

**Entrance Module Disconnection &
Removal Procedure**

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Author(s): David Wang

	Name:	<u>Approval Record</u>
Author:	David Wang	
Reviewed By:	Frank Song	
Approved By:	Anders Mjos	

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History of Changes

Release Number	Date	Description of Changes	Author(s)
1	2020-11-23	Initial release	David Wang, Frank Song

Keywords: Target Hall, Module Moving, Procedure, Operation

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ENTRANCE MODULE DISCONNECTION & REMOVAL PROCEDURE

1 Introduction

Sometimes we should move the Entrance Module out from ITE/ITW to SHC for maintenance or repair.

Correction

ITE - SHC @ 25/02/2021
SHC - ITE @ 17/03/2021

2 Scope

ISAC1 Entrance Module.

3 Safety

Allow at least 30 min cool down time after beam be off before going down to the pit. A general radioactive field check is required. Consult with RPG if the highest measurement is above 1.0 mSv/h.

4 Procedure



- 1) INSTALL ENTRANCE MODULE TRANSIT FLANGE IRH0115 ONTO SHC FLANGE TOP



Figure 1,2 Flange IRH0115

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- ✓ 2) INSTALL FOUR ENTRANCE MODULE SHC CAMERAS STANDS AND MOUNTING PLATES IRH1082/IRH1083 AROUND TRANSIT FLANGE. INSTALL SHC CAMERAS ONTO MOUNTING PLATES. CHECK CAMERA VIEWS WITH RH CRANE OPERATOR IN RH CONTROL ROOM.

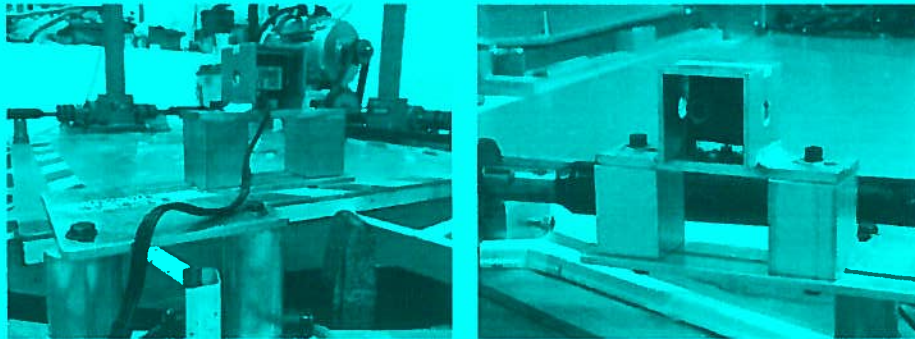


Figure 3,4 Cameras re-mounted around SHC

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- ✓ 3) DISCONNECT ENTRANCE MODULE IN ITW/ITE WHICH INCLUDES FOLLOWING DISCONNECTIONS ON MODULE TOP.

and did re-connection

- ✓ A: CABLE FOR TP1S CONTROLLER, AIR SUPPLY TUBES TO AIR CYLINDER AND TP1S BVs, CABLE FOR 24V SOLENOID VALVE CONTROLLING TOP BV, CF25 CLAMP BETWEEN TP1S BVS, TP1S FAN, AND POWER CORD FOR TP1S FAN. SWITCH OFF AIR SUPPLY TO ALL BVs AND AIR CYLINDER FIRST.

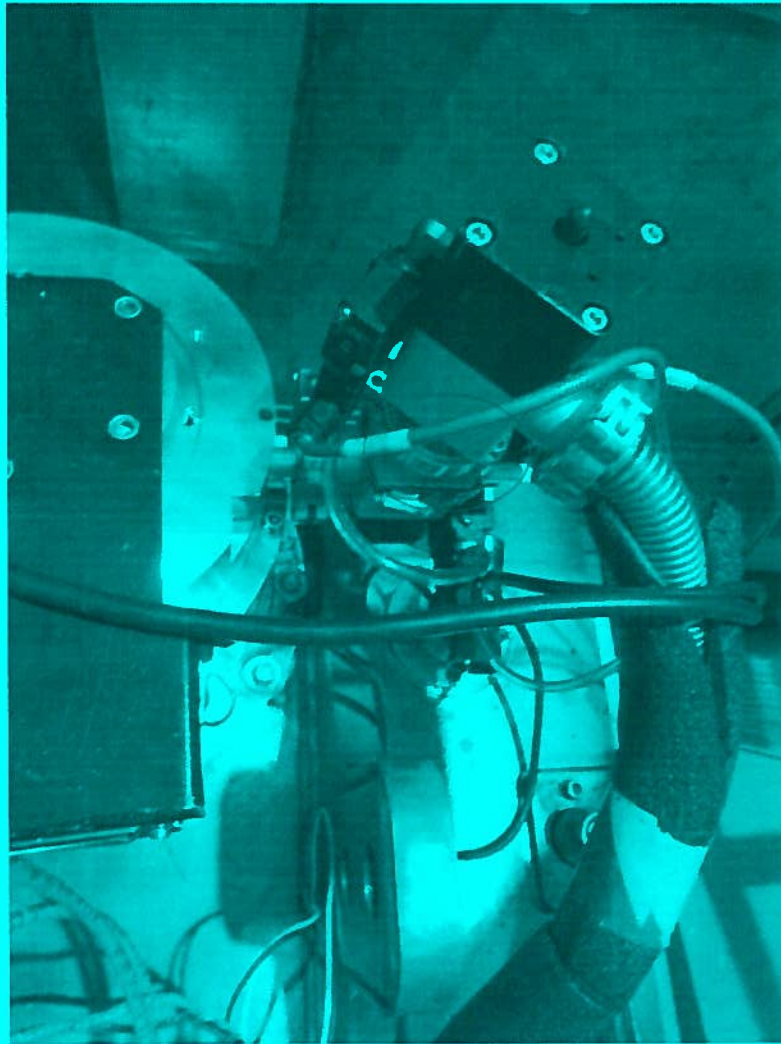


Figure 5

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✓ B: COLLIMATOR WATER COOLING SUPPLY AND RETURN LINES.

✓ C: WIRE SCANNER HV CABLE AND SCANNER SIGNAL CABLES CONNECTOR.

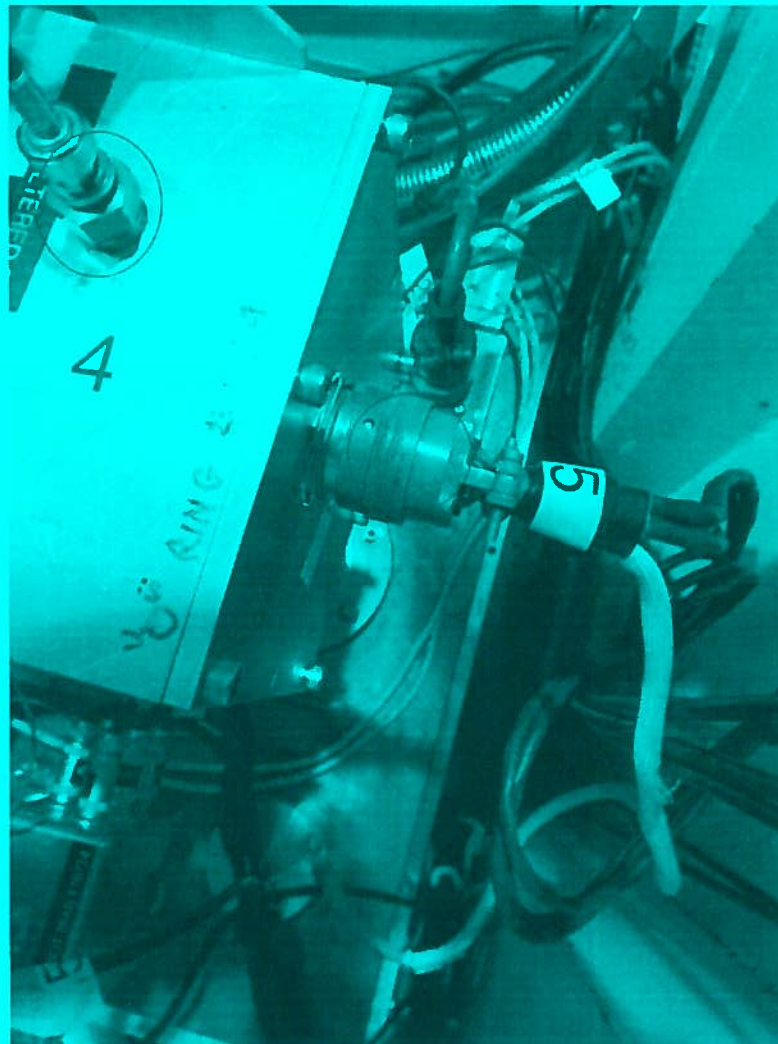


Figure 6

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✓ D: COLLIMATOR HV CABLE AND 6 LEMO CONNECTORS INCLUDING HALO, TOTAL, UP, DOWN, RIGHT, AND LEFT.



Figure 7

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✓E: TWO THERMOCOUPLE YELLOW CABLES FOR COLLIMATOR THERMOCOUPLES.



Figure 8

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✓ F: TWO SMALL LEMO CONENCTORS AND ONE MIL CONNECTOR FOR AIR CYLINDER LIMIT SWITCH SIGNALS.

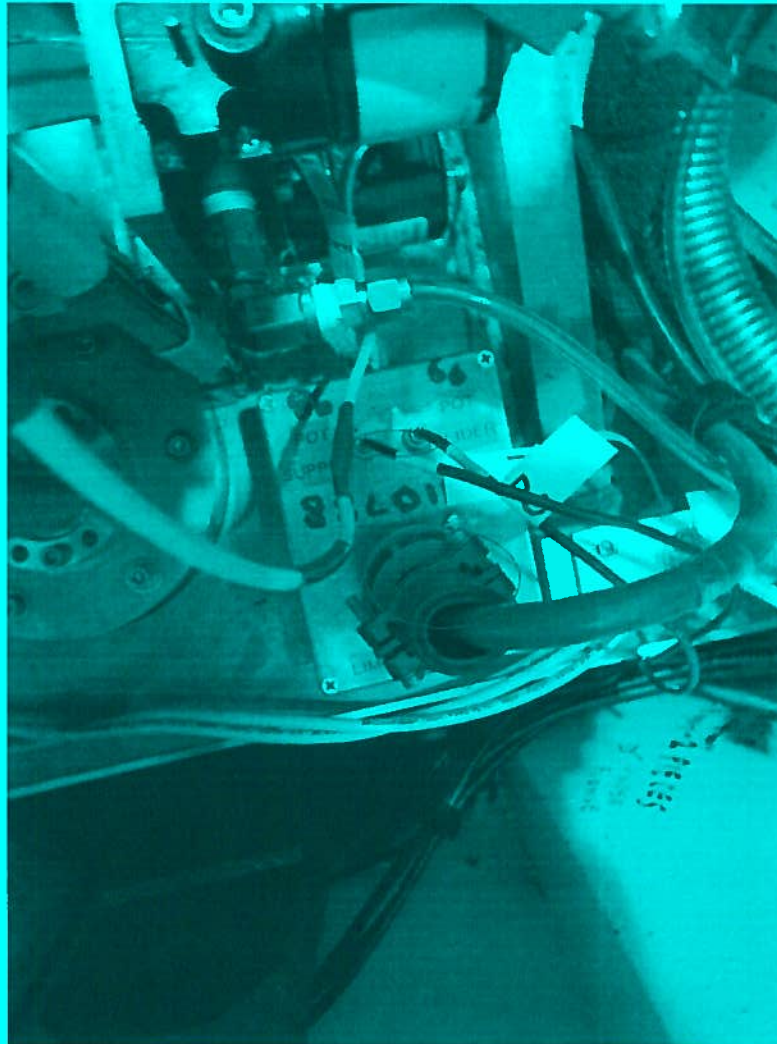


Figure 9

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- ✓ 4) INSTALL ENTRANCE MODULE LIFTING YOKE ONTO MODULE. INSTALL BOTTOM PINS ON BOTH YOKE ARMS FIRST. THEN, ALIGN THE TOP PIN HOLES, AND INSERT TOP PINS.

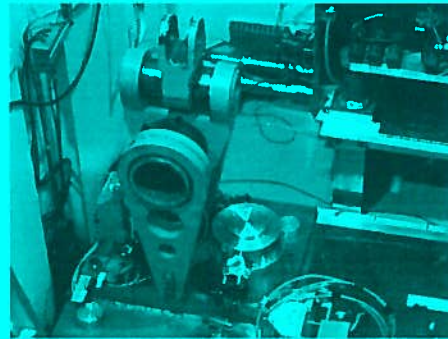


Figure 10, 11 smaller lifting yoke mounted

- 5) SET UP CAMERAS FOR ENTRANCE MODULE MOVE. RH TECHNICIAN IS IN CHARGE OF IT.

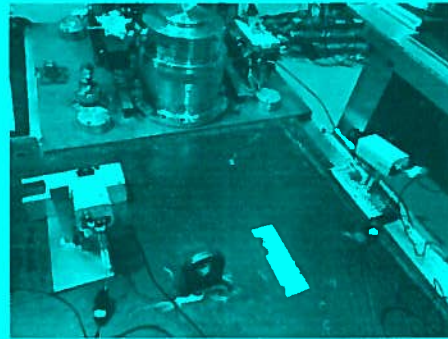


Figure 12, 13 setting cameras around module

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- ✓ 6) USE TH CRANE REMOVING TOP PLATE ON TRANSIT FLANGE AT SHC.



Figure 14 metal cover removing

- ✓ 7) CONNECT TH CRANE TO ENTRANCE MODULE. LIFT UP MODULE 4 FEET HIGHER FROM TANK FLANGE IN PIT.



Figure 15,16 start module moving

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- ✓ 8) REMOVE RAILINGS AND ~~LADDER~~, LOCK UP TH



Figure 17,18 make sure the way is clear and safe for module remote handling

- ✓ 9) REMOTELY REMOVE ENTRANCE MODULE TO SHC. STOP CRANE MOVING WHEN MODULE IS ONE FOOT ABOVE TRANSIT FLANGE AT SHC.

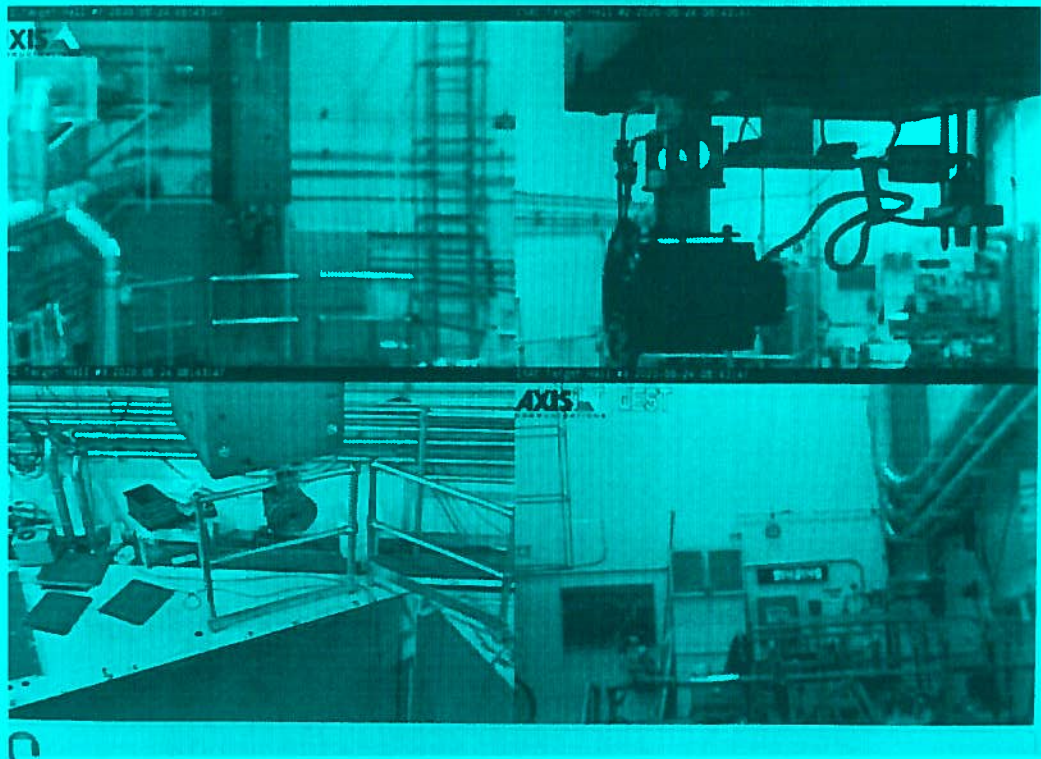


Figure 19 the module is under moving

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- ✓ 10) ACCESS INTO TH. CRANE DOWN MODULE ONTO TRANSIT FLANGE. THE GUIDE PIN HOLES ON MODULE ARE STEP HOLE STYLE. WATCH FINAL ALIGNMENT ON PINS AND HOLES AT LAST INCH CRANING DOWN. RETRIEVE TH CRANE FROM MODULE.



Figure 20 finish the module moving

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- ✓ 11) INSTALL TRANSIT FLANGE TOP PLATE ONTO ENTRANCE FLANGE IN PIT. PUT RAILINGS AND LADDER BABK. AROUND THE PIT.

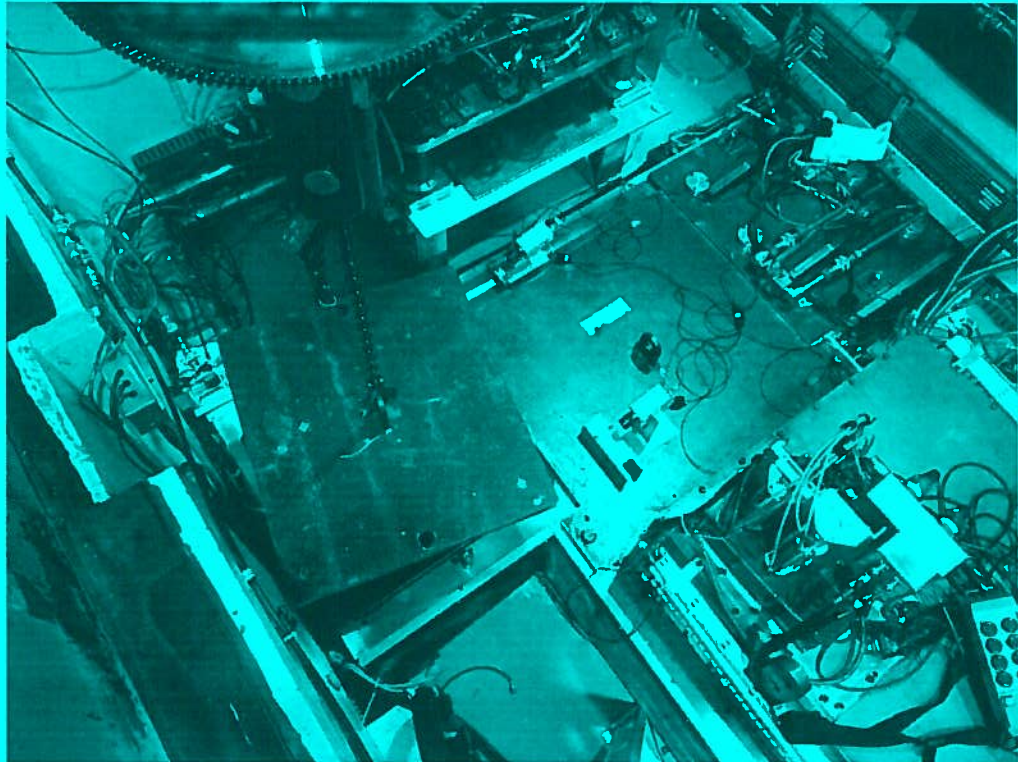


Figure 21 last step of the job

THIS PROCEDURE IS FOR ENTRANCE MODULE REMOVAL FROM SHC TO ITW/E, AND ENTRANCE MODULE CONNECTION IN ITW/ITE AS WELL.

REFERENCE DOCUMENT

IRH0115 TRANSIT FLANGE ASSEMBLY.

IRH1082 ENTRANCE MODULE CAMERA SUPPORT POST

IRH1083 ENTRANCE MODULE CAMERA MOUNTING PLATE

David and I moved the module back to ITE by following this Procedure #190510.

[Signature]
Mar 17 / 2021