

## *Preparation of Cool-Down in Sector 78 RAT* Réunion Avancement Travaux

HARDWARE COMMISSIONING COORDINATION - WEEK 47

24 November 2006 8:30 2889-R-009

Present: B.Bellesia, D.Bozzini, P.Chambouvet, M.Coccoli, P.Cruikshank, E.Millet, B.Perea Solano, M.Pojer, R.Schmidt, A.Suraci, A.Vergara.

### **Preparation of the Cool-Down in Sector 78**

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AC cabling non-conformity: -

Instrumentation cabling:-

Vacuum:

- Pressure test foreseen this afternoon Friday 34 Nov. The tunnel from RR73 to UJ87 will be not accessible from 13:00. The tests will start at 14:00 and will end by Monday.
- P.Cruikshank informed that the leaks that had been localized and 3 leaks will be repaired. The repair will start Monday, 27 Nov, and is estimated to finish by the end of the week. Five interconnects will be opened, and 2 BLMs need to be removed. The repetition of a pressure test might not be necessary, this issue is being discussed between VAC and the safety commission.

Cryogenics:

- An upgrade of 6 temperature sensors for the DFBX is planned for next week (D.Bozzini).

DFB Commissioning:

- P.Chambouvet informed that the pumping of the current lead insulation vacuum in DFBAN finished.

Safety:

- B.Perea is preparing a planning with *consignations* and *deconsignations* of the monorail according to scheduled activities. Monday 20<sup>th</sup> Nov. the monorail will be consigne at 9:00 LSS8L and 9:30 LSS7R.

Preparation of Powering Procedure Test (previously called Dry Run):

- B.Bellesia informed that the pre-test of the 60A converter (C16L8) took partially place yesterday with the debug phase. Today this test has been blocked due to a hardware problem in the LQA; this problem should be fixed on Monday.

ELQA:

- All electrical circuits in 7-8 have been tested for continuity, and no non-conformities were noted.

AOB:

- R.Schmidt proposed that the open issues indicate the name of the "owner" (as already asked by R.Saban yesterday) and an estimate of the time needed to close the issues.

## Open Issues

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### AC non-conformity

- 21.11.06 Transport and installation of the heater system of the current leads for RR77 and UA83 (P.Chambouvet: about 2 weeks of work starting Mon 27 Nov)
- 21.11.06 Non-conformity on instrumentation cables (temperature sensors on current leads) (A.Suraci: 4 cables are in repair)
- 13.11.06 Non-conformity of the crates of cryo instrumentation (inrush current) (A.Suraci: ready next year)
- 13.11.06 Non-conformity of the AC cabling of the crates under the magnets. This concerns ACR, MEL, orbit corrector power converters & VAC.

### DC cabling

- 23.11.06 Cable temporary positioning on the transport side of the tunnel (A.Vergara: next year)
- 22.11.06 Pre-connection of 120A cables in LSSR7
- 20.11.06 Galvanic insulation installation on all DFBs
- 13.11.06 Non-conformity of the DC cabling of the orbit corrector power converters
- 13.11.06 6 kA and 13 kA cables positioning at DFBAO, DFBMA and DFBMC

### Assembly

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### Vacuum

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### Cryogenics

- 22.11.06 Cryo-valves remote control in CCC by AB/CO
- 22.11.06 Control of quench valve
- 20.11.06 DFB instrumentation cables to be connected (D.Bozzini: 80% done)
- 17.11.06 Instrumentation cable HV tests in LSS8L (A.Suraci: 4 cables to be tested)

### DFB Commissioning

- 13.11.06 EIQA-TP4-A for all DFBs between 7 and 8 (D.Bozzini: ongoing according to schedule; next week will begin EIQA-TP4-B, i.e. HV tests)

- 17.11.06 Pumping of insulation vacuum for all DFBs between 7 and 8 (P.Chambouvet: DFBAN done)

#### Safety

General remark: written communication in advance to announce operations!!!

- 23.11.06 Wooden structure for UA access restriction (that will allow transport).
- 23.11.06 Preparation of a prototype insulating protection (derived from a plastic tube) of the monorail by J.C.Guillaume and approval by J.Etheridge.
- 23.11.06 Water leak on the tunnel concrete wall to be fixed (33L8).
- 23.11.06 Planning of *consignations/deconsignations*
- 16.11.06 Cool down safety procedure & access conditions

#### Preparation of powering test

- 22.11.06 Pretest of 60A converters in sector 78, location C16L8. (B.Bellesia: stopped due to LQA hardware problems; expected end by Tuesday 28 Nov)
- 22.11.06 Installation of flexible cables by CV (UA83)
- 16.11.06 Water circulating in UA83 for the Powering Procedure Test: filters need to be checked.

#### AOB

- 13.11.06 BPM connection in Q2, Q3, Q4, Q5, Q6, Q7
- 13.11.06 Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)

#### **Closed Issues**

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Missing labels on DFBAO instrumentation cables	24.11.06
Adjustment of cable length on DFBAO	24.11.06
Prototype of galvanic insulation to be tested at Point 6	23.11.06
Definition of Safety procedure for Powering Procedure Test (aka Dry Runs)	23.11.06
Leaks on DFBAO gas recovery line in repair/installation of helicoflex	22.11.06
21 leak detectors to be placed all along the arc 78	22.11.06
Connections (made by TS/MME) of 120 A cables to be verified (TS/EL)	22.11.06
600 A cable positioning on DFBAO	22.11.06
Pumping of insulation vacuum DFBMH	21.11.06
Pressurized air supply to valve on WRL	21.11.06
Support on DFBAO WRL	21.11.06
Bellows in Q6-Q7 LSS8L which had been damaged, is now repaired	20.11.06
Valve on the WRL is operational	20.11.06

Leak in arc Q11-8L	20.11.06
Cryogenic valve manipulation on DFBX	20.11.06
Removal of some BLMs in conflict with the pumping groups	17.11.06
120 A Cables connection in DFBAO, DFBMC, DFBMA and DFBX LSS8L	17.11.06
DS7R and DS8L leak test finished	17.11.06
Leak in R7 repaired	17.11.06
Q6-Q7 bake-out completed	17.11.06
Current lead vacuum: man power and pumping groups availability	15.11.06
Hydraulic connection of the current leads	15.11.06
DFBX AT/MEL Transformers installation	14.11.06
WRL connection DFBMH LSS7R	14.11.06
ELQA-TP3 test of the sector 78	14.11.06
Polarity tests of the 600A and 120A cables for DFBAN and DFBMH (LSS7R)	14.11.06
QUI available	10.11.06
Pressure tests of QUI and DFBs safety valves finished	10.11.06
QRL valves available for all sector	09.11.06
QRL valve opening/cabling verification	13.11.06
Interconnections DFBAO, DFBMA and DFBMC.	13.11.06
WRL connection at DFBMC, DFBMA and DFBX	13.11.06
120A cables positioning at DFBAO, DFBMA and DFBMC	13.11.06
Q6-Q11L8 leak test envelope	13.11.06
Interconnections of DFBAN and DFBMH	13.11.06

## **Milestones: Test Schedule**

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Week 45	Interconnections
End week 46 [18.11.06]	Leak Test
End week 47 [24.11.06]	Pressure Test
Week 47-48	EE sensor tests in RR77
Week 48 & 49	Purge and filling
Week 49	Dry Run
Week 49	Short Circuit tests of 60 A
Week 49	Diesel Tests
Week 50	Flushing
Week 50 [15.12.06]	Giga PAQ
Week 51	Cool Down Sector 78



**Next RAT meeting**

**Monday, November 27th 8:30 @ P8 2889-R-009**

Mirco Coccoli