Sample Project: 18 kA superconducting bus bars production, integration and new components

Code	TE5950
Programme	FCT
Department	TE
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Title

18 kA superconducting bus bars production, integration and new components

Description

In the Magnet, Superconductors and Cryostats Group (MSC), the Large Magnet Facility Section (LMF) is in charge of the engineering, manufacturing and maintenance of superconducting accelerator magnets, including superconducting coils, busses, electrical joints and interconnects. In the frame of the LMF section activity, the selected candidate will participate to the development and implementation of the 18 kA superconducting bus bars production process for HL-LHC. The work will also include the development, design and production of 18 and 13 kA superconducting bus bars components as internal supports and protection spouts (mechanical characterization including FEM, stress and fatigue test when needed).

Skills

Material Science: Mechanical testing of materials, Superconductors. Mechanical Engineering: Numerical techniques and software (e.g. ANSYS, Abaqus...), Structural mechanics and machine development
Knowledge in mechanical engineering, measurement and testing technologies.

Good working knowledge of of English or French. Demonstrated ability to write technical reports and to work in teams.

Soldering technologies, Scientific Communication and Education.

Disciplines

Mechanical Engineering, Material Science

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