

# Job Title: Operational Instrumentation Officer IO1054

Requisition ID **5604** - 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:** 30/01/2022

**Domain:** Engineering

**Department:** Engineering Design

**Division:** Internal Components

**Section:** Divertor

**Job Family:** Engineering

**Job Role:** Engineer – 3

**Job Grade:** P3

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

**Contract duration:** Up to 5 years

## **Purpose**

In this role as an Operational Instrumentation Officer you will prepare and manage all activities related to the operational instrumentation of the internal components (Divertor, Blanket and First Plasma Protection Components) in line with the given interface, scope, budget, and schedule requirements;

You will also develop its final design, to ensure its integration with interfacing systems, and to follow up its procurement, as well as participate to the preparation of its assembly and commissioning.

## **Background**

*The Operational Instrumentation for the Blanket, the Divertor and the First Plasma Protection Component (so-called BOI/DOI/FOI) is procured directly by the Divertor Section of the ITER Organization. It includes all the concerned components (sensors, cables, connectors, feedthroughs, cubicles, electronic equipment and software) to be installed in the tokamak itself and in the tokamak complex. Part of these components will be installed during Assembly Phase I, in particular the ones needed for the First Plasma Protection Components (FPPC) and the ones captivated by the Vertical Stability coils.*

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

- Manages and participates to the design development and integration of the BOI/DOI/FOI in a timely manner;

- Ensures resolution of engineering issues related to design development of instrumentation systems, physical and functional integration with complex plant systems, including Instrumentation & Control (I&C) hardware and software development, acceptance testing and integrated commissioning;
- Defines and maintains interfaces with other systems, including: Control, Data Access and Communication (CODAC), Plasma Control System, Cable Trays, Electrical Services, buildings;
- Follows up on the procurement of the instrumentation during the ITER construction;
- Interacts with the Construction Department teams to organize, prepare and maintain the required documentation and the overall engineering packages, including the ones for assembly and commissioning phases;
- Ensure compliance of design with the ITER requirements;
- Monitors the associated required R&D and qualification tests;
- Monitors the interfaces and Quality Assurance procedures of the instrumentation in close relation with the Quality Assurance & Assessment Division;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- 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.

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

---

- Finalizes the design in compliance with safety and quality requirements;
- Ensures the delivery of instrumentation for the internal components within the prescribed quality, in a timely manner and within defined costs;
- Fixes efficiently engineering issues related to the scope of work;
- Identifies and manages effectively interfaces with other systems;
- Generates and maintains coherent, comprehensive and understandable design documentation;
- Maintains effective communication on the system/project within the ITER Organization or with the Domestic Agencies as required by this position.

### Experience & Profile

---

- *Professional Experience:*
  - At least 8 years' experience in the design and follow up of procurement of instrumentation.
- *Education:*
  - Master's degree or equivalent in the engineering field or other relevant discipline;
  - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or training certificates in relevant domains.
- *Language requirements:*
  - Fluent in English (written and spoken).
- *Technical Competencies and demonstrated experience in:*
  - **Specialized Domains of Work (Instrumentation for the Blanket, the Divertor and the First Plasma Protection Component) :**
    - Designing and procuring first of a kind instrumentation involving complex physical and functional interfaces with numerous systems;
    - Management of the system requirements and propagation through the supply chain;
    - Electrical engineering and I&C engineering including hardware and software engineering.
  - **Project Management (including procurement and contracts):** Planning, measuring progress of project work, managing risks/costs and reporting on progress of contracts' deliverables;

- **Interface Management: Identify, resolve and maintain complex interfaces with Control, Data Access and Communication (CODAC), Plasma Control System, Cable Trays, Electrical Services, buildings;**
- **Quality Management:** knowledge of requirements for international quality standards (both management and product), methods and practices, QA/QC implementation;
- Industrial Supervisory Control and Data Acquisition Systems (SCADA) and Computer Aided Design (CAD), preferably with the CATIA software would be an advantage;
- Standards for equipment qualification for nuclear safety would be an advantage;
- Experience in Ultra High Vacuum (UHV), and/or nuclear devices would be an advantage.
- *Behavioural 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/define problems accurately before moving to proposals;
  - Instill trust: ability to apply high standards of team mind-set, 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.