

**RAT** Réunion Avancement Travaux **RR17/UA23-UA27/UJ33**  
HARDWARE COMMISSIONING COORDINATION



**NEXT RAT meeting**  
**Tuesday 28.08 at 14:00 in Point 1 – Bld. 3190-R-002**



August 23-08-2007 08:30 in **in Point 1 – Bld. 3190-R-002**

Present: Boris Bellesia, Maria Paz Casas Lino, Alejandro Castaneda, David Nisbet, Ivan Romera, Jacques Toullieux.

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**Heat runs general schedule:**

**UA27:** 4<sup>th</sup> September 9:00 – 5<sup>th</sup> August 9:00 **24hr heat run**  
**UA23:** 6<sup>th</sup> August: 9:00-17:00 – **8hr heat run – Done**  
**UA23:** 9<sup>th</sup> August 14:00 – 10<sup>th</sup> August 14:00 – **24hr heat run - Done**  
**UA23-UA27:** 5<sup>th</sup> September 9:30 **AUG**  
**RR17-UJ16:** 14<sup>th</sup> August 16:00 **Pre-test 8h run - Done**  
**RR17-UJ16:** 15<sup>th</sup> August: 9:00-17:00 – **8hr heat run - Done**  
**RR17-UJ16:** 21<sup>th</sup> August 9:00 – 22<sup>th</sup> August 9:00 – **24hr heat run - Done**  
**RR17-UJ16:** 22<sup>st</sup> August 9:30 **AUG - Done**

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**Short Circuit Tests in RR17-UJ16**

- **AC (TS-EL): -**
- **DC (TS-EL): -**
  - Interlock cables for DC\_CABLE\_WATER are inversed in the circuit RQ10, RQ8 and RQ6 in RR17. This does not prevent the heat run tests. Maria Paz reported that Baptiste informed that TS/EL has not the resources to fix this problem now. A date for the intervention is still to be fixed.
- **Cooling and Ventilation (TS-CV):**
  - During the 8h run, the ventilation in RR17 stopped, (it seems that the trip occurred while changing to high speed). The control was not possible from the PLC in US15. It was done locally. TS/CV has solved the problem before the 24h heat run.
- **PIC (AB-CO): -**
- **Energy extraction (AT-MEL):**
  - A test with 6kA on the 13kA switches is pending. (about 4 hours test). The preparation of the cables by TS/EL will be completed by Friday 31<sup>th</sup> morning. The test will be done the latest on Friday afternoon 31<sup>th</sup> August. (Under discussion the possibility of having the intervention of TS/EL on Tuesday 28<sup>th</sup> August and the test during a heat run that might be repeated from Tuesday 28<sup>th</sup> to Wednesday 29<sup>th</sup> August)

- **WIFI (IT-CS): - WorldFip: -**
- **Convertisseurs (AB-PO):**
  - The squeezing test will be done on Friday 24<sup>th</sup> after 15:00h. (Decided after the RAT with agreement from planning (Hubert), PO (David) and HC (Boris and Paz))
  
- **8h heat run:**
  - Started at 9:00 approx.
  - Around 10:00 RQ9.R1B1 and RQ9.R1B2 went off. A temporary solution was implemented and after the test the problem was solved.
  - Around 11:00 all circuits were running at I ultimate again.
  - 11:05, all circuits were set to Inom. The reason was that several cables were increasing in temperature very fast. A ventilation problem was detected and TS/CV was contacted. (The RR17 UTA stopped) the control from the PLC was lost)
  - At 11:30 the ventilation was recovered and the converters were set to I ultimate. (It seems that the trip occurred while changing to high speed). The control was not possible from the PLC in US15. It was done locally. TS/CV will look carefully at the problem and solve it before next heat run.
  - At 17:40 the test was stopped.
  - At 18:04 the current was 0 in all PCs. Immediately after a fault appeared in RTQX1.V1 (VS\_state). It does not seem serious, just a time parameter. AB/PO will correct it if necessary. A minute after faults and errors appeared in many circuits. (See elogbook)(Just due to the consignment)  
[http://elogbook.cern.ch/eLogbook/attach\\_viewer.jsp?attach\\_id=1010857](http://elogbook.cern.ch/eLogbook/attach_viewer.jsp?attach_id=1010857)
  - Measurements from TS/EL and AB/PO showed different hot spots. TS/EL will work on the solution the 17<sup>th</sup> morning.
  - WiFi problems were detected during the heat run in RR17, quality of the signal not constant.(AT/MEL)
  
- **24h heat run:**
  - Beginning at 9:00, 21 August.
  - End of the morning, the temperature in several 600 A cables is getting close to 80 °C. A check in the ventilation is done. The problem seems to be the distribution of the cables.
  - Around 14:50 the 600A and 120A type circuits are switched off to allow the rearrangement of the cables.
  - At 15:40 the 600A and 120A type circuits are switched on and ramped up. The current does not go up to I ultimate as expected.
  - Around 16:00 the 600A and 120A type circuits are set to I ultimate changing I plateau.
  - At 16:26 the power converter RCBYV4.R1B1 trips. PO is looking for the reason.
  - At 16:32 RCBYV4.R1B1 is switched on and ramped up.
  - All circuits remained with I ultimate until 4:00 AM 22<sup>th</sup> August to give time to the temperature to stabilize again.
  - No trip during the night.

- In some cables the temperatures reached 80 °C with Iultimate, with Inom, all the temperatures are below 80°C.
- The test was finalized at 9:00 22<sup>nd</sup> August with the AUG test.
- On Thursday 23<sup>rd</sup> August, TS/EL informed, (after the RAT), that the modification on the cables 600A in RR17 done during the heat run cannot be maintained and that the definitive modification will be done in the same way as for the RR13. TS/EL is studying the option of doing this new modification on Monday 27<sup>th</sup> August. The possibility of repeating a heat run in RR17 is under discussion. (Proposed date from Tuesday 28<sup>th</sup> august 17:00 to Wednesday 29<sup>th</sup> August 8:30)
- **Co-activities:**
  - On Friday 24<sup>th</sup> August, after 15:00 no works close to the DFBs will be carried out. The squeezing test will take place.

### **Open Issues SCT in RR17-UJ16**

30.07          Minor prob. with a temp. prob of 13kA EE sys – **AT-MEL**



### **Short Circuit Tests in UA23 – UA27**

- **Pre-test ok** – minor problem with the DQS
- **8h Heat run UA23 (6<sup>th</sup> August):**
  - The test began at 9:50 for all circuits except RB.A12 which was added to the test around 10:30.
  - RB.A12 had some internal water problems at the beginning that were quickly solved.
  - It was not possible at the beginning of the test to give the PC permit by using the PIC SU. Alexandro gave the PC permit directly.
  - When starting the test for RB.A12, the current at Stand by state was over 800A (Configuration to be verified)
- **24h Heat Run UA23 (9<sup>th</sup> August):**
  - The test started at 15:00 9<sup>th</sup> August and finished at 14:30 10<sup>th</sup> August. Temperatures in the cables decreasing after the change of current to Inom and practically stabilized again.
  - A small water leak in a connection to a water cooled cable of RB was detected before starting the tests. It did not prevent to carry out the tests but it has to be fixed by TS/CV.
  - Klaus informed at the end of the test that the inlet dematerialized water temperature was lower than usual. TS/CV is looking at it.
- **AC (TS-EL):**

- Works on the transformer in UA27 as foreseen. It is expected to have the transformer ready for the heat run at the end of week 35.
- **24h UA27:** The new proposed date for the heat run is 4<sup>th</sup> September. The previous date 29<sup>th</sup> August is too tight for TS/EL to have the transformer in UA27 ready.
- **AUG UA27- UA23:** The new proposed date for the AUG is 5<sup>th</sup> September. The previous date 30<sup>th</sup> August is too tight for TS/EL to have the transformer in UA27 ready.
- **Cooling and Ventilation (TS-CV):**
  - A small water leak in a connection to a water cooled cable of RB was detected before starting the UA23 24h heat run. It did not prevent to carry out the tests but have to be fixed by TS/CV
- **PIC (AB-CO): -**
- **Energy extraction (AT-MEL):**
  - Communication problem with the DQS from the CCC during pre-test of the 8hr run
- **WIFI (IT-CS): -**
- **Convertisseurs (AB-PO): -**
  - The squeezing test in UA27 will take place either during the heat run or just after the AUG the 5<sup>th</sup> September.
- **Système MKI (AB-BT):-**
- **Balisage:**

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### **Open Issues SCT in UA23**

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- 06.08            Next week the DQS 6kA cables are to be prepared.
- 10.08            A small water leak in a connection to a water cooled cable of RB was detected before starting the tests. It did not prevent to carry out the tests but have to be fixed by TS/CV.

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### **Open Issues SCT in UA27**

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- 19.06            Due to the burnt out of the transfo EMT6/0627 and the high temperatures registered during the UA27 heat run, it has been decided to repeat the 24h heat run.
- 06.06            Electrical departures EBD in UA27 – 67 and 47 to be tested by TA-EL (Jacques agrees with Knud the best moment)
- 04.06            RQX.R2 has been powered with a PIC by-pass / PC side. – interlock test postponed to PIC1 test.




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### **Open Issues SCT in UJ33**

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- 04.08 13kA: bad DC cabling of the water cooled cables in R37! **(TS-EL)** Knud pointed out it would be preferable to carry out the correction in the DFB side to avoid repeating the tests. Waiting for an answer from Baptiste who is to study the issue the 16<sup>th</sup> August.
- 04.08 No fixed AC connection for the DQR racks – cables disconnected from the net to free the plug for other activities in the tunnel – not acceptable. **(TS-EL)** Jack will take care of the problem.
- 04.08 Eletta cabling in the tunnel side (both R34 and R37) to be checked **(TS-EL)**. Eletta calibration done **(TS/CV)**
- 04.08 In two racks of 600A electronic filter to be changed – they have been broken during the re-routing of the cables. **TS/EL** is to remove the cables so that the replacement of the filters can be done. Maria Paz reported that Baptiste announced week 38. Knud asked to reconsider the date.
- 20.07 The cables of the converter RPMBB.UJ33.RSS.A23B1 are close to the current leads of the circuit RSS.A23B2 and vice versa. TS-EL will invert the two circuits at the PC side. The cabloteque will be modified. **(TS-EL)**. Maria Paz reported that Baptiste announced week 38. Knud asked to reconsider the date.

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### **Open Issues SCT in RR73 and UJ76**

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- 08.02 Temporary WIFI cable to be replaced by TS/EL – IT/DI

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### **Open Issues SCT in UA67 and UJ67**

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- 02.02 RSF2.A67B1 and RSF2.A67B2 PIC cables to extend
- 02.02 NC opening on the bad connection of the “plages” on the 6kA racks
- 08.01 EE fan rotation problem – all ring – **ON GOING**