

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

HARDWARE COMMISSIONING COORDINATION

14 Novembre 2006 8 :30 2889-R-009

Present: B.Bellesia, D.Bozzini, P.Chambouvet, M.Coccoli, P.Cruikshank, K.Dahlerup-Petersen, S.Junker, F.Millet, B.Perea Solano, M.Pojer, R.Saban, A.Suraci, H.Thiesen, A.Vergara.

### **Preparation of the Cool-Down in Sector78**

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- Cryo. valves manipulation on the DFBMH, DFBAN has started. Antonio Suraci informed that some equipment has been already installed in UJ76.
- Antonio Suraci sent yesterday the procedure for the HV tests of the cabling to cryo instrumentation to John Etheridge.
- Steffen Junker informed that the hydraulic connection of the current leads should be finished this morning.
- Regarding the non-conformity of the mini-crates of cryo instrumentation, A.Suraci informed that a new prototype is being built and tested. However the new crates will not be ready before the cool-down of Sec.78.
- TS/EL Non-conformity is not only affecting QPS and 60A Orbit Correctors but also vacuum crates (P.Cruikshank).
- WRL DFBAO missing support LSS8L could be installed on Friday 17<sup>th</sup> Nov. AT/VAC confirmed that the bake-out of Q6-Q7 should start ramping down the temperature on Wednesday 15<sup>th</sup> Nov. and liberate the area by Friday. Paul Cruikshank has confirmed this by email.
- BPM have encountered problems with the CMC50 cables in the LSS8 region, where the tolerances on the cables are out of specification. TS/EL will have to intervene to correct this before they can continue to connect in this region. AB/BI will check the work currently on-going in Pt 4 and will give Jean-Claude the go-ahead to correct Pt 8 when he can fit this into his planning. There is also a problem with the cables arriving on the warm supports, where they interfere with other equipment. This is also to be clarified with Jean-Claude.
- EIQA-TP4-A in the DFBAO procedure is being written by Davide Bozzini and will be sent to John Etheridge as soon as possible. The ELQA-TP3 tests have been completed.
- Antonio Vergara informed that the polarity tests of the 120 A Cables in P7 will be done together with the 60 A orbit corrector tests. He reminded that the connection of the 120 A cables in DFBX LSS8L should remain open at the level of the split (distribution box).
- Reiner informed by email that the Quench protection continuity tests and cables assignment LSS8L (DFBMC and DFBX) would start Thursday 16<sup>th</sup> Nov and if possible in LLS7R (DFBMH, DFBAN). The tests could be carried out in DFBMA on Friday after the bake-out of Q6-Q7. Knud mentioned a labeling task to be carried out within AT/MEL.

- DS7R and DS8L leak test information will be provided by P.Cruikshank tomorrow during the next RAT.
- Current lead vacuum: manpower and pumping groups availability. P.Cruikshank promised to look around for an appropriate pumping group (turbomolecular + 1 to 3 l/min). As for the manpower, Pascal Chambouvet confirmed that this should not be an issue.
- Due to a non-conformity in the galvanic insulation, between the power cables and the current leads, part of it had to be repaired and is therefore not fully available.
- Francois Millet reminded that during helium tests in week 46 and week 47, AT/VAC requires pumping down the different headers in QRL and magnets to check the leaks without any pressure drop between internal process circuits and the vacuum enclosures. Then the evacuated process circuits are pressurized to 1 bar with helium for leak detection in vacuum enclosure which is kept under vacuum conditions. Due to the fact that the lines are not interrupted by valves along the LSS and arc, all circuits are subjected to oscillations between 0 bar Abs and 1 bar Abs.  
Therefore during these two weeks internal piping could be sometimes under vacuum conditions and therefore any activity requiring higher pressure (electrical test) should be coordinated with AT-VAC.
- The Safety Coordinators (TS/HDO) will attend every Thursday meeting in order to discuss any safety issue.
- Francois Millet informed that line B is not available for pressurization today.

## Open Issues

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- 13.11.06 Cryo. valves manipulation on the DFBMH, DFBAN and DFBAO
- 13.11.06 Hydarulic connection of the current leads
- 13.11.06 Non-conformity of the mini-crates of cryo instrumentation
- 13.11.06 Cabling non-conformity affecting QPS and 60A Orbit Correctors IST
- 13.11.06 WRL DFBAO missing support LSS8L
- 13.11.06 3 x 600 A power cable positioning LSS8L
- 13.11.06 BPM connection in Q2, Q2, Q4, Q5, Q6, Q7
- 13.11.06 EIQA-TP4-A in the DFBAO
- 13.11.06 LSS8L Q6-Q7 bake-out
- 13.11.06 120 A Cables connection in DFBMC, DFBMA and DFBX LSS8L
- 13.11.06 6 kA cables positioning at DFBMA and DFBMC
- 13.11.06 Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)
- 13.11.06 DS7R and DS8L leak test
- 13.11.06 Leak in R7
- 13.11.06 Current lead vacuum: men power and pumping groups availability
- 13.11.06 Galvanic Insulation 600 A, 6 kA, 13 kA for LSS8L and LSS7R available

## Closed Issues

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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  
Interconnections of DFBAN and DFBMH

13.11.06

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**

**Wednesday, November 15th 8:30 @ P8 2889-R-009**

Mirco Coccoli  
Blanca Perea Solano