Job Title: Diagnostics Components Engineer IO1006

Requisition ID **4800** - 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: 05/12/2021
Domain: Engineering
Department: Engineering Design
Division: Port Plugs & Diagnostics
Section: Diagnostic Engineering
Job Family: Engineering
Job Role: Engineer – 3
Job Grade: P3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As Diagnostic Components Engineer, you will support the port integration development and coordinate the work of several ports at ITER, you will also follow-up the development of common port plug components and diagnostic components both within the ITER Organization (IO) and through Domestic Agencies (DA). You will be expected to provide engineering solutions that fulfil integration, manufacturing and commissioning requirements for integrated ports.

Background

At ITER, a large set of plasma diagnostics and other equipment are integrated in the upper (x14), equatorial (x8) and lower (x3) ports, into dedicated housing structures incorporating support equipment.
The integrated ports, i.e. the port housing structures assembled with diagnostic systems, are also subject to the harsh ITER environment, must comply with defined (safety) requirements, and must also be installable, operable and maintainable consistent with the ITER facility requirements, i.e. with the highest possible level of standardization and commonality.
To design and build the populated diagnostic ports, the 7 Domestic Agencies (DAs) are contributing in-kind, under functional specifications Procurement Arrangements (PAs) while IO also directly undertakes parts of the ITER diagnostics and port integration scope.

Key Duties, Scope, and Level of Accountability

- Leads the development and remaining design of the common port components and diagnostic components integrated in ports including developing and approving interface documentation,

schematics plans and databases ;
- Leads integration activities for diagnostics to be incorporated in the diagnostic ports, including their manufacturing, together with experts at IO and Domestic Agencies;
- Leads the development of interfaces between ports, diagnostics, services and other ITER systems, such as remote handling, water cooling, buildings and vacuum;
- Ensures the engineering justification of the integrated diagnostic ports and diagnostic systems integrated in these ports by analysis and mock-ups to demonstrate their structural soundness and compliance with nuclear safety procedures;
- Coordinates the procurement, qualification and acceptance tests of common port plug components and integrated diagnostic systems for nuclear operation with industry suppliers and through Domestic Agencies;
- Writes operational and safety procedures for common port plug components and integrated diagnostic systems;
- Follows up on acceptance tests and any issues related to installations and commissioning of common port plug components and integrated diagnostic systems;
- 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

- Develops and follows up work packages for common port plug and diagnostic components in line with agreed deadlines;
- Ensures that technical documentation for procurement of common port plug and diagnostic components is of a high standard, completed on time and in line with IO procurement procedures;
- Ensures accurate compliance, traceability and records of all relevant documents as per nuclear safety requirements and quality standards throughout all stages of the common port plug and diagnostic components' lifecycle;
- Ensures effective use of resources with regards to the schedule & budget;
- Ensures that lessons learned and engineering solutions are well propagated within the team and implemented to mitigate future issues;
- Collaborates effectively and professionally with technical partners in Domestic Agencies and other Directorates at IO.

Experience & Profile

- ***Professional Experience:***
  - Minimum 8 years' experience in the design, procurement, integration, testing and installation of mechanical components and diagnostic components in a nuclear field, within complex international environments or projects.
- ***Education:***
  - Master degree or equivalent in mechanical engineering, nuclear engineering or diagnostic engineering field;
  - 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:***
- **Design:** Create technical designs based on project requirements, including the development of mechanical components and diagnostic components for nuclear, fusion or plasma environments;
- **Interface Management**: Managing complex mechanical and functional integration in complex nuclear or diagnostic fusion projects;
- **Procurement:** Implementing effective procurement follow up for mechanical components
- **Technical follow-up of CAD activity**; (familiarity with CAD oversight; familiarity with P&I Diagrams; familiarity with 2D manufacturing and assembly drawings);

- **Integrated Management of Construction and Engineering**: Coordinating activities and managing overall plant installation strategies and engineering solutions within a reasonable time and at a reasonable cost.
- **Planning:** Define scopes of work, duration, estimating cost, sequencing, risk and planning for change management.
- ***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.