Trainee's Project Report

Job Code	EN2764
Department	EN
Discipline	Mechanical Engineering
Supervisor	FOLCH Ramon

Description

Beam intercepting devices assure the safe and efficient operation of every particle accelerator. In the Source, Targets and Interactions Group (STI) of the Engineering Department (EN), the trainee will study and participate to the development of new mechanical systems. Under the supervision of senior mechanical engineers, the trainee will perform analytical and finite element analysis and participate in engineering projects from the design to production and operation. The simulations are based on structural, thermal, shock and vibration analyses,and analytical computations. The preparation of specifications and functional design, drafting, manufacturing and follow-up, relations with external suppliers, including market surveys and invitations to tender are completing the task. These activities are carried out relying on a large range of CAD and CAE tools, including CATIA, AutoCad, ANSYS and Autodyne.

Special Requirements

University degree in mechanical engineering. Knowledge of analytical and numerical tools applicable to mechanical design, in particular in the fields of structural, thermal and dynamic analysis of machines and structures. Previous experience using a finite element analysis code, such as ANSYS, would be an asset.

Training Value

The trainee will gain experience with materials (graphite, tungsten, etc.) under extreme conditions and has the possibility to follow the full life cycle of the product from specification to commissioning.