



Sample Project: Characterisation of magnet insulation materials and support to Polymer lab CERN-wide activities.

Code	TE4134
Programme	FCT
Department	TE
Responsible	48914 - Ms. Sandra Cristina Sequeira Lopes Tavares
Created by	90920 - Ms. Mariane Catallon
Updated by	41065 - Dr. Johan Bremer
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Title

Characterisation of magnet insulation materials and support to Polymer lab CERN-wide activities.

Description

During the vacuum pressure impregnation (VPI) of superconducting coils, the interaction between the different materials contributes to the quality of the insulating system. The candidate will characterise the resins most commonly used in coil insulation. The interaction between the resins and the various materials of the insulation systems (fibre glass, mica tape, specific binders, etc.) will also be characterised. This work is targeting both HL-LHC coils as development for FCC. The candidate will have the opportunity to participate in other activities of the polymer lab such as establishing procedures and have hands-on practice with rapid prototyping technologies (3D printing).

Skills

<p>Polymer properties, polymer processing. Organic chemistry and mechanical testing of materials is a plus</p>

Disciplines

Chemistry/Chemical Engineering, Material Science

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