

# NATIONAL COMPACT STELLARATOR PROJECT

## Engineering Change Proposal (ECP)

### COVER PAGE

*(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)*

Originator: D Williamson

Date: 9/17/04

ECP No: ECP-015

ECP Title: MCWF Contract-Negotiated Changes and General Revision to Winding Form Types A, B, and C.

### Required Reviewers

Required Reviewers for this ECP:

P. Heitzenroeder, L. Dudek

### ECP Approval Level

Expedited ECP? ☒ Yes ☐ No

Change Level: 3 Project

Approving Official: 3a Expedited ECP - Engineering Manager

### Actions

Update Table 6-1 in NCSX specification NCSX-CSPEC-141-03 to reflect the updated drawings per ECN # 4903

Update the following drawings per ECN # 4903:

- SE-141-114 through SE-141-116 and
- SE-141-101 through SE-141-103

### APPROVALS

*(TO BE COMPLETED BY APPROVING OFFICIALS)*

Change Level	Approving Official	Approval?	Signature
3	NCSX Project Manager	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3a (Expedited ECP)	NCSX Engineering Manager	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	NCSX Federal Project Director	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1	Associate Director OFES	<input type="checkbox"/> Yes <input type="checkbox"/> No	
0	Under Secretary of Energy	<input type="checkbox"/> Yes <input type="checkbox"/> No	

# NATIONAL COMPACT STELLARATOR PROJECT

## Engineering Change Proposal (ECP)

### *PART I* *(TO BE COMPLETED BY ORIGINATOR)*

Originator: Dave Williamson

Date: 9/17/04

#### Overview of Change

Type of ECP: ☒ EXPEDITED ☐ STANDARD

Type of Change: ☒ TECHNICAL ☐ COST ☐ SCHEDULE ☐ EDITORIAL

(Check all that Apply)

#### **Reason for Change:**

Contract-negotiated changes will reduce the cost of the production winding forms.

Lead block dimensional changes are proposed to make Types A and B similar to Type C (see ECP-012).

**Impacted WBS Elements:** WBS 141 Modular Coil Winding Form

#### **Impacts of Change (Briefly Describe):**

Cost impacts were already captured in ECP-014.

Elimination of the spherical seats and other modifications will reduce the cost of the winding forms. No impact on the winding process is anticipated.

Lead block changes will improve the conductor configuration and provide space for additional insulation and mechanical support.

#### **Assessment of Other Options:**

None.

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## Engineering Change Proposal (ECP)

### *PART I* *(TO BE COMPLETED BY ORIGINATOR)*

Originator: Dave Williamson

Date: 9/17/04

#### Detailed Description of the Change:

(Use Continuation Sheets and/or Attach Information/Sketches, As Needed)

#### List Attachments, Impacted Documents, etc.

- NCSX-CSPEC-141-03-04 (not signed)
- ECN #4903

#### Description of Change:

Updated NCSX-CSPEC-141-03 to NCSX-CSPEC-141-04 to reflect revise Table 6-1.

SE141-101, All views updated to reflect changes to SE141-114

SE141-114, Sheet 2, Quad G4 - Removed spherical seats, revised tee relief, added dimensions

SE141-114, Sheet 2, Quad F7 - Added 45-deg x .03 chamfer at VPI groove edge

SE141-114, Sheet 3, Quad C4 - Revised hole in vessel support boss

SE141-114, Sheet 7, Quad C2 - Revised lead block protrusion dimensions

SE141-114, Sheet 9, Quad C7 - Revised dimension of cooling inlet/outlet hole

SE141-114, Sheet 10, Quad D3/D7 - Updated image

SE141-114, Sheet 11, Quad E3 - Removed Tables III, IV

SE141-102, All views updated to reflect changes to SE141-115

SE141-115, Sheet 2, Quad G4 - Removed spherical seats, revised tee relief, added dimensions

SE141-115, Sheet 2, Quad F7 - Added 45-deg x .03 chamfer at VPI groove edge

SE141-115, Sheet 3, Quad F4 - Added assembly fixture attachment boss

SE141-115, Sheet 7, Quad B4 - Revised lead block protrusion dimensions

SE141-115, Sheet 9, Quad F4 - Revised dimension of cooling inlet/outlet hole

SE141-115, Sheet 11, Quad D3/D7 - Updated image

SE141-115, Sheet 12, Quad E3 - Removed Tables III, IV

SE141-103, All views updated to reflect changes to SE141-116

SE141-116, Sheet 2, Quad G4 - Removed spherical seats, revised tee relief, added dimensions

SE141-116, Sheet 2, Quad F7 - Added 45-deg x .03 chamfer at VPI groove edge

SE141-116, Sheet 11, Quad D3/D7 - Updated image

SE141-116, Sheet 12, Quad E3 - Removed Tables III, IV