

RAT in Point 8 Réunion Avancement Travaux

HARDWARE COMMISSIONING COORDINATION - WEEK 2

8th January 14:00 2889-R-009

Present: AB/PO: H.Thiesen.
AT/ACR: P.Gomes, F.Millet, A.Suraci.
AT/MEL: D.Bozzini, R.Denz, M.Kappinen.
AT/VAC: P.Cruikshank, A.Grimaud, W.Maan.
TS/EL: J.C.Guillaume.
TS/HDO: M.Coccoli, M.Laureure, B.Perea, R.Saban, A.Vergara.
TS/IC: E.Barbero.
TS/LEA: D.Macina.

Preparation of the Cool-Down in Sector 78, 81 and 45.

Sector 78

The status of the Cool-Down reported by F.Millet is:

- The flushing started on Thu Dec 21 in the QRL; it is ongoing today.
- Tonight will start the flushing of the DFBs and then of the magnets.
- On Friday the flushing should be finished and the EIQA-TP4B will take place.
- 2 plugs have been found in the 3 DFBs checked; 3 more DFBs need this check.
- There is the need for valves software control check (as some errors have been found in the past).
- 3 BLMs need re-installation. E.Barbero and P.Cruikshank said that there is no hurry as this work can be done during powering.
- F.Millet suggests performing an interlock test (vacuum loss leading to a cryo-stop) on Wednesday with all the system connected for cool-down and the equipments responsible agree (P.Cruikshank, P.Gomes, W.Maan, F.Millet).

J.C.Guillaume reported on his activity:

- The warm magnets cables will be ready this week on the magnet side (LSS8L).
- One cryo-instrumentation cable may need to be changed: this need to be organized by tomorrow morning.

R.Denz reported on his activity:

- Data recording is taking place in the QPS systems.
- 2 QPS cables need repair. The action has been discussed after the RAT between R.Saban, D.Tommasini.

D.Bozzini reported on his activity:

- EIOA-DOC is ongoing and need to be coordinated with the flushing.
- For the EIOA-TP4B (1.9kV) everything need to be connected by Friday morning.
- The clamps to avoid the freezing of the current leads are being placed.
- The wrong pinout is being changed and the database updated by J.C.Guillaume.

Warm Magnets Commissioning:

- A.Vergara reported that the warm magnets will be commissioned starting tomorrow afternoon. M.Kappinen will perform the EIOA and M.Coccoli will ensure the safety information banners.

Sector 81 and Sector 45

The status of the LHCf and BRAN reported by D.Macina is:

- This week is consecrated to test in surface buildings.
- The main part of the equipment will arrive before the end of this week 2 and the transport of the LHCf detector in the LSS1L will be done on Friday 15th January affecting the access conditions. The BRAN will probably be transported on the 16th Jan.

The status of the Warm Magnet commissioning reported by A.Vergara is:

- Week 2 and 3 will be consecrated to the preparation, while the heat run will be performed during week 4.
- J.C.Guillaume asks for the consignment of the *gaine monorail* during the warm magnet cabling and it is agreed that it will be asked to J.M.Chevalley to have longer term consignations in sect 78, 81, 45 in the LSS regions. J.C.Guillaume asked for the *consignation* of the Power Converters as well.

AC cabling:

- Installation of the cryo-instrumentation crates in sector 81 will be finished by the end of January, while in sector 45 it will be done at the beginning of February.

QPS:

- QPS tests will start this week in sector 45 in DFBA's.

Open Issues

AC non-conformity

- 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 & VAC.

DC cabling

- 30.11.06 Non conformity temperature sensor cables need repair LSS7R (D.Bozzini, A.Suraci)
- 22.11.06 Pre-connection of 120A cables in LSSR7 (TS/EL) - PC Non conformities (H.Thiesen)

Instrumentation Cabling

- 15.12.06 DFBXG non-conformity on the current lead heater cables (P.Chambouvet-J-C.Guillaume)

Cryogenics

- 22.11.06 Instrumentation and remote control not fully stable (P.Gayet - F.Millet)

DFB Commissioning

- 29.11.06 DFBX Pumping of Current Leads insulation vacuum (S.Feher)

13 kA EE Systems

- 16.12.06 Calibration of the Arc Detectors on the 13 kA EE System (K.Dahlerup-Petersen)

Safety

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

- 23.11.06 Water leak on the tunnel concrete wall to be fixed (C33L8).

Preparation of powering test

- 30.11.06 EI_QA performed on C16L8. ICC test showed reversed sequence of V-taps on circuit RCBV16.L8B1 (D.Bozzini)

AOB

- 13.11.06 BPM connection in Q2 (R.Jones) - waiting for Inner Triplet to be repaired

Closed Issues

Short-to-ground in QBBI.A21R7 (Lyra side) (D.Bozzini, F.Seyvet)	19.12.06
BPM connection in Q3, Q4, Q5, Q6, Q7 (R.Jones)	15.12.06
DFBAO Functional test on the leads heaters	15.12.06
DFBXG 100V test on current leads (S.Feher)	15.12.06
Repositioning of 1 DC cable on DFBAO and of 2 DV cables on DFBAN (all 13kA) (J.C.Guillaume)	14.12.06
Wooden structure for UA access restriction (that will allow transport)	12.12.06
Non conformity in DFBMH, DFBAN and DFBXG current lead heaters (P.Chambouvet-J-C.Guillaume)	12.12.06
Galvanic insulation installation on all DFBs (AT/MEL)	08.12.06
Re-positioning collars used to fix the WRL to the CLs (all DFBs)	08.12.06

(A.Perin-D.Bozzini-F.Millet)

6 kA and 13 kA cables positioning at DFBAO, DFBMA, DFBMC (Flohe)	08.12.06
Functional test on the leads heaters: DFBMA, DFBMC	08.12.06
EIQA-TP4B safety procedure (1900 volts tests!)	07.12.06
Cool down safety procedure & access conditions	07.12.06
Instrumentation cable HV tests in LSS8L (A.Suraci: 4 cables to be tested)	06.12.06
Non-conformity on instrumentation cables (temperature sensors on current leads) (A.Suraci: 3 cables are in repair-Wed.29th)	06.12.06
Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)	06.12.06
DFBAN cable positioning (J.C.Guillaume)	06.12.06
Access & Safety Cable Installation (full sector) (J.C.Guillaume)	06.12.06
EIQA-TP4-A for all DFBs sector78	04.12.06
Water circulating in UA83 for the Powering Procedure Test: filters checked, installation of flexible cables by CV.	04.12.06
LHCb ODH System ready	04.12.06
Definition of owner of activity and pumping needs for current leads insulation vacuum (DFBX) (S.Feher, R.J.Rabehl)	04.12.06
DFB instrumentation cables to be connected (A.Suraci)	04.12.06
Functional test on the leads heaters DFBMA	04.12.06
Functional test on the leads heaters DFBMC	04.12.06
Non-conformity of the DC cabling of the orbit corrector power converters	04.12.06
Pretest of 60A converters in sector 78, location C16L8.	30.11.06
EIQA-TP4-A on DFBAN, 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 DFBAN	28.11.06
Pumping of current lead insulation vacuum DFBAN	25.11.06
120A and 600A positioning on DFBAN 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 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

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 [07.12.06]	Diesel Tests
Week 49	ELQA-TP4B (Phase I)
Week 50	Flushing
Week 50 [15.12.06]	ELQA-TP4B (Phase II)
Week 03	Cool Down Sector 78



Next RAT meeting

Wednesday, January 10th 8:30 @ P8 2889-R-009

Mirco Coccoli