

RAT in P4 - *Status of Sector 45* - Preparation of Cool-Down

HARDWARE COMMISSIONING COORDINATION - WEEK 7

16th February POINT 4

Sector 45 (M.Solfaroli, B.Perea Solano)

AT/MEL (P.Denis):

- LSS4R: AT/MEL has finished working, connecting the following 120A cables:
 - ✓ DFLES.7R4.1 to DFLES.7R4.4
 - ✓ DFLES.8R4.1 to DFLES.8R4.4
 - ✓ DFLES.9R4.1 to DFLES.9R4.4
 - ✓ DFLES.10R4.1 to DFLES.10R4.4
 - ✓ DFLFS.7R4.1 to DFLFS.7R4.4
 - ✓ DFLES.6R4.1 to DFLES.6R4.4
 - ✓ DFLES.5R4.1 to DFLES.5R4.4

EIOA (D.Bozzini)

- D.Bozzini informed that EIOA-TP3 tests are not finished yet (not DFBMs or DFBAs) and should finish next week.
- Since DFBLD and DFBXE are not ready, D.Bozzini will start performing the EIOA-TP4A tests in all the other DFBs as soon as DFBAI and DFBAH are ready.

60A orbit correctors (H.Thiesen)

- Worldfip working in the arc is needed in order to perform the tests. The correct installation and operation will be confirmed by E.Barbero.
- The tests will be carried out in parallel with the arc 81 and according to the resolution of the TS/EL AC non-conformity. Therefore, the tests will be carried out starting from point 4R on week 9. The full arc will be completed 2 weeks later.

CRYO (A.Suraci)

- A.Suraci informed that they are starting the manipulation of the cryo valves. They will start testing the SCADA system to check the full chain soon.
- Temperature sensors and control cables are being installed in the arc.
- 25%-30% of the mini-racks are already in place and in about 2 weeks 2/3 of the arc will be provided with those.
- Coherence tests with the mobile tests bench will be carried out as soon as the TS/EL non-conformity and Worldfip are ready.
- Two profibus cables in both 45 and 34 need to be pulled by J-C.Guillaume. This will be followed by TS/IC.
- They have already installed 2 heaters of 100 kW on Radio Frequency system. TS/EL is connecting them now.

Installation (E.Barbero)

- In the DFBA AT/ACR has started with the He piping and will be finished next week, after this AT/MCS will come to finish the connection with the WRL.
- The DFBL is not still in place. A meeting in place is necessary to define the sequence of different activities to be performed by Flohe, Ineo and interconnection.
- Due to the delay, a new planning of the NEG activation is necessary. Starting from wk10 will be no access to the DFBAH.
- AB/BI has started the installation in the arc of the Beam Loss Monitors in the sub-sectors fully delivered.

Cryogenics (S.Junker)

- The leak tests should finish by the end of wk15; after this the pressure tests will be carried out.
- Steffen proposed that the week starting from 13th could be used by ELQA, since they will do pumping during at least 8 days. D.Bozzini agreed to use this slot.
- Leak tightness tests (pressurize 3 bars) and functional tests on the DFBS pressure valves should be performed. It requires only 1 day for all the DFBS. This operation will be performed preferably on Friday in case of Helium leakage and no personnel should be working on those DFBS during the tests. Steffen requested this slot to be Friday 2nd March (wk 9).

Vacuum (W.Mann)

- W.Mann informed that there is not insulation pumping done in any stand alone magnet from LSS4R.
- 3 over 8 vacuum sub-sectors showed leaks. From these, in 2 the leak has been localized and will be repaired next week. E.Barbero informed that no sub-sectors will be released from the interconnections next week; in the meanwhile the vacuum group will be doing intermediate leak tests on the jumpers.

AOBs (H.Thiesen)

- There was a leakage of water on RB PC (UA47) yesterday that means there was water on DCCT. A check if the PC works properly is needed. AB/PO is evaluating the consequence on the converters and their equipments. However one heat run on the cables DC in the short circuit will be needed.

Open Issues

Current Leads

- 23.01.07 Current lead cable non-conformities : 1515511 1515512 1515513 1515514 1515516 (L.Poyet + J.C.Guillaume)
- 15.01.07 Current Lead heater functional tests LSS4R (P.Chambouvet)
- 15.01.07 Current Lead heater functional tests LSS5L (P.Chambouvet)
- 15.01.07 CL Insulation Vacuum DFBAH, DFBLML/K/G in LSS4R (P.Chambouvet)
- 15.01.07 CL Insulation Vacuum DFBAI, DFBL, DFBXE in LSS5L (P.Chambouvet)
- 30.01.07 120A mechanical connection DFBAH, DFBLMK/L/G (P.Chambouvet/P.Denis)

QPS

- 31.01.07 LSS5L DFBAI, DFBL, DFBXE continuity/assignment cables and HVT - non-conformities to be repaired by J.Mourao and TS/EL(R.Denz)
- 31.01.07 LSS4R DFBAH, DFBLMK/L/G continuity/assignment cables and HVT - non-conformities to be repaired by J.Mourao and TS/EL(R.Denz)

Cryo-Instrumentation

- 16.02.07 Manipulation of cryo valves (A.Suraci)
- 16.02.07 Connection of the temperature sensors and control cables (A.Suraci)

Other issues

- 09.02.07 Non-conformity (EDMS 816458) at the level of the cable trays installed above the DFBXE (D.Bozzini)
- 15.02.07 Check of PC in U47 because of water leakage

Open Issues (followed by TS/IC)

- 29.01.07 Installation of UPS PIC boxes (E.Barbero)
- 22.01.07 Interconnections around DFBAI, Q5-DSL, Q4-DSL
- 29.01.07 Interconnection and WRL connection DFBAH (LSS4R)
- 16.02.07 Installation and activities on the DFBL - meeting in the field

AOB

- 06.02.07 WorldFip in Arc 45 (C.Dehavay)
- 06.02.07 WorldFip Tests in Arc 45 (week 08) (J.Thomsen)

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

- 29.01.07 Cabling 13-6kA in DFBAH, DFBMK\G in LSS4R(Flohe)
- 05.02.07 Correction of two water-cooled cables on the DFBAI - Flohe (LSS5L)

Cryo-Instrumentation

- 06.02.07 Cryo instrumentation racks installation in Arc 45 (A.Suraci)
- 16.02.07 Pulling profibus cables in UA47 and USC55

Warm Vacuum - NEG Activation

- 05.02.07 NEG Activation in Q6-Q5 LSS5L (to be finished 9th Feb)
- 05.02.07 NEG activation in Q5-D3 LSS4R (to be finished 16th Feb)

Other issues

- 12.02.07 Activity on the water pressure valves for the ACNs

Closed Issues

P.Denis check of the 6kA and 13kA cable presentation in LSS4R	12.02.07
Pre-mounting 600-120A in DFBAI LSS5L (TS/EL)	09.02.07
Pre-mounting 120A in DFBMk/L/G LSS4R (TS/EL)	06.02.07
Polarity Tests of the 120 A in DFBAH, DFBMK, DFBML and DFBMG in LSS4R (TS/EL)	29.01.07
Pre-mounting 600-120A in DFBAH (TS/EL)	26.01.07

Closed Issues (followed by TS/IC)

Interconnection and WRL connection DFBMK/L/G (LSS4R)	16.02.07
Interconnections around Q6-DSL (LSS5L)	26.01.07
WorldFip in UA47 and in Arc 45 (C.Dehavay)	06.02.07
Cabling 600A and 120A in DFBAI, 120A in DFBL in LSS5L(INEO)	09.02.07
13-6kA cabling at the DFBML in LSS4R (Flohe)	06.02.07
Cabling 13-6kA in DFBAI and DFBX in LSS5L(Flohe)	19.01.07
Cabling Q6, Q7, Q8, Q9 and Q10 in LSS5L (INEO)	26.01.07
Cabling of the 600-120A in DFBAH, 120A in DFBMK, DFBML and DFBMG, Q6, Q7, Q8, Q9 and Q10 in LSS4R (INEO)	26.01.07

Milestones: Test Schedule

FORESEEN DATE (provided by TS/IC)	TASK
Wk 12-13	ELOA-TP4A
Wk 11	Interconnections
Wk 13	Interconnection Inner Triplet
Wk 15	Interconnection DFBL
Wk 10-11	AB/PO short Circuit tests
Wk 15	Pressure Test
Wk 21	Cool Down Sector 45
Wk 28	Powering Tests

Matteo Solfaroli