Job Title: Divertor Testing Engineer IO0247

Requisition ID **7126** - 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.

ITER Organization (IO) is an Equal Opportunity/Inclusive organization committed to diversity in the workplace, with diversity and Inclusiveness being one of the ITER Values.

As IO attracts and retains people coming from a vast array of different backgrounds and cultures, bias and exclusion cannot be tolerated. IO believes it is our diverse perspectives and backgrounds that gives unique strength and value to the ITER mission, regardless of race, member nation, gender, religion, status, sexual orientation, or disability - all are welcome and respected at ITER.

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: 01/10/2023
Department: Engineering Design Department
Division: Internal Components Division
Section: Divertor Section
Job Family: Engineering
Job Role: Engineer – 2
Job Grade: P2
Language Requirements: Fluent in English (written & spoken)
Contract Duration: Up to 5 years

Purpose

As a Divertor Testing Engineer, you will be responsible for monitoring the Procurement Arrangement on the High Heat Flux Testing of the Divertor plasma-facing components.
You will provide engineering support to the Blanket Section in the area of high-heat flux testing during manufacturing and procurement of the Blanket First Wall components and assess technical documentation related to execution of tests.

Background

In the ITER machine, the Divertor is located on the bottom of the Vacuum Vessel and is actively cooled by pressurized water. The main function of the Divertor is to minimize the impurity content in the plasma by intercepting the magnetic field lines, thus neutralizing the plasma, which is then pumped away by the vacuum pumping system. The scope of the Team you will integrate includes the procurement of the Divertor and of the Operational Instrumentation inside the Vacuum Vessel.

All these components are subject to the harsh ITER environment, and must also be installable, operable and maintainable, consistent with the ITER facility requirements.
The Procurement of High Heat Flux Tests of the Divertor plasma facing elements is implemented via a dedicated Procurement Arrangement with the Russian Domestic Agency (RF DA).

Key Duties, Scope, and Level of Accountability

- Is the Technical Responsible Officer of the Procurement Arrangement on Divertor High Heat Flux Testing with the RF-DA;
- Manages the Quality Assurance procedures of the testing activities in close relation with the Quality Management Division;
- Liaises with the Technical Responsible officers of the ITER Organization to develop the work plan and detailed schedule of the testing activities and to ensures the implementation of the required interfaces in collaboration with relevant stakeholders;
- Supervises and witnesses the critical manufacturing steps during the procurement of the Divertor components in particular the High Heat Flux Tests;
- Manages the related Research & Development (R&D);
- Manages interfaces with the Divertor interfacing systems;
- Provides technical and engineering support the Blanket Section when monitoring of the high heat flux tests during manufacturing of the Blanket First Wall components and assesses engineering documentation related to the high heat flux tests;
- May be requested to perform other duties in support of the project;
- May be required to work outside the ITER Organization (IO) reference working hours, including nights, week-ends and public holidays.

Measure of Effectiveness

- Successfully performs all responsibilities for the execution of the high heat flux testing of the Divertor plasma-facing components;
- Produces and maintains coherent, comprehensive, and understandable technical documentation;
- Assists effectively in the supervision of critical manufacturing steps during the procurement of the Divertor in particular during the high heat flux test and related Research & Development (R&D), as well as of the related quality documentation;
- Provides excellent technical support to the Blanket Section during monitoring of the high heat flux tests during manufacturing of the Blanket First Wall components;
- Maintains effective communication and ensure people coordination on the system/project within the ITER Organization or with the Domestic Agencies as required by this position;
- Contributes to keeping the Divertor effort within planned schedule and costs and manages resources allocated to the system/project under this scope of activity.

Experience & Profile

- ***Professional Experience:***
  - Minimum 5 years in the manufacturing and/or testing of mechanical components, preferably in an Ultra High Vacuum (UHV) and/or fusion devices within complex international environments or projects.
- ***Education:***
  - Master degree or equivalent in an 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:***
  - High Heat Flux tests of actively cooled plasma facing components;
  - Operating Data Acquisition systems including Infrared and X-Ray diagnostics;
  - Basic Project Management experience is required;
  - Understanding of CAD 3D models and 2D technical drawings;
  - Non-destructive testing inspection techniques would be an advantage;

  - Good knowledge of the engineering requirements of the relevant ITER systems (Divertor, First Wall) would be an advantage;
  - Experience in signal/image processing would be an asset.
- ***IO Core 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 (Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members) :
  1) Nuclear Safety, Environment, Radioprotection and Pressured Equipment
  2) Occupational Health, Safety & Security
  3) Quality Assurance Processes
- 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 or Department 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.
- For staff expected to perform on-call, shift hours, or other work outside ITER Organization reference working hours, including nights, weekends, and public holidays, the possession of a driving license valid in France is required. No commuting vehicle will be provided by the ITER Organization.