Job Title: Mechanical Engineer IO0808/IO0726

Requisition ID **7605** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Engineering of Systems** - **New Posting**

Fusion, the nuclear reaction that powers the sun and the stars, is a promising long-term option for a sustainable, non-carbon emitting global energy supply.

The ITER Organization (IO), based in the southern France, welcomes best talents who can together prepare the way to this new energy in a truly multi-cultural work environment.

We offer challenging assignments in a wide range of areas and encourage applications from candidates will all levels of experience. Applications from under-represented ITER Members' nations and women candidates are strongly encouraged, as IO strongly believes that a diversified, equitable, and inclusive workplace is crucial in solving one of the most complex scientific and engineering projects in the world today.

As the IO attracts and retains people coming from a vast array of different backgrounds and cultures, discrimination and exclusion cannot be tolerated. The IO believes it is our diverse perspectives and background 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.

ITER CARE Values (Collaboration / Accountability / Respect / Excellence):
We perform our work with care, we care for the well-being of colleagues, our families and ourselves, and we care about the health of the planet for generations to come. CARE drives our work and our behaviors at ITER.

To see why ITER is a great place to work, please look at this video

Application Deadline: 10/11/2024
Department: Engineering Services Department
Division / Program:
Section / Project:
Group:
Job Family: Construction
Job Role: Engineer – 2
Job Grade: P2
Language Requirements: Fluent in English (written & spoken)
Contract Duration: Initial Employment Contract up to five years with possibility for extension

Overview

Are you looking for an exciting opportunity at the heart of an ambitious fusion energy project? Join us as a **Mechanical Engineer** within the Engineering Service Department (ESD) where you will:

- Perform mechanical analyses of piping systems and relevant supporting structures,
- Be responsible for completing the design, manufacturing and installation supervision process of diverse platforms and structures and for supporting components and piping systems,
- Oversee the procurement, installation qualification and commissioning of mechanical equipment.

The ESD is responsible for providing the needed skilled engineering resources or services, which are necessary to the successful completion of the ITER Project. This includes acting as Engineering Resource Provider and ensuring the optimized availability and proper competence level of the engineering needs of the Project.

Key Duties & Responsibilities

Primary Responsibilities:

- Develops and coordinates the design of interfaces with main tokamak (e.g vacuum, cooling, buildings, remote handling etc.);
- Performs stress analyses, in addition to thermal and structural analyses of piping systems and mechanical components to validate the design;
- Develops Technical Specifications for the procurement, fabrication, qualification and testing of the equipment, prepare relevant tenders, and updates documents as needed;
- Follows up on the manufacturing of the systems' mechanical and structure components including qualification tests, and the final acceptance tests (FATs);
- Collects and verifies input data for the design of the assigned platforms and reviews the deliverables produced by external design contractors;
- Manages the interfaces between structural platforms and supported systems, verifying the structural coupling between platforms and systems.

Additional Responsibilities:

- Provides assistance to the Domestical Agencies, contractors and ITER groups to carry-out engineering, R&D, interface control and procurement work as required;
- Performs activities in a formal, quality-assured environment, consistent with a nuclear facility that requires rigor and a systematic way of working;
- Reviews detailed workshop drawings or any Installation Procedures, Inspection & Test Plans and the installation testing issued by the installation Contractor;
- Issues inspection and observation reports when and where required;
- Provides expert criteria for mechanical and structural discipline related problems and follows-up on the resolution of the field engineering changes and installation non-conformances.

Experience & Profile

- **Essential competencies and experience**:
  - Minimum 5 years' experience in Mechanical Engineering and/or mechanical components in the field of nuclear installations, within complex international environments or projects.
  - **Stress Analyses:** Modeling the structure, analyzing its response to loads using various methods like finite element analysis, calculating stresses, evaluating against design criteria, and optimizing the design based on analysis results
  - **Mechanical Engineering:** Specifying, designing, testing, installing and maintaining mechanical components, systems and interfaces.
  - **Manufacturing Follow up:** Experience in the follow-up of manufacturing of mechanical parts, including working knowledge of mechanical manufacturing techniques.
  - Knowledge of CAESAR II, STAAD PRO and other similar computer software commonly used for design of gas or liquid piping systems;
- **Desirable competencies and experience:**
  - Knowledge of software for mechanical engineering (e.g. ANSYS or ABAQUS);
  - Experience with dissimilar materials joining techniques;
  - Piping supporting systems technologies, as well as fixation systems for nuclear plants;
  - **Quality Control:** Verifying the compliance of the procedures for the installation of structures with all applicable requirements as well as specifying and supervising welding techniques, and NDT techniques,
  - **Civil Engineering:** competencies in practical design solutions to optimize fabrication and erection of structural platforms, structural connections design solutions and design procedures.
  - Knowledge of software for structural engineering of software such as AVEVA E3D and Diagrams, CATIA (ENOVIA) and SMART PLANT;
- **Education:**
  - **Essential:** Master degree or equivalent in Mechanical, Civil or Structural Engineering or other relevant discipline;
  - *The required education degree(s) 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).

The following items apply to all jobs and job holders for the duration of tenure at ITER Organization:

- **The CARE Values are a framework of principles that guide our actions and define the culture and spirit of the ITER Project:**

Collaboration: We collaborate with commitment and flexibility using the power of teamwork, building partnerships, and working with others to reach shared objectives;

Accountability: We are accountable for the whole project - we take responsibility for our specific actions and are transparent in our daily work, holding self (ourselves) and others accountable to meet commitments;

Respect: We treat each other with respect and dignity at all times, knowing that all of us belong here. We appreciate the value that our multicultural and diverse community brings to the ITER Project;

Excellence: We are driven by excellence; we are agile and innovative while maintaining the highest standards of safety, quality and integrity;

- **ITER Core Technical Competencies**:
  1) **Nuclear Safety, Environment, Radioprotection and Pressured Equipment**
  2) **Occupational Health, Safety & Security**
  3) **Quality Control & 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 perform other duties in support of the project as defined by your line manager, and when relevant upon the request of the matrix manager;
- May be requested to work outside the ITER Organization reference working hours, including nights, weekends and public holidays, due to business needs - this may include on-call, shift work, etc.
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- 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.**
- Informs management of any important and urgent issues that cannot be handled by line or matrix management and that may jeopardize the achievement of the Project’s objectives;

The ITER Organization (IO) is an Equal Opportunity organization committed to diversity and inclusive in the workplace.