

Job Title: Mechanical Engineer IO1088

Requisition ID **5680** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Construction and Installation - 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: 06/03/2022

Domain: Construction

Department: Plant Construction

Division: Field Engineering Installation

Job Family: Engineering

Job Role: Coordinating Engineer

Job Grade: P4

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

In this role as a Mechanical Engineer, you will act as Deputy Leader for the Penetration Working Group Design Team:

- You will coordinate the team in charge of producing the Engineering Work Packages (EWP) for the Tokamak standard and complex penetrations. This involves coordinating resources, scheduling, managing design contracts and close interactions with other stakeholders to achieve final design and EWP production;
- You will act as a technical expert for the design of the penetrations;
- You will develop the right strategy to optimize the installation sequence, taking into account the overall assembly sequence, in-kind contributions availabilities and the buildings availabilities.

Background

In the frame of the Field Engineering Installation Division, the In-Field Engineering Support (IFES) Group provides transversal mechanical engineering supports to both construction and design activities, i.e.:

- For all the Plant (Balance of Plant, Nuclear and Non-Nuclear Buildings), assures the in-field engineering assessment, which includes the resolution in real-time of Supplier Deviation Requests and In-Field Non Conformities;

- IFES supports the other divisions for the production of engineering design packages of safety and non-safety mechanical systems including pipes, piping supports, valves, cable trays, etc. up to the penetrations into the walls.

Key Duties, Scope, and Level of Accountability

- Provides technical leadership to the team in charge of Tokamak Complex Penetrations design;
- Controls the schedule of the production of EWPs and adapts it as per the overall construction sequence in the Tokamak Complex;
- Assures the availability and maturity of input data for the design of the assigned penetrations and coordinates with diverse stakeholders within the project to consolidate the design input;
- Manages the interfaces between penetrations and crossing systems, verifying their correctness and maturity of these interfaces;
- Leads the issuance of the technical specification and the scope definition for call for tenders, participates in the selection process, manages the contract for outsourced design of penetrations, and assures production at cost, schedule and quality of the selected contractor;
- Acts as a technical expert and provide technical solutions to complex problems including mechanical interface loads, environmental loadings (including seismic, pressure, temperature and fire), adequacy versus safety requirements (i.e. leak-tightness confinement function, accidental seismic conditions, accidental overpressure, fire conditions, high energy line break, etc ...);
- Coordinates and leads the design teams for the production of the design Hand-Over Package (i.e. 3D model, 2D detailed drawings, bill of materials, justification report, compliance matrix, Installation sequence, statement of work, material and installation technical specification, etc ...);
- Coordinates the preparation of design reviews and manufacturing readiness review for the assigned scope, assuring availability, quality and completeness of the Hand-Over Packages for construction of the assigned scope;
- Supports the Penetration Working Group Design Team Leader as requested and acts as deputy leader during the Penetration Working Group different meetings and steering committees;
- Answers to Request for Information and provides engineering assessments for Deviation Request issued by the construction team;
- Issues inspection and observation reports when and where required;
- Provide expertise for mechanical and civil disciplines related problems and follows-up on the resolution of the field engineering changes and installation non-conformances;
- 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

- Achieves the Final Design Review and the Manufacturing Readiness Review as per the construction schedule for the assigned scope;
- Anticipates or resolves interface and integration issues related to the penetrations promptly to minimize disruption to the schedule;
- Reports on the status of the design in a timely and accurate manner;
- Coordinates the handover of Engineering Work Packages (EWP) to CMA in good time, ensuring the proper transfer of information;
- Ensures the schedule, cost and scope satisfaction for the associated contracts;
- Effectively manages the interfaces associated with his/her scope of activities;
- Controls, monitors and respects the cost and schedule for the execution of activities in accordance with ITER Project objectives;
- Maintains effective communication and excellent relations with interfacing teams within ITER and with external contractors/suppliers;
- Performs design activities and ensures decisions are made in line with safety and quality standards.

Experience & Profile

- **Professional Experience:**
 - Minimum 10 years' experience in the design, procurement, fabrication and installation supervision of mechanical or civil structures and equipment or piping systems or penetrations, within complex international environments or projects.
- **Education:**
 - Master degree or equivalent in Mechanical Engineering or Civil Engineering, with competences in construction, installation and testing of mechanical components or piping systems or civil structures;
 - 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:**
 - **Integrated Management of Construction and Engineering:** Managing plant installation strategies and engineering solutions within a reasonable time and at a reasonable cost;
 - **Specialized domains of work and technical expertise:** Structural static analysis and seismic analysis, with proven experience in identifying and applying different loading conditions under different postulated accidents according to Accidental Analysis Report.
 - **Design:** of Creating and reviewing technical designs for safety related penetrations for nuclear facilities, with practical experience and knowledge of different available solutions to cope with diverse penetrations requirements, such as radiation confinement, pressure containment, fire resistance, decontamination, etc. Design of reinforcements in concrete is advantageous;
 - **Interface Management:** Identify, resolve and maintain technical and functional interfaces;
 - **Construction, project and contract management:** Planning, measuring of project work, managing risks/costs and reporting on progress;
 - Excellent knowledge of Eurocode and Nuclear Plants structural codes such as ASME BPVC Section III - NF, AISC N690 or similar;
 - ANSYS, GT Strudl, SAP 2000, Caesar II ,3D CAD plant software (AVEVA and Catia or Smartplant) is advantageous
 - **Quality Control:** Verifying the compliance of the procedures for the installation of mechanical components and piping systems with all applicable requirements;
- **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;
 - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity;
 - Persuades: Using compelling arguments to defend design progress and requirements/compliance across multiple systems;
 - Problem solving: Ability to identify the problem, to actively manage the resolution, to analyze it, to determine the root cause, to take into account of the lessons learned, to seek expert advice for analysis in technical area, to find proposal and to implement the solution.

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.