

LIFT PROCEDURE

Procedure Number: D-L-NCSX-984-00

TITLE: Modular Coil Lift Procedure

Note: LIFT DATA SHEETS NEEDED TO PERFORM THIS LIFT

PREPARED BY: James H. Chrzanowski
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Date: 2005.08.03 13:12:26 -0400'

James H. Chrzanowski- Mod Coil ATI

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Larry Dudek- Modular Coil RLM

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Date: 2005.06.03 12:45:0400'

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LIFT MANAGER: Mike Viola
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Reason: I am approving this document
Date: 2005.08.03 14:43:40 -0400'

Michael Viola- NCSX Lift Engineer

PROCEDURE INCLUDES ALL ATTACHMENTS

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1.0 INTRODUCTION:

- 1.1 This procedure describes the necessary equipment and methods to follow in lifting and transporting a Modular Coil Ring Assembly. [Winding form mounted in a ring assembly]
- 1.2 This procedure shall be used for transferring modular coils from station turning fixture to station turning fixture, or to reposition the coil from the vertical to horizontal position at station number 1a.
- 1.3 This procedure shall be used for handling any of the (3) types of modular Coils (A, B and C) while they are in the ring support structure.
- 1.4 This lift has been classified as a Critical lift because of the cost and impact to the NCSX schedule if damaged.
- 1.5 Table 1 identifies the weights of the three completed modular coil types.

**Table 1- Weight of Completed
Modular Coil** (does not include weight of the lifting beam)

Casting Type	Weight (lbs.)
A	6130
B	6050
C	6100

- 1.6 This lift procedure shall used in conjunction with procedures [reference]:
D-NCSX-MCF-001- Modular Coil Winding Form Preparation Activities
D-NCSX-MCF-002- Modular Coil Winding Activities
D-NCSX-MCF-003- Modular Coil VPI Activities
D-NCSX-MCF-004- Modular Coil Post VPI Activities

2.0 PREREQUISITES:

- 2.1 PIC will attest on the Lift Data Sheet that any installation, disassembly, or removal procedures required to allow the equipment to be moved have been completed.
- 2.2 PPPL Lift Manager and QC shall be notified in advance of a critical lift.
- 2.3 No Critical Lift may be commenced without the presence of a PPPL Lift Engineer or his designee.
- 2.4 The lift must be made in accordance with ENG-021 Hoisting and Rigging Program.

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3.0 PRECAUTIONS:

- 3.1 The area where lift is being made shall be properly secured so that personnel other than the lift team are allowed access.
- 3.2 All personnel involved in this procedure shall wear hard hats.
- 3.3 All rigging shall be inspected by a qualified rigging specialist (QRS).
- 3.4 The crane operator shall be Critical Lift certified.
- 3.5 Protection for the slings and equipment from sharp edges will be provided.

4.0 PROCEDURE FIELD CHANGES

Procedure field change can be made on site if approved by the PPPL Lift Engineer by working up or using a new Lift Data Sheet.

5.0 LIFT DATA SHEET INSTRUCTIONS

The attached Lift data sheet provides the specification for the hoisting and rigging aspects of the lift and shall be initiated by the Cognizant engineer.

6.0 PROCEDURE:

6.1 Raising a Modular Coil Ring Assembly at Station No.1a

6.1.1 Use the lifting arrangement identified on the attached Lift Data Sheet to connect the modular coil ring assembly to the crane.

6.1.1 The PIC shall identify the coil being transferred.

Coil ID being transferred: _____

6.1.2 In conjunction with procedure D-NCSX-MCF-001 section 6.6 [Station 1a] slowly raise the modular coil ring assembly from the horizontal position to the vertical position. [See figure 1]

6.1.3 Once the modular coil ring assembly is in the vertical position [See figure 2] disconnect the modular coil ring assembly from the Casting to Ring Assembly fixture.

6.1.4 Transport the modular coil ring assembly to the Turning Fixture at stations 2 or 4.

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- 6.1.5 Secure the modular coil ring assembly to the turning fixture frame [steps 6.6.1 thru 6.6.6 procedure D-NCSX-MCF-001].
- 6.1.6 Once the modular coil ring assembly is secured in the turning fixture, remove the lifting slings, shackles, etc. The lift is complete.
- 6.1.7 The modular coil ring assembly lift and transfer is complete.

Verified by PIC: _____ **Date:** _____

6.2 Raising a Modular Coil Ring Assembly at Station No.1a

- 6.1.2 Use the lifting arrangement identified on the attached Lift Data Sheet to connect the modular coil/ring assembly to the crane.
- 6.1.3 The PIC shall identify the coil being transferred.

Coil ID being transferred: _____

- 6.2.2 In conjunction with procedure D-NCSX-MCF-004 section 6.10 [Station 1b] disengage, raise and transport the modular coil ring assembly from the turning fixture at station 1b to the casting assembly fixture at station 1a.
- 6.2.3 Connect the modular coil ring assembly to the Casting Ring Assembly fixture. [See figure 2]
- 6.2.4 Slowly lower the modular coil ring assembly from the vertical position to the horizontal position. [See figure 1]
- 6.2.5 Once the modular coil ring assembly is resting in the casting ring assembly fixture, remove the lifting slings, shackles, etc. The lift is complete.
- 6.2.6 The modular coil ring assembly lift and transfer is complete.

Verified by PIC: _____ **Date:** _____

6.3 Transporting a Modular Coil Ring Assembly from Station to Station

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- 6.2.1 Use the lifting arrangement identified on the attached Lift Data Sheet to connect the modular coil ring assembly to the crane.
- 6.3.2 Depending upon the stations that are involved with the coil lift and transfer, there are different supporting procedures. See step 1.5 for procedure numbers.
- 6.3.3 The PIC shall identify the stations and supporting procedures involved with the transfer:

From Station Number: _____ **to Station Number:** _____

Supporting procedure used during transfer: D-NCSX-MCF- _____

Coil ID being transferred: _____

- 6.3.4 Lift and transport the Modular Coil Ring assembly to next the Turning Fixture.
- 6.3.5 Secure the Modular Coil Ring assembly to the turning fixture frame using the steps in the appropriate procedure as identified in 6.1.7.
- 6.3.6 Once the Modular Coil Ring assembly is secured in the turning fixture, remove the lifting slings, shackles, etc. The lift is complete.
- 6.3.7 The Modular coil ring assembly lift and transfer is complete. Attached copy of completed/signed Lift Data Sheet to back of procedure.

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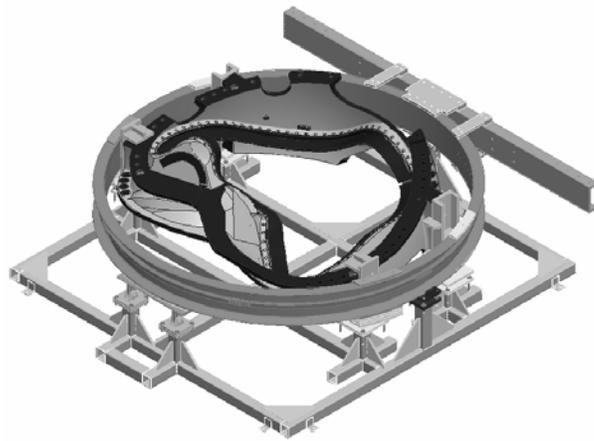


Figure 1- MC Assembly in Horizontal Position

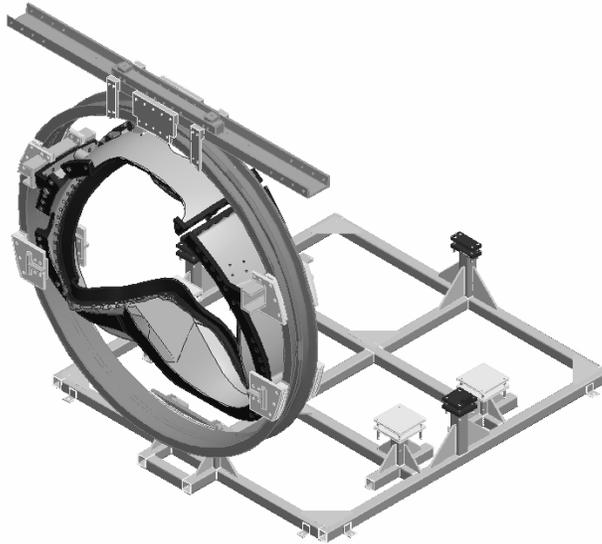
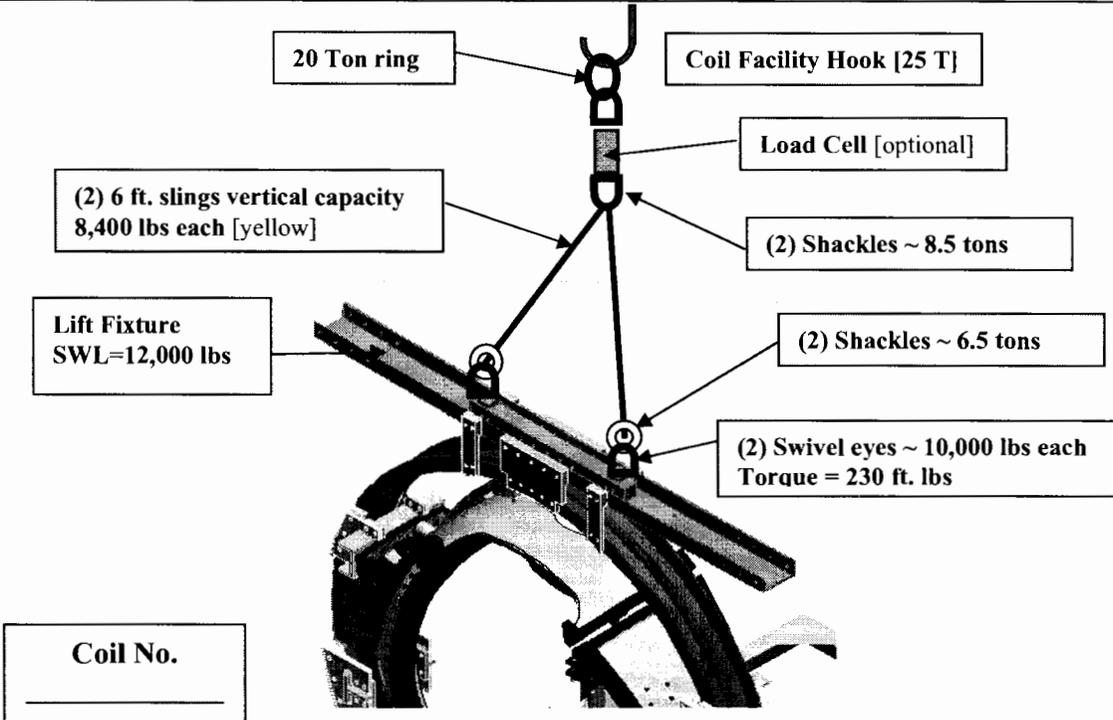


Figure 2- MC Assembly in Vertical Position

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LIFT TITLE: Lifting the Modular Coil Winding Form & Support Ring Assembly	Effective Date: 8/2/05	Initiated: COG. ENG. / PHYS.	Prepared by: QRS
LIFT PROCEDURE NO. D-L-NCSX-984	Repetitive Lift Expiration Date:	<i>Michael Smith</i> Approved: LIFT MANAGER	
AREA: NCSX Coil Manufacturing Facility			

DISASSEMBLY PROCESS COMPLETED PIC: _____
PROCEDURE PREREQUISITES COMPLETED QC: _____



DESCRIPTION: WEIGHT: 7200 Lbs. (Type A,B,C w/ring assembly)
DETERMINED BY: Calculation
 Sketch of rigging shall include: Crane Capacity, Hook Load, All Rigging, Lift Height, Flight Plan
 Sketch of equipment shall include: Dimensions, Bolts Removed, Allowable Tilt

CRANE OPERATOR (print)	RIGGING TEAM (print)		
APPROVED:	QRS (Rigged per sketch)	PIC (Equipment ready to lift)	LIFT ENGINEER (Qualification/inspection complete)

... PERFORM LIFT PERFORM LIFT PERFORM LIFT ...

Equipment is secure and rigging may be removed:	PIC: _____	Date Performed: _____
LIFT DATA SHEET AND ALL DATA TO BE RETURNED TO PPPL OPERATIONS CENTER.		