

## Job Title: Instrumentation Technician IO0605

Requisition ID **4720** - 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:** 14/11/2021

**Domain:** Construction

**Department:** Machine Construction

**Division:** Ex-Vessel Delivery & Assembly

**Section:** In-Cryostat, CTS & Auxiliaries

**Job Family:** Engineering

**Job Role:** Coordinating Technician

**Job Grade:** G5

**Language requirements:** Fluent in English (written & spoken)

**Contract duration:** Up to 5 years

### **Purpose**

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As an Instrumentation Technician, you will contribute to the definition and qualification of the instrumentation assembly and testing procedures, in addition to supervising the instrumentation and control assembly and final tests, before coil commissioning activities.

You will support the Magnet and In-Cryostat instrumentation integration into the coils and auxiliary systems.

### *Background*

*The Magnet System is involved in the plasma confinement and control and is made of 48 superconducting coils and modules. High Voltage and thermo-mechanical Low Voltage measurement chains are required for the magnet system protection and monitoring. A thermo-mechanical monitoring of the Cryostat is also implemented. All the related components have*

*been specifically designed, developed and qualified for ITER. Today, these components are in series production for the most part. This position targets the development and qualification of the assembly procedures, the supervision of the on-site assembly activities and the preparation of the integrated tests for these measurement chains.*

### **Key Duties, Scope, and Level of Accountability**

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- Assists in integrating the magnet instrumentation systems with the coils, to fulfill the monitoring requirements reliably without compromising the coil operation;
- Defines and supports the qualification tests for the Low Voltage (LV) and High Voltage (HV) instrumentation individual components and complete measurement chains;
- Supports the development and qualification of the instrumentation installation and test procedures;
- Organizes the certification, and supervises the assembly and testing of the above components;
- Assists in the definition of procurement specifications for the instrumentation systems and supports the contract follow up ;
- Monitors quality control tests on the instrumentation during manufacture, assembly and after installation;
- Assists in providing the control logic to allow the control software to be developed;
- Supports the definition of the LV and HV instrumentation integrated tests;
- 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.

### **Measure of Effectiveness**

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- Contributes efficiently to the instrumentation assembly and testing activities within the defined schedule;
- Contributes to the manufacture and the qualification of the instrumentation solutions within the defined schedule;
- Generates and maintains coherent, comprehensive, and understandable documentation related to instrumentation and provides reports within defined timelines;
- Communicates information effectively with stakeholders across the ITER Organization;
- Complies with the ITER Quality Assurance (QA) program and safety requirements for the assembly and testing of the instrumentation.

### **Experience & Profile**

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- **Professional Experience:**
  - Minimum 7 years' experience in the assembly and testing of superconducting magnet instrumentation or in cryogenic environment.
- **Education:**
  - Bachelor's degree or equivalent in Electrical Engineering or other related 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:**

- Specialized Domains of Work: superconducting magnet instrumentation and cryogenic environment;
  - Defining and qualifying instrumentation assembly procedures;
  - Writing test procedures for complex instrumentation systems;
  - Supervising and monitoring instrumentation continuity tests and control system functional tests;
  - Magnet and Cryogenic controls including quench detection would be an advantage;
  - High Voltage measurement techniques would be an advantage;
  - Mechanical instrumentation signal processing and interpretation would be an advantage;
  - Working in a complex international environment would be 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.
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***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.