

Polymer Laboratory Weekly Meeting Summary – 25.07.2024

➤ **General information:**

- Reminder for everybody: please ask (to the person concerned) before borrowing tools from the 927 and do not forget to put them back. As well for the POLAB, please try to put back the tools where you took it.

➤ **Operation & Services:**

- The bounding of the copper components using STYCAST 2850FT/CAT9 for the main workshop is done.
- The job regarding the casting of $\varnothing 15 \times 30$ mm plugs is silicone RTV-4250-S (green) is done.
- The quality control of the batch of CTD-101K for the B180 (viscosity + DSC tests) is in progress.
- The job regarding the insulation of transformer with red Araldite F filled with Dolomie has started.
- Two septa coils (small version) have arrived to be impregnated with POLAB Mix (to be conformed). Ongoing discussion to determine if and how to perform the repair.
- The SMC 108 coil has been released from its mold. It was found the presence of an air bubble (lack of resin) at the bottom of the coil.
- The SMC 109 coil has arrived at the POLAB, waiting to know which resin to use for the VPI.
- The MQXF cable (Kirtana) has arrived, waiting to know which resin to use for the VPI.
- Cédric has managed to perform the maintenance of the mixing tank of the Telstar.
- ProtoDUNE Tube: the tube is still leaking, so it was decided to cut the tube at the end before the flange. Then, a new flange but longer will be manufacture. The longer flange will be the bond, vertically, on the shortened tube with the LOCTITE Ablestik 286 (Eccobond).
- The silicone pins for the B180 in silicone (green) are finally finished.
- Casting of transparent resin (TD150) to encapsulate the slices of the HL-LHC link for the CERN 70th anniversary trophies. A prototype of a holder for these slices has been made in 3D (FDM).
- 3D Printing:
 - The CERN DG order two new maquette of the Science Gateway for CERN 70th Anniversary.
 - Olivier has almost finish the manufacture of the 200 grid and cross for the LHC current leads in Accura 25.
 - Job request for a sample holder which needs to be translucent, to be printed in Accura 48.
 - The first (out of 2) Prusa MK4 FDM 3d printer has been assemble and tune), the second to be done (Olivier + J-S) next week.
 - Job request for winding tools for the CHIC project.

➤ **Projects (R&D):**

- Impregnation of HV 10 stack made of cable insulated with two layers of 11 tex S2 glass and CTD-101K. Plus, a normal 10 stack for glass fibre fraction calculations.
- Turn to tun inulation tresistance test of HV 10 stacks with reacted MQXF cable impregnated CTD-101K in LN2 at 77K.

- ITER HV wires: thermal cycles carried on Toshiba and Mitsubishi samples and production of new encapsulated samples for further tests.
- ITER insulation bonding investigation completed: DSC, DMA and 3PB tests performed. Test report in progress.
- PU Jacks: writing of a new test plan for tensile test, waiting to be validated before start of the test.