet/outlet thru hole diameter is too small, and one hole interferes with flange.	Revise location and diameter of the interfering hole and the diameter of the other seven holes.
8	SE141-116	10	D2	As-cast tolerance is not suitable over a small area where wing of adjacent coil overlaps.	Revise profile tolerance to +.05 / -.1 over area defined by IGES surface.
9	SE141-116	NEW	N/A	Four thru holes to be added for cooling line inlet/outlet at poloidal break.	Add drawing view.

REASON FOR CHANGE:

Inspection of MCWF C1 identified several issues requiring resolution and/or clarification. Some were manufacturing and some were design errors.

ENGINEERING CHANGE PROPOSAL: ECP-038 **DATE: 10/24/2005**

COGNIZANT INDIVIDUAL MAKING THE CHANGE:
D. Williamson

RESONSIBLE LINE MANAGER:
B. Nelson