Job Title: Microwave Technician IO1011

Requisition ID **4522** - Posted - (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: 17/10/2021
Domain: Engineering
Department: Engineering Design
Division: Heating & Current Drive
Section: Electron Cyclotron
Job Family: Engineering
Job Role: Coordinating Technician
Job Grade: G5
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

In this role, you will support the integration, commissioning and operation of the Electron Cyclotron (EC) microwave sources (or gyrotrons) in the radio frequency (RF) building. This task includes the oversight of the hardware installation (performed by either the Domestic Agency (DA) or the ITER assembly contractor), gyrotron commissioning and operation during integration with the transmission lines and launchers. Additionally, you will support the gyrotron maintenance activities. This includes the management of the documentation of the acceptance and commissioning tests.

Background

Electron Cyclotron (EC) system will be used in ITER for Heating and Current Drive (H&CD) in a number of plasma operating scenarios. The EC system is equipped with a total of 24 gyrotrons (1 MW each) with a potential upgrade for additional 24 sources as a future up grade.
The ECH system is also a First Plasma (FP) system, where approx. 8MW of power will need to be installed to accommodate plasma breakdown. In preparation for FP operation, the gyrotron system will start installation and commissioning in the 2022 period, requiring support of EC engineers with experience in installing and operating high frequency, high power gyrotron systems.

Key Duties, Scope, and Level of Accountability

- Performs the oversight of the gyrotrons installation and its associated ancillaries;
- Supports the DA during the commissioning of the gyrotrons, before and during the Site Acceptance Test (SAT);

- Performs the alignment, SAT (e.g. optical, power measurements), and calibration measurements associated with the gyrotron installation and commissioning;
- Conducts the gyrotrons inspection and maintenance activities following the Site Acceptance;
- Support the gyrotrons operation during system commissioning and ITER operations;
- Supports the EC system in general with commissioning and operation (e.g. optical and power measurements at locations of transmission lines) and assists in the monitoring of Quality Programs associated with the sub-system procurements;
- Performs the associated measurements (in collaboration with the other EC Technical Responsible Officers (TROs)) of the installed EC equipment to ensure compliance for operation;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project schedule.

Note: 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.

Measure of Effectiveness

- Supports the installation and commissioning of the gyrotron systems ensuring successful SAT;
- Supports the EC system with preparation of procedures for commissioning, maintenance, and successful operation;
- Maintains the documentation associated with Site Acceptance Tests, system commissioning tests, general inspection and operation plans;
- Maintains effective communication with the interfacing teams with respect to the gyrotron systems within ITER, Domestic agencies and with external contractors.

Experience & Profile

- ***Professional Experience:***
  - Minimum 7 years' experience in commissioning and operations in the field of Electron Cyclotron (EC) microwave sources within complex international environments or projects.
- ***Education:***
  - Bachelors' degree or equivalent in Electrical 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 and demonstrated experience in:***
  - Installation/testing/commissioning/operation of high power microwave sources;
  - Operations execution: executing tasks with consistency and adapting to the changing context;
  - Quality management: knowledge of requirements for international quality standards, methods, and practices;
  - Operating or maintaining either low or high voltage DC power supplies is an advantage;
  - Installation and maintaining evacuated transmission line systems is an advantage;
  - Instrumentation and Control Systems related to either Gyrotron or EC system operation is 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, radioprotection 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 line management and that may jeopardize the achievement of the Project’s objectives.