

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

HARDWARE COMMISSIONING COORDINATION - WEEK 48

29 November 2006 8:30 2889-R-009

Present: B. Bellesia, S.Brown, H. Buret, P.Chambouvet, V.Chareyre, M.Coccoli, R.Lauckner, F.Millet, B.Perea Solano, R.Schmidt, A.Suraci, H. Thiesen.

Preparation of the Cool-Down in Sector 78

AC cabling: -

Instrumentation cabling:

- A.Suraci informed that:
 - Connection of instrumentation on DFBX is on hold as required by the team investigating on the inner triplet leak.
 - The activity of connecting the crates in UA83 and RR77 to the FIP is ongoing
 - Informs that the tests of the EI_QA of the orbit correctors could damage Cryo-equipment if an error in the interface boxes occurs.

Vacuum:

- F.Millet summarized the situation:
 - Inner Triplet leak has been found between Q2 and Q3. The cold mass will be insulated at level of line B (1 week), the planning for cool down is still reliable: it will be done w/o the IT.
 - A new pressure test will be performed on the inner triplet (of sector 81) to verify if the problem is reproducible during next week.
 - The 4 leaks in the arc have been localized. One has already been repaired and the rest will be done by the end of this week.

Cryogenics: -

DFB Commissioning:

- P.Chambouvet informed that he saw Flohe personnel sitting on current leads - J. C. Guillaume has been informed.
- Insulation vacuum of the current leads of the high current module of the DFBAO. Today it starts.
- Functional tests of current lead heaters DFBMH is finished and DFBAN nearly to be finished

Safety:

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

- B. Bellesia informed that the tests of the 60 A converters of the orbit correctors will start on Monday 4th Dec (week 49). The 24 hr run will be done using the 66% of the converters (64 over 96). The planning is attached.
- EI_QA performed on C16L8. ICC test showed reversed sequence of V-taps on circuit RCBV16.L8B1. To be discussed on next RAT.
- A. Vergara informed that the 120A circuits in the right of 7, powered from RR77 but directly connected to the SSS, have not gone yet through the polarity test (they are not labelled). They can be included in the 60A campaign starting next Monday. The test of the converter will not be needed since those were already tested during the SCT in RR77. In this way we will not have to devote a special team next week to place the 20 labels and allow MME to make the connection to the lead.

EI_QA: galvanic insulation pieces available:

12 - 600 A
6 - 13 kA
6 - 6 kA

AOB: -

- H.Buret and F.Millet informed that the the ODH system in LHCb cannot be accepted yet. It is mandatory that the changes required by SC need to be performed before the cool-down. David Hay and safety commission are involved to solve the issue.

Open Issues

AC non-conformity

- 21.11.06 Non-conformity on instrumentation cables (temperature sensors on current leads) (A.Suraci: 3 cables are in repair-Wed.29th)
- 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

- 30.11.06 Non conformity: 6 temperature sensor cables need repair (A. Suraci)
- 25.11.06 Functional test on the leads heaters: DFBAO, DFBMA, DFBMC, DFBXG
- 22.11.06 Pre-connection of 120A cables in LSSR7 (TS/EL)
- 20.11.06 Galvanic insulation installation on all DFBS (AT/MEL)
- 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, DFBMC, DFBAN (Flohe)
Assembly

-

Vacuum

-

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 (A.Suraci: 80% done)

17.11.06 Instrumentation cable HV tests in LSS8L (A.Suraci: 4 cables to be tested)

DFB Commissioning

29.11.06 Definition of owner of activity and pumping needs for current leads insulation vacuum (DFBX)

29.11.06 Pumping of insulation vacuum for DFBX

13.11.06 EIQA-TP4-A for all DFBs between 7 and 8 (D.Bozzini: next(w48): DFBAO HC module, DFBMA, DFBMC, DFBX))

Safety

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

25.11.06 EIQA-TP4B safety procedure (1900 volts tests!).

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).

16.11.06 Cool down safety procedure & access conditions

Preparation of powering test

30.11.06 EI_QA performed on C16L8. ICC test showed reversed sequence of V-taps on circuit RCBV16.L8B1. To be discussed on next RAT.

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-wk49 (J-C.Guillaume & R.Jones)

13.11.06 Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)

Closed Issues

Pretest of 60A converters in sector 78, location C16L8.	30.11.06
EIQa-TP4-A on DFBA, DFBMH, DFBAO LC module	29.11.06
Pumping of insulation vacuum for all DFBS between 7 and 8 (except DFBX)	29.11.06
Functional test on the leads heaters DFBMH	29.11.06
Functional test on the leads heaters DFBA	28.11.06
Pumping of current lead insulation vacuum DFBA	25.11.06
120A and 600A positioning on DFBA and DFBMH (INEO)	25.11.06
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 current lead 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 DFBA and DFBMH	14.11.06

(LSS7R)

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

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

Friday, December 1st 8:30 @ P8 2889-R-009

Blanca Perea
Boris Bellesia