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SPES - Specific Services for CMS

Minutes of the meeting nr 22 held on 12/12/2001

Presents: R.Principe, A.Hormiere, W.Van Doninck, A.Gaddi, S.Bally, R.Pintus, P.Baillon, D.Loveless, N.Bangert, M.Jeske, L.Isaksen, P.Ingenito, I.Crotty, A.Herve, P.Giacomelli, I.Wichrowska-Polok.

1.THERMAL ANALYSIS OF ETA=3 REGION OF EE AND SE. (I.Wichrowska-Polok)

I.Wichrowska-Polok has explained the results of the analysis for eta=3 zone of EE and SE (see annexe 1) The goal of the analysis was to find what will be the temperature variation in SC array in the result of temperature variation of nitrogen situated in SE cone and what will be the effect of insulation of SE cone (20mm of thickness). Temperature of nitrogen can vary 3 degrees from its mean. The crystals are very sensible on temperature variation. The temperature cannot vary more than 0.1 degrees in time and 2 degrees along axis. The crystals temperature stability is maintained by conduction from the back plate, which is cooled with precision 18+-0.05^{o}C. The 3D model, which has been prepared in Ansys program is consisted of back plate, simplified SC array, Inner Environmental Screen, Front Environmental Screen and SE cone without insulation (first model) and with insulation 20mm (second model).
For the simulation, a temperature 18.05 ^{o}C is set on the rear of back plate. The rear of the SE is kept at the temperature 18.2 ^{o}C; fixation of the SE cone and SE is kept at the temperature 18.5 ^{o}C. For the outer surface of the model- adiabatic conditions has been assumed. A steady state analysis has been done for the nitrogen temperature 18 ^{o}C for first run and 20 ^{o}C for the second run. The analysis was done in StarCD program and has shown, that maximal temperature variation along Super crystal will be 0.06 degree, maximal temperature along radius will be 0.1 degree and maximal temperature variation in time will be 0.07 degree. It has to be decided if those values are acceptable and if it is necessary to insulate SE cone.

2. MUON TESTS FACILITIES (L.Isaksen)

L. Isaksen has made a report from visit in ILK Dresden, which was done by L.Isaksen and R.Principe 6th of December. The reason for the visit was to participate in the testing of the cooling system for the RPC & DT's. This test was set up to study the behavior of the cooling

water wile filling and purging the system. For more detailed description and some photos please annexes 2a and b.

3. RE COOLING PIPING ON YOKE (I.Crotty) .

I.Crotty has presented the cooling and gas layout for RE. See annexe 3.

4. AOB.

The dates for SPES meetings in next year have been proposed. Next meeting will take place 23th of January at 14h00. From February the meeting time will be changed to 10h00. Dates of meetings:

23/1 14:00
13/2 10:00
13/3 10:00
10/4 10:00
15/5 10:00
19/6 10:00
17/7 10:00
11/9 10:00
16/10 10:00
13/11 10:00
11/12 10:00