Job Title: Power Supply Technician IO0953

Req ID **1401** - Posted **05/03/2020** - (France, 13067 St Paul Lez Durance Cedex) - **Engineering of Systems** - **New Posting**

The ITER Organization brings together people from all over the world to be part of a thrilling human adventure in southern France—building the ITER Tokamak. We require the best people in every domain.

We offer challenging full-time assignments in a wide range of areas and encourage applications from candidates with all levels of experience, from recent graduates to experienced professionals. Applications from under-represented ITER Members and from female candidates are strongly encouraged as the ITER Organization supports diversity and gender equality in the workplace.

Our working environment is truly multi-cultural, with 29 different nationalities represented among staff. The ITER Organization Code of Conduct gives guidance in matters of professional ethics to all staff and serves as a reference for the public with regards to the standards of conduct that third parties are entitled to expect when dealing with the ITER Organization.

The south of France is blessed with a very privileged living environment and a mild and sunny climate. The ITER Project is based in Saint Paul-lez-Durance, located between the southern Alps and the Mediterranean Sea—an area offering every conceivable sporting, leisure, and cultural opportunity.

To see why ITER is a great place to work, please look at this video

Application deadline: 12/04/2020
Domain: Engineering
Department: Engineering Design
Division: Heating & Current Drive
Section: Electron Cyclotron
Job Family: Project Engineering
Job Role: Coordinating Technician Engineer - Early Career
Job Grade: G5
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As Power Supply Technician, you will support the activities related to the engineering design, integration, interfaces, procurement, installation, and commissioning of the High Voltage Power Supplies (HVPS) of the Electron Cyclotron (EC) system. Also, to be generally supportive of electrical activities for the EC system

Background

The key figures of the typical EC Power Supply systems are:

- Pulse step Modulation based High Voltage Power Supply Systems;
- Input: 22kVac, Output: 55kV/110A DC power supply with resistive load including 5kHz ON-OFF modulation;
- Input: 400Vac, Output: 35/100mA DC Power supply with capacitive load including 5kHz ON-OFF modulation;
- Total 22kV grid power for EC Power Supply ~50MW;
- Dynamic load characteristics and supply to the RF sources (gyrotrons).

Major Duties/Roles & Responsibilities

- Supports the design, procurement, installation and commissioning of the EC power supplies;
- Writes Technical Specifications and oversees the procurement of test components & spare parts of the EC HVPS;

- Prepares the procedures for testing and commissioning of the electrical installations of EC system;
- Performs interface and integration management of the EC power supplies with other systems, services and buildings. This includes not only interfacing with the 22kV, 6.6kV and 400V ITER grid, but also preparing the test setups for EC commissioning ;
- Supports the preparation of the Engineering Work Package for the installation of the EC power supplies;
- Performs operation & maintenance activities of the EC Power Supplies, including on call duty operation team;
- Implements Quality Assurance (QA) & Quality Control (QC) requirements, including International Electro-technical Commission (IEC) standards for components and systems, in close relation with the Quality Assurance & Assessment (QAA) Division;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- May be required to work outside ITER Organization reference working hours, including nights, week-ends and public holidays.

Measures of Effectiveness

- Supports the design, procurement, installation and commissioning activities related to EC HVPS by meeting the defined quality, cost and schedule, providing detailed specifications, finalized procedures and accurate reports;
- Performs work on the electrical installations and related components of EC systems to a high standard;
- Maintains effective communication with the interfacing teams within ITER, Domestic Agencies and with external contractors;
- Ensures proper management of the electrical interface (22kV, 6.6kV & 400V), installation and commissioning of the EC systems, in collaboration with services, buildings and other systems.

Experience & Profile

- *Professional Experience:*
  - At least 7 years' experience in supporting the design, installation and commissioning of complex electrical installations (involving high voltage systems (>20KV AC/ DC) and power converters).
- *Education:*
  - Bachelor or equivalent degree in Electrical or Electronics Engineering or other relevant discipline;
  - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.
- *Language requirements:*
  - Fluent in English (written and spoken).
- *Technical Competencies in:*
  - Electrical steady state and transient analysis;
  - IEC standards for the HV and Low Voltage (LV) electrical installation and test protocols;
  - Working with electrical schematics and troubleshooting is preferable;
  - Using Microsoft Office package tool;
  - Software applications for development of 3D model and 2D schematics;

- Good knowledge of running computer codes for transient and steady-state analysis of electrical system;
- Electrical installations similar to EC HVPS is considered as an advantage.

- *Behavioral Competencies:*
  - Collaborate: Ability to facilitate dialogue with a wide variety of contributors and stakeholders;
  - Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;
  - Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;
  - Manage Complexity: Ability to analyze multiple and diverse sources of information to understand problems accurately before moving to proposals;
  - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.

The following important information shall apply to all jobs at ITER Organization:

- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mind set; Diversity and Inclusiveness) and Code of Conduct;
- ITER Core technical competencies of 1) Nuclear Safety, environment, **r**adioprotection and pressured equipment 2) Occupational Health, safety & security 3) Quality assurance processes. Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- Informs the IO Director-General, Domain Head, or Department/Office Head of any important and urgent issues that cannot be handled by lline management and that may jeopardize the achievement of the Project's objectives.