Job Title: Mechanical Technician IO0074&IO0697

Requisition ID **7646** - 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: 12/01/2025
Department: Engineering Services Department
Division / Program:
Section / Project:
Group:
Job Family: Engineering
Job Role: Technician – 3
Job Grade: G4/G5
Language Requirements: Fluent in English (written & spoken)
Contract Duration: Initial Employment Contract up to five years with possibility for extension
Two positions
Overview

Are you looking for an exciting opportunity at the heart of an ambitious fusion energy project?
Join us as a **Mechanical Technician** within the Engineering Service Department (ESD). *The ESD provides the required skilled engineering resources or services, which are necessary for the successful completion of the ITER Project.*

As **Mechanical Technician**, your goals will include:

- **Providing mechanical engineering support** for the design, manufacturing, testing, installation and commissioning phases related to different components of the Electron Cyclotron (EC) system;
- **Supporting integration activities** including the design finalization of new equipment such as building intermediate steel, layouts, piping and instrumentation design, adaptation of ex-vessel waveguides, launcher components and ancillaries.
- **Drafting and monitoring of reports**, assembly & operational procedures and technical specifications as required.
- Ensuring deliverables are produced according to project schedule and budget, within a quality-assured environment that requires rigor and a systematic way of working
- Developing, under the leadership of your discipline manager, your skills and experience for the benefit of the Project.

The Electron Cyclotron (EC) heating system will be used at ITER for Heating and Current Drive (HCD) in a number of plasma operating scenarios. The EC system is a microwave system consisting of various subcomponents (power supplies, radiofrequency sources, transmission lines and launchers) which final aim of heating the electrons in the plasma.

Key Duties and Responsibilities

Primary Responsibilities
- Carries out technical support activities and drafts technical reports required for the design finalization, procurement, manufacturing, installation and commissioning activities for components, equipment and systems.
- Develops and reviews CAD 3D models and drawings for the relevant scope of activity.
- Witnesses and reports on the critical manufacturing steps during the procurement phase.
- Provides input required for Engineering Work Packages for assembly and installation and interfaces definition whilst ensuring that the engineering technical inputs are compatible with constructability requirements.
- Troubleshoots mechanical issues and offers solutions to optimize and minimize impact where possible.

Additional Responsibilities
- Performs activities in a formal, quality-assured environment, consistent with a nuclear facility that requires rigor and a systematic way of working.
- This position could be shift and/or on-call based, and crucial to maintaining continuous operations and ensuring the highest level of service for our stakeholders. This requires shift rotation and/or availability including day, evening, and night shifts, as well as weekends and holidays, depending upon project or team needs.

Please note that job descriptions cannot be exhaustive, and the staff member may be required to undertake other duties, which are broadly in line with the above primary responsibilities.

Experience & Competencies

Essential:
- Proven experience technically supporting the design, procurement and installation of complex mechanical systems within international environments or projects.

- **Interface Management:** Ensuring design compliance and technical integration of complex mechanical systems with other interfacing systems;
- **Design and Manufacturing**: Familiarity in generating and manipulating CAD models (for example: CATIA V5) and applying codes and standards (for example: RCC-MR, ASME, EN, ASTM);
- **Drawings/Diagrams**: Familiarity in interpreting and creating Piping & Instrumentation diagrams, assembly drawings, isometric drawings, part drawings, Bill of Materials (BOMs);
- **Continuous Improvement:** proposing changes to processes and systems to enhance efficiency, quality, and productivity over time;
- **Quality Management Systems (QMS):** Apply the applicable procedures related to your field of activity;

Desirable:
- **Finite Element Analysis** and associated Structural Analysis software such as ANSYS.
- **Electromechanical:** Understanding signal chains for instrumentation and control, electrical connector design and cable routing, high and low voltage, electrical grounding, grounding loops.
- Familiarity with human factors analysis, generation of assembly & maintenance plans and technical specifications in general.
- **Complex Mechanical Systems:** Thermal-mechanical applications, cooling, tolerance analysis, electron cyclotron components or highly specialized components in the radiofrequency or particle accelerators.
- Working with complex systems with nuclear safety functions or projects such as nuclear fusion, particle accelerators, aerospace or nuclear fission.
- **Organizational Savvy:** Maneuvering comfortably through complex policy, process, and people related organizational dynamics.
- **Optimizes Work Processes:** knowing or identifying the most effective and efficient processes to get things done, with a focus on continuous improvement.

Qualifications

Essential:
- Bachelor degree or equivalent in Mechanical Engineering or other relevant discipline;

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.