

# Job Title: In-Cryostat Instrumentation Group Leader IO0581

Requisition ID **3540** - Posted **25/01/2021** - (France, 13067 St Paul Lez Durance Cedex) - **Construction and Installation - 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:** 07/03/2021

**Domain:** Construction

**Department:** Machine Construction

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

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

**Job Family:** Project Engineering

**Job Role:** Coordinating Engineer

**Job Grade:** P4

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

**Contract duration:** Up to 5 years

## **Purpose**

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As a Group Leader of the In-Cryostat Instrumentation group, you will be responsible for leading the procurement, preparation and installation of the instrumentation, cables and control systems located within the tokamak boundary.

You will develop an overall strategy for completing the installation and testing of the related hardware focusing on integration, logistics, schedule and cost, in addition to ensuring system constructability through collaboration with the system designers.

As part of this role, you will place and manage some In-Cryostat Instrumentation contracts in collaboration with the procurement team.

You will also coordinate and supervise the group's activities, in addition to supporting the line management for resourcing and performance management.

## **Background**

The Tokamak Machine requires a lot of instrumentation to monitor the operation of the Magnets and other systems, which are not monitored by plasma diagnostics. Low Voltage and High Voltage instrumentation is fitted to components in the Cryostat, and must operate under vacuum and at cryogenic temperature. Instrumentation shall be specified, procured, inspected prior handover to our Assembly Contractor. Installation, including process qualification, shall be managed with respect to the Construction schedule. This position is assigned in the In-Cryostat, CTS & Auxiliaries (ICCA) Section in charge of procurement and assembly of In Cryostat Instrumentation, Magnet Feeders, Cryostat.

## **Major Duties/Roles & Responsibilities**

- Monitors, coordinates and provides guidance for the activities managed by the staff of the In-Cryostat Instrumentation group;
- Proposes resourcing plan for the activities of the group and contributes to performance management of staff;
- Acts as leader for the production of Engineering Work Packages (EWP) for all In-Cryostat Instrumentation, which are used as input for Construction Work Packages (CWP);
- Ensures that interfaces are clearly defined, verifying constructability and construction readiness;
- Participates in the review of the engineering designs providing expert guidance on design, installation and maintenance aspects related to in-cryostat instrumentation;
- Coordinates the preparation of technical specifications and leads the contracts for the procurement of some In-Cryostat Instrumentation;
- Develops the installation procedures for various Tokamak Instrumentation systems located inside the cryostat, based on experience acquired from trials on the different mock-ups available;
- Manages appropriate training on special installation processes for contractors;
- Reviews the various assembly contractors' documents such as technical documents/drawings, procedures, test & examination documents, schedule related documents;
- Supervises the construction and installation execution by the assembly contractor, controls work sequences, schedules and ensures work quality;
- Coordinates with the centralized Project schedule control team in establishing the construction master schedule, and oversees the development of detailed plans & schedules by assembly contractors;
- Is responsible for the installation and testing of the instrumentation and control systems, including timely delivery of completion dossiers and supports the commissioning preparation phase;
- 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**

- Maintains and successfully implements the assembly plan for the Tokamak Instrumentation on time;

- Effectively coordinates the In-Cryostat Instrumentation Group's activities regarding performance, work plans, workloads, absences, missions, and/or any other daily activities, by ensuring regular reviews and providing proper guidance and tools;
- Ensures that I&C components are delivered on time, within budget and respecting all requirements and interfaces;
- Issues EWPs for In-Cryostat Instrumentation, in accordance with the construction schedule;
- Maintains effective communication within the ITER Organization and with external stakeholders;
- Provides effective leadership in safety and maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics;
- Preemptively identifies and manages risks to minimize disruption to the schedule and implements suitable actions to anticipate and/or resolve issues.

## Experience & Profile

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- **Professional Experience:**
  - At least 10 years' professional experience in the management of development, installation and assembly of special sensors and cabling installed in ultra-high vacuum (UHV) and cryogenic environments.
- **Education:**
  - Master degree or equivalent in the Electronic Engineering field 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:**
  - Project Management within an Engineering context, including Procurement and Contracts (planning, measuring progress of project work, managing risks/costs and reporting on progress):
    - International procurement and tendering for engineering contracts, including safety, quality, scope, schedule and cost is required;
    - Proven ability to provide effective technical leadership within a large complex project;
    - Coordinating and supervising of a team's activities, in addition to coaching and performance management of staff;
    - Demonstrated ability to deliver quality results within tight timescales;
    - Knowledge of contract law would be an advantage.
  - Specialized Technical Domains of Work (Instrumentation):
    - Knowledge of various sensors used in extreme environments (extreme temperatures, high radiation, UHV conditions etc.) and precision signal processing technology;
    - Providing expert guidance on design, installation and maintenance aspects related to in-cryostat instrumentation;
    - Supervising all aspects of manufacturing, acceptance, assembly and integrated testing for instrumentation, cables and control systems is required;
    - Understanding of the main requirements for the assembly of a tokamak would be an advantage;

- Experience of CAD, structural analysis and PLM software would be an advantage.
  - Problem Solving (assess problems, identify root causes and reach practical solutions in a consistent way to reach project objectives):
    - Developing innovative solutions to complex and technologically sophisticated engineering problems, building on experience;
  - Interface Management (identify, resolve and maintain technical and functional interfaces).
  - **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/define 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.