

TITLE: COIL DESIGNER, DEPARTMENT FOR TOKAMAK		TKM-009
REPORTS TO LINE MANAGER: PF Coil Section Leader		
DIRECT EMPLOYMENT: NOT REQUIRED	GRADE RANGE: P3 – P4	
DATE WRITTEN: October, 06	DATE REVISED: 7 June 2007	DATE REVISED:

Purpose:

Contribution to the design of the ITER PF coils, specialising in definition of the winding procedures and coil assembly (including joints and jumpers)

Major Duties/Responsibilities:

- Contribute to the design of the PF coils
- Responsible for the interface between PF coil winding and the on-site building preparation
- Responsible for the PF coil joint and jumper design
- Contribution to the mechanical and superconducting design aspects of the PF coils, including insulation specification and layout, instrumentation, conductor handling during winding and insulation, helium piping layout and joining, mechanical support of joint regions and conductor joint forming
- Prepares documentation to support the design
- Contribute to the preparation of design and procurement specifications relating to the coil design, winding, and testing, especially mechanical aspects of the composite systems, the conductor joints and electrical testing procedures
- Prepare CAD drawings for the design of the PF coils
- Development of detailed manufacturing schedules, considering interfaces with conductor production, on-site facility construction and ITER final assembly
- Participate in the monitoring of PF coil fabrication, especially as regards the building fabrication, winding procedures, and implementation of quality controls

Qualifications Required:

- University degree (DipIng or Bachelors) in engineering (mechanical or electrical)
- At least 10 years post graduate experience in magnetic coil design and manufacturing
- Good knowledge of magnetic field coil and superconductor, design and requirements
- Good knowledge of quality assurance and quality control methods

- Familiarity with basic metallic joining techniques such as welding and brazing
- Ability to communicate clearly and write technical reports and specifications in English.

Work Direction and Interfaces:

Reports to the PF coil section head. Interfaces with other groups in the magnet division. Interfaces with other departments as required by the magnet design, in particular to the CAD office and the buildings group. Interfaces with the Field Teams and their industries regarding coil 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:

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Acceptance of conditions and procedures for winding PF coils by industry. Timely start of PF coil winding on site. Successful and timely completion of PF coils.