Development of HL-LHC beam vacuum line interconnections

Project code	68
Supervisor	Cedric Garion
Department	TE

Title

Development of HL-LHC beam vacuum line interconnections

Description

The Vacuum, Surfaces and Coatings (VSC) group is in charge of the design, construction, operation, maintenance and upgrade of high & ultra-high vacuum systems for accelerators and detectors as well as coatings, surfaces treatments, surface and chemical analysis for Accelerators and Detectors.
The work will entail:Development and prototyping of interconnections and cold warm transitions for HL-LHC.Thermal mechanical studies including Finite Element analyses of thin-walled components and thermal heat transfer.Follow-up of manufacturing of components, participation to the assembly and validation of the mechanical systems.

Functions and Training Value

Basics in vacuum physics and technology.
Modeling of thin walled components in particular with buckling analysis and non-linear material behavior.
Thermal mechanical properties of materials at cryogenic temperatures.
Project management.

Qualifications/Skills

Mechanical engineer with knowledge in FE analysis and manufacturing methods