

Coil Design Specialist

TKM-097

Reports to Line Manager:	Superconductor Systems and Auxiliaries Section Leader; Magnet Division, Tokamak Department	Job Code:	TKM-097
Direct Employment:	Required	Grade:	G5

Purpose

To work under the supervision of a professional engineer, to assess aspects of the ITER superconducting coil performance, in particular Alternating Current (AC) losses and the cryogenic helium cooling flow.

To assist the magnet Division in predictions of coil superconducting performance by carrying out numerical assessments using state of the art AC loss and helium flow models, and using production data on strands and cables once the procurement of conductor parts begins.

china

eu

india

japan

korea

ru^ssia

usa

Major Duties/Responsibilities

- Assesses coil superconducting performance using quality control measurements on strands and cables;
- Assists in the implementation of quality control data relevant for coil performance assessment;
- Develops and uses numerical tools to assist in magnetic field, AC loss and helium cooling performance assessment;
- Prepares technical reports on the results of performance assessments and documentation on numerical procedures for other users;
- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.

Qualifications and Experience

- Education:**
 - Recognized qualification or Degree at least equivalent to 5 years of study after the High School Diploma, in mathematics, physics or other related discipline.
- Technical experience and knowledge:**
 - Familiarity with AC loss assessment of superconductors;
 - Knowledge of the characteristics of cryogenic helium flow;
 - Experience with the numerical modelling of physical processes.
- Project experience:**
 - At least 10 years' experience in a similar position in a large multidisciplinary project or institute.
- Social Skills:**
 - Ability to work effectively in a multi-cultural environment;
 - Ability to work in a team and to promote team work.

- ***Language requirements:***
 - Fluent in English (written and spoken).
- ***Computer and IT skills:***
 - Familiarity with Windows/Linux based office programs
 - Experience with writing computational analysis routines (Fortran, C, etc.)
 - Experience with data processing tools such as Matlab, Mathcad, etc.

Direct Supervisor and Interfaces

- Reports to the Superconductor Systems and Auxiliaries Section Leader;
- Interfaces and contributes to work in other Magnet Division Sections as required.

Authority / Approval Levels

This position has authority and approval levels generally defined by the DDG for the Tokamak Department for his/her scope of work.

Measures of Effectiveness

- Provides efficient and high quality service to the Magnet Division's members;
- Acts in a collaborative manner with all members of the Division and with other ITER Divisions and Departments.