Job Title: Mechanical Engineer IO0633

Requisition ID **5720** - 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: 13/03/2022
Domain: Construction
Department: Machine Construction
Division: Ex-Vessel Delivery & Assembly
Section: In-Cryostat, CTS & Auxiliaries
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 Mechanical Engineer, you will carry out design, analysis and engineering activities for the Cryostat components with an emphasis on construction code compliance in particular for what is related to Torus Cryopump Housing (TCPH) and bellows;
You will prepare engineering specification packages and supervise the Cryostat and auxiliaries' onsite assembly works, in addition to providing welding and Non Destructive Examination (NDE) expertise.

Background

The Cryostat and Auxiliaries Group is in charge of Cryostat and all related items including interfaces to the Tokamak core machine and the building. The Cryostat itself provides containment and support for all superconducting components and systems.
The group takes care to the procurements spanning from Cryostat components over bellows to seals and equipment housings by following manufacturer activities. After receiving components onsite, the group is deeply involved in the preparation and follow up of installation activities.

Key Duties, Scope, and Level of Accountability

- Performs design and engineering for the Cryostat components, especially for TCPH and bellows;
- Coordinates the preparation of the design drawings and Computer Aided Design models for the Cryostat;

- Manages interfaces of TCPH and bellows with the Vacuum Pumping System and Assembly/Remote Handling;
- Issues and manages specifications, follows up and monitors procurement and manufacturing activities for the Cryostat including TCPH and bellows;
- Manages factory and site acceptance tests of the Cryostat components;
- Prepares and consolidates the Engineering Work Packages (EWPs) which instruct assembly contractors for Cryostat and auxiliaries systems;
- Supervises the Construction Work Packages (CWPs) related to Cryostat and auxiliaries systems;
- Manages the assembly and commissioning of the Cryostat components;
- Assesses non-conformities and field changes in relation to the onsite work execution;
- Contributes to define the load conditions and other requirements;
- Participates in the review and evaluation of thermal and structural analysis;
- Provides welding and NDE expertise in support of assembly tasks (specification development, documentation review and on-site activity follow-up); 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

- Implements efficiently actions related to activities for the Cryostat within the defined schedule;
- Ensures compliance with French regulatory requirements relating to Basic Nuclear Installations and in particular the application of the ITER Quality Assurance (QA) requirements for the Cryostat;
- Proactively follows up the production of CAD models/2D drawings and detailed design documents to ensure they are generated as scheduled;
- Creates and maintains high-quality reports, specifications and documents as requested Regularly reports on tasks progress, provides appropriate preventative/corrective measures and escalates issues when necessary to minimize disruption to the schedule;
- Demonstrates effective communication and excellent relations with interfacing teams within ITER and with external contractors/suppliers.

Experience & Profile

- ***Professional Experience:***
  - Minimum 8 years' experience in design, engineering and manufacturing of large, complex mechanical components within complex international environments or projects.
- ***Education:***
  - Master degree or equivalent in Mechanical Engineering 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:***
  - **Design** (creating technical design based on project requirements): Issuing or coordinating detailed design drawing production, reviewing drawing packages, instructions and guidance to codes such as ASME or RCC-MR;
  - **Interface Management** (identifying, resolving and maintaining technical and functional interfaces): Knowledge and skills needed to work independently in the specific domain of work; Analyzing and proposing solutions for interface or challenging technical issues problems, drawing on experience and expertise;
  - **Quality Control:** Verifying the compliance of the procedures for the manufacturing/installation of large mechanical systems with all applicable requirements;

    - **Specialized Domains of Work & Technical Expertise**: Welding expertise (Welding Engineer level) with Non-Destructive Examination expertise would be advantageous;
    - Good knowledge of CAD systems and basic knowledge of Finite Element Model analysis.
- ***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 problems accurately before moving to proposals;
    - Proactively identifying operational or contractual interfaces and reaching resolution of issues;
    - 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.