

TITLE: Superconductor Engineer		TKM-072
REPORTS TO LINE MANAGER: Leader of Superconductor Systems and Auxiliaries Section, Magnet Division, Department for Tokamak		
DIRECT EMPLOYMENT: NOT REQUIRED		GRADE RANGE: P3-P4
DATE WRITTEN: May, 2008	DATE REVISED: July 2008	DATE REVISED:

Purpose:

- To contribute to the Toroidal Field (TF), Poloidal Field (PF), Central Solenoid (CS) and Correction Coils (CC) conductor performance analyses;
- To liaise with ITER Domestic Agencies on the conductor procurement;
- To review manufacturing plans, and monitor manufacturing progress;
- To contribute to the development of conductor quality controls and their implementation.

Major Duties/Responsibilities:

- Contributes to thermohydraulic analyses of the conductor performance during ITER operation;
- Prepares documentation to support the analyses;
- Works with the ITER Domestic Agencies to define qualification and quality control tests for the conductors;
- Contributes to the implementation of procedures for QC monitoring;
- Ensures compatibility with conductor interfaces within and outside the magnets;
- Interacts with industry regarding optimum fabrication routes for the conductors;
- Participates in the monitoring of the fabrication of the conductors by the Domestic Agencies;
- Contributes to monitoring and maintaining the fabrication schedule of the conductors;
- Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.

Qualifications Required:

- **Education:**
 - University degree (Engineering Diploma or Bachelor's Degree) in Engineering or Applied Physics.
- **Experience:**
 - At least 10 years' postgraduate experience in applied superconductivity;
- Familiarity with analysis procedures for superconductors;
- Knowledge of cryogenics;
- Knowledge of low and high temperature superconductivity;
- Knowledge of welding techniques;
- Experience in supervising superconductor fabrication in industry.

- **Language requirements:**
 - Ability to communicate clearly and write technical reports and specifications in English.

Work Direction and Interfaces:

- Reports to the Superconductor Systems and Auxiliaries Section Leader
- Interfaces with other sections in the Magnet Division, in particular those responsible for coil windings;
- Interfaces with the Domestic Agencies and their industries regarding fabrication.

Authority/Approval Levels:

Has authority and approval levels generally defined by the Magnet Division Head for his/her scope of work.

Measures of Effectiveness:

- Successfully qualifies TF, CS, PF and CC conductors;
- Successfully provides maintenance of conductor fabrication schedules;
- Successfully implements conductor QC procedures.