Job Title: Diagnostic Implementation Engineer IO1005

Requisition ID **4060** - 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: 11/07/2021
Domain: Engineering
Department: Engineering Design
Division: Port Plugs & Diagnostics
Section: Diagnostic Engineering
Job Family: Project Engineering
Job Role: Engineer - 2
Job Grade: P3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As Diagnostic Implementation Engineer, you will lead the integration of diagnostic systems in the tokamak infrastructure and coordinate the work for diagnostic implementation in several integration areas in ITER Organization (IO). You will also follow-up integration of diagnostics inside diagnostic ports and in the buildings within IO and through Domestic Agencies (DA).
You also will be expected to provide engineering solutions to fulfil integration, manufacturing and installation requirements for integrated diagnostics.

Background

To design and build the diagnostic systems in collaboration with the 7 Domestic Agencies (DAs) Procurement Arrangements (PAs) contributions, specific to the ITER diagnostics and integration scope. Diagnostic Engineering Section (DE) provides the design and manufacturing follow-up, with industrial partners or through DAs, of integrated diagnostic ports, and infrastructures to host diagnostic systems in the tokamak complex. The Section provides engineering justification and support to diagnostic developers at IO and DAs. Also, DE section supports technical interface development with other PBSs to ensure that diagnostic systems are designed and developed to fulfil their mission.

Major Duties/Roles & Responsibilities

- Leads diagnostic integration development through oversight of, and collaboration with, a team of engineers within IO and DA;

- Coordinates across IO and with DA's to finalize the engineering design of diagnostics supports, and captive and hard core components (which are the components forming the secondary confinement barriers at the boundary of the building), for manufacturing;
- Leads the definition and integration of interfaces between diagnostics, buildings, ports, services and other ITER systems, such as machine assembly, cooling water, gas and electrical systems;
- Oversees the engineering justification of the integrated diagnostic infrastructure (supports in buildings, integration in ports etc) through analysis to demonstrate structural soundness and compliance with nuclear safety procedures;
- Produces technical specifications and documents as required for manufacturing of integrated diagnostic infrastructure following required practices, codes and standards;
- Coordinates all phases of the procurement of integrated diagnostic infrastructure with industry and through DAs, with the support of Procurement & Contracts Division;
- Ensures qualification of integrated diagnostic infrastructure and their components for nuclear operation;
- Coordinates acceptance of integrated diagnostic infrastructure with external industrial partners and through DAs;
- Leads the development of operational and safety procedures for integrated diagnostic infrastructure;
- Confirms acceptance tests of integrated diagnostic systems before they are installed on ITER;
- Follows up installation and commissioning of integrated diagnostic systems in ITER;
- 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 IO reference working hours, including nights, week-ends and public holidays.

Measure of Effectiveness

- Implements work packages for integrated diagnostic infrastructure within defined schedule;
- Delivers approved interface documentation, schematics plans and databases for integrated diagnostic infrastructure;
- Produces requirements definition and technical specifications within defined timeline;
- Approves technical documentation for procurement of integrated diagnostic infrastructure with external industrial partners and through DAs;
- Partners successfully with technical teams in DAs and across IO.

Experience & Profile

- ***Professional Experience:***
  - At least 8 years' experience managing mechanical engineering, nuclear engineering or diagnostic engineering in fusion installations.
- ***Education:***
  - Master degree or equivalent in mechanical engineering, nuclear engineering or diagnostic 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:***
- Manufacturing of mechanical or diagnostic components following dedicated codes and standards, such as ASME and/or RCC-MR(x);
- Coordination of engineering teams for design and procurement of large nuclear or mechanical components;
- Technical follow-up of CAD activity: familiarity with CAD oversight; familiarity with Piping and Instrumentation (P&I) Diagrams; familiarity with 2D manufacturing and assembly drawings;
- Planning: define scopes of work, duration, sequencing, risk and planning for change management;
- Cost management: develop and maintain cost estimates for approved scope, including change requests;

- Quality Assurance and Quality Control: knowledge of requirements for international quality standards (for both management and product), methods, and practices;
- Interface management; identify, resolve and maintain technical and functional interfaces;
- Procurement: knowledge and practice of procurement procedures, delivery, management of external parties, and implementation within contractual requirements.
- ***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.

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.