

Collimator Design Meetings

Minutes of the meeting # 69

30 June 2005

COOLING:

temperature sensors (if and how many)
flow meter (type)
how many collimators will be "connected" on one water outlet.
water plug-in "final" version

Oliver
Oliver, Rosario
Oliver
Roger

Water cooling distribution, bakeout, final version

Rosario

In absence of Rosario Principe, it was decided that Oliver sends a mail to Rosario (copy to Ralph) to get an update of the bakeout-scenario and to finalize the missing parameters. This becomes urgent if we want to finalize the design for the water connections and order the flexible hoses required (tender and administrative procedures for order in the range of 100k – 3 month) for the end of the year.

ELECTRICAL CONNECTIONS

type of cables for cabling model, cable tree

Roberto

In absence of Roberto Losito and A. Masi it was decided to finalize design for the electrical connections for cables with 10mm diameter, order 2 prototypes and – if necessary – enlarge the holes afterwards.

some **OLD** points:

Design for special collimators (2in1)

Ralph, Oliver, Roger

Due to several missing indications for the design of the 2in1 collimators (specially the RF contact finger configuration), it was decided to start the design work for the secondary masks for TCDI, TCLIB and TCDQ by mid July (Ludovic under the supervision of Roger). The functional specification is in approval circulation and is sufficiently complete to start design.

Detailed test program for 3rd assembly

Oliver, Roberto

An updated version is attached

Design of supports, status

Roger

Delivery end of July, 45° and 135° have priority. TS-MME-MS will start tendering end of July Ordering for Sept. Delivery for the end of the year.

TCDI installation and exchange tooling

Roger, Yacine

The support has been installed in the tunnel, - QRL “bequille” had to be removed and slightly modified

Design of tooling for tests

Oliver, Roger

Concerning the alignment, Oliver will start “searching” for Taylor-Hobson telescopes which need to be integrated in the verification alignment system.

AOB

- *Visit of CERCA 4.07 and 5.07 they will take 2 CFC jaws home(baked @ 1000° and packed adequately for vacuum applications – i.e. not touched after the bakeout without gloves, wrapped in special paper and alu foil, all that packed in a PVC “gaine” filled with dry Nitrogen and sealed at both ends)*
- *Some problems occurred with the graphite jaws, as they outgass too much to be put into the vacuum furnace. They will be baked in air and – hopefully – thereafter in vacuum)*
- *Concerning the final installation of the collimators in the tunnel, it needs to be clarified whether this tasks is the responsibility of the AB-ATB or TS-IC group. Oliver+Ralph will clarify. In case of AB-ATB installation, additional manpower will have to be found!! Outsourcing ??*
- *After some discussion, it was decided that the final thermal conductance measurements of final assembly will only be carried out in 2006. There is no test-setup available at the moment and all effort in the design office will be directed to finalize the manufacture drawings for the series production. Furthermore, if the measurements would reveal some differences from the very detailed thermal calculations, there is no more time to introduce any changes. The (manufacturing) train has left the platform.*

and our

ACTION LIST to be followed up:

Play between motor spindle and jaw to be checked on #3

#34 Roger

New Fluka simulation for 7TeV accident case

#47 Vasilis

Installation of collimators and required tooling

#56 Keith

Manfred

Work to be done:

- Collimator parts are in B 252.
Tank installation on table.
- Machining of the second jaw support (week 16/17) done.
- Metrology of the first assembled block. (week 24), CERCA comes for the mounting of the second jaw (4/5 July).
- Mounting of the second jaw assembly. (week 27)
- Metrology of the second assembly. (week 27).
- Mounting into the vacuum tank (week 28).
- Mounting of the new tables.
- Motion tests with mounted springs (no motors).
- Test with the four new supports with different angles.
- Torque measurements on all angles and different spring combinations.
- Measurement procedure on the 3D machine.
- Full alignment of collimator jaws.
- Tests with new motors and electronics?
- Chronometrical assembly of the collimator to its support, alignment, calibration of sensors, motor assembly, cabling...
- Writing of scenarios and procedures for installation and exchange.

Collimator No. 5 should not be changed as it goes back to the tunnel end of November.

Collimator TT40:

Tuesday, 5th July/ Friday 1st July? :

R. Wilfinger is preparing a vibration measurement on the jaw and the structure with the laser vibrometer. In the same time A. Masi is trying the new electronics for collimator No3 on the TT 40 unit to move the motors (vibrations?). S. Redaelli will take microphonic measurements during these tests to have a comparison with the results from the beam tests in SPS last year.