

Polymer Laboratory Weekly Meeting Summary – 05.12.2024

➤ General information:

- Trip to ITER two weeks ago by Roland, Vincent and Pavan – visit report to be completed.
 - Discussions on IA24, IA25, Polymer and High-Voltage labs and potential activities that could be done in collaboration with CERN.
- Visit to PSI by Christian in November 2024 – visit report to be completed.
 - Investigation of performing computed tomography tests on Nb₃Sn 10-stacks using neutrons. These are absorbed strongly by hydrogen, meaning that defects in insulation could be more observable.
- Reminder to use correct tools for machining operations.

Foret à centrer (Centering Drill)	Foret (Drill)	Queue de cochon (Broach)
		
Pointeau (Center Punch)	Alésoir (Reamer)	Fraise à chanfrainer (Chamfering cutter)
		

➤ Operation & Services:

- Impregnation eRMC 106 performed successfully excellent processing. Another one planned for next week.
- 12/16 septa impregnations completed, one this week.
 - Next week one or two more.
- 3D Printing
 - SPS Cooling Regulation Block printed out of PEEK and ULTEM using MiniFactory machine. EcoBond appears applicable for bonding metal inserts to this part.
 - BE-HPA series for 15 December nearly finished.
 - CHiC parts requested also internally (former for coil).
- 40 silicone conical plugs made for building 180 (MQXFB)
- Progress on Boris tube.
- Mock-up of MCBRD former to be prepared before starting activities for repair.
- Silicone resistance heaters received for wax impregnations.
- Visit from EN-CV, likely to order 3D-printed components, potentially metallized.
- ITER voltage taps have to be tested locally, using a Paschen chamber-type setup, which could be made using 3D Printing.

➤ **Projects (R&D):**

- Thermal shield installed for cryocooler, aiming to install water-cooled compressor.
- Tests on ISOLDE tracking study of PEEK components started.
- Sample preparation for I_c and RRR measurements following de-sizing procedures in progress.
- TGA analyses on glass fibre tissue samples for study on thermal de-sizing of Nb₃Sn reaction layer.
- DMA studies on neutron-irradiated polymer samples.
- Impregnation of FalconD 10-stacks.