Job Title: Divertor Cassette Engineer IO0282

Requisition ID **6360** - 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: 10/07/2022
Domain: Engineering Domain
Department: Engineering Design Department
Division: Internal Components Division
Section: Divertor Section
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 a Divertor Cassette Engineer, you will be responsible for the supervision of the procurement, qualification and acceptance tests of Divertor Cassette Body. You will also supervise the testing, factory acceptance and on-site acceptance activities, in line with the given interface, scope, and schedule requirements.

Background

Situated at the bottom of the vacuum vessel, the Divertor extracts heat and ash produced by the fusion reaction, minimizes plasma contamination, and protects the surrounding walls from thermal and neutronic loads. Each of the Divertor's 54 "cassette assemblies" has a supporting structure in stainless steel welded parts, so-called ***cassette body (about 4.5 tones each)****, and three plasma-facing components: the inner and outer vertical targets and the dome. l. The 54 cassette assemblies of the ITER Divertor will be installed during the second assembly phase, following First Plasma operations. The* ***cassette bodies*** *are procured in-kind by the EU Domestic Agency (EUDA) partner of the ITER project. The serial production of the cassette bodies already started and has to be completed by 2029.*

Key Duties, Scope, and Level of Accountability

- Supervises the procurement for the Cassette Body along series manufacturing phase;

- Ensures that the completed components are manufactured and delivered in compliance with design, functional and safety requirements of the ITER machine;
- Assesses the 3D models and 2D drawings of the Divertor Cassette Body produced by EUDA and its suppliers;
- Reviews/approves the related documentation provided by the suppliers, in particular the documentation related to materials, manufacturing techniques and welding;
- Manages the Deviation Requests and Non-Conformities strictly following ITER Quality Assurance procedures;
- Manages the testing, factory acceptance and on-site acceptance of the Divertor Cassette Body in close collaboration with the Construction Department;
- Maintains the interfaces with other ITER systems to ensure their full compatibility and operation;
- 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

- Completes the procurement of the Divertor Cassette Body within the prescribed specifications and schedule;
- Ensures resolution of engineering issues, and generates and maintains coherent, comprehensive and understandable documentation for the scope;
- Identifies and manages effectively interfaces with other systems;
- Maintain effective communication within the ITER Organization and the Domestic Agencies as required by this position;

Experience & Profile

- ***Professional Experience:***
  - At least 8 years' experience in the manufacturing and/or testing and/or installation and integration of mechanical components, preferably in an Ultra High Vacuum (UHV) and/or nuclear devices.
- ***Education:***
  - Master degree or equivalent in Mechanical Engineering field or other relevant discipline;
  - Qualification as "Welding Engineer" is highly advantageous;
  - 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 Expertise (manufacturing, testing, installation of mechanical components): Manufacturing techniques following EU codes and standards; welding processes, non-destructive tests following dedicated codes and standards, such as ASME and/or RCC-MR(x);
  - CAD activities (CAD oversight, 2D manufacturing and assembly drawings reviews);
  - Project management: measuring progress of project work, managing risks versus quality/schedule and reporting on progress of contracts' deliverables;
  - Interface Management: Identify, resolve and maintain complex interfaces;
  - Quality Management: knowledge of requirements for international quality standards (both management and product), methods and practices, QA/QC implementation;
  - Problem solving: assess problems, identify root causes, and reach solutions to reach project objectives within time and/or cost;
  - Presentation writing: write, review, and present technical documents in the domain of expertise, transmitting knowledge and data with precision;

- Engineering requirements for fusion devices (divertor, diagnostics, Remote Handling, Vacuum Vessel) 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/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.