

Polymer Laboratory Weekly Meeting Summary – 13.06.2024

➤ **General information:**

- Planning updated for the open days of the polymer lab.
- Presentation about TGA study for fibres desizing (Javier).
- Cleaning of the polymer lab and installation for the open days scheduled on Friday 14th June afternoon.

➤ **Operation & Services:**

- Parts for CRAB cavities for AP should be completed soon.
- 100 parts produced for CMS School: 11T cables casted in translux resin.
- 3D printing parts with Accura 25 for cleanroom.
- Protodune: consolidation of the gluing between G10 glass fibre composite and stainless steel part. 3 different gluing methods tested: Glue applied with a paintbrush, glue applied onto glass fibres with a paintbrush (porosities with this method), glue applied onto glass fibres with a paintbrush and use of a vacuum bag during the curing. Thermal shock of the 3 different methods in liquid nitrogen to be performed.
- Request to glue parts for HiLumi.
- Silicone rods (RTV-4250S) for LMF section being produced (160 in total). New silicone tested (as a potential replacement of the green).
- New order from NCM to produce round shape parts in Araldite F charged with Dolomie.
- Gluing of stainless steel extremities onto vetronite tubes with Eccobond 286.
- CTD101K batch check performed for coil 147 and 148 for LMF.
- Viscosity tests performed on 5 different waxes, and good correlation with DMA measurements.

➤ **Projects (R&D):**

- Study on the thermal properties of wax samples using DMA and viscosity measurements.
- Resin quality tests on epoxy resins for LMF.
- Thermogravimetric analyses on glass fibre samples for thermal desizing study.
- Sample preparation and mechanical (tensile) testing on polyimide samples.
- Chemical ageing tests on thermoplastic polyimide-insulated wires.
- PU ageing for PU jacks in progress, chemical compatibility with new grease to be tested.
- DMA and DSC analyses for study on post-curing of epoxy resins in wet winding process for ITER.