

Job Title: Piping Mechanical Engineer IO0622

Requisition ID **3881** - Posted **26/04/2021** - (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: 06/06/2021

Domain: Construction

Department: Plant Construction

Division: Mechanical Implementation

Section: Cooling Mechanical & Welding

Job Family: Project Engineering

Job Role: Engineer - 2

Job Grade: P3

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

As Mechanical Engineer, you will be responsible for the preparation of mechanical Engineering Work Package (EWP) and the validation of the structural integrity of Cooling Water Systems (CWS), including Piping, Supports, Equipment and Interfaces.

Additionally, you will be involved in service and supply contracts management for CWS items.

Background

Cooling Mechanical and Welding (CMW) Section is responsible of the design CWSs, namely for the secondary and tertiary ITER cooling loops. CMW is currently involved in various phases of the ITER project from the CWS final design, procurement, preparation of Engineering Work Packages (EWPs) for the relevant assembly. CMW is also involved as well as to assist the construction and the commissioning phase of CWSs. This role works in coordination with the Group Leader and Section Leader for activities in the Cooling Mechanical and Welding (CMW) Section for the Mechanical Engineering and Piping Design.

Major Duties/Roles & Responsibilities

- Performs design and stress analyses of CWS piping systems;
- Co-ordinates CAD designers to finalize the design;

- Performs structural analyses of CWS piping supporting structures for both Embedded Plates and Post Drilled Plates in order to assess and/or to justify the loads on civil structures;
- Reviews and verifies design reports on structural analyses issued by IO and external contractors;
- Performs beam joints verification (bolted and welded);
- Performs analyses by using Finite Element Models for Pressure Equipment (Valves, Pumps, Heat Exchangers, Chillers);
- Collaborates with the Cooling, Mechanical, and Welding (CMW) Technical Responsible Officer(s) (TROs) to prepare Technical Specifications for stress analyses activities, and for the procurements of CWS piping and supports (both primary and secondary);
- Prepares the Engineering Work Packages (EWPs) for construction and installation, in coordination with the Group Leader for the Mechanical Engineering in CMW Section;
- Supports the TRO and Group Leader and/or leads activities for the supply and/or service contracts relevant to CWS such as contracts for the stress analyses, in Final Design Phase, for the Cooling Water System (CWS) piping, stress analyses, structural supports and equipment;
- Acts as TRO for the relevant CWS procurement in close collaboration with the Procurement & Contracts Division (PCD);
- Participates in the manufacturing of CWS piping and equipment;
- Support Group Leader in responding to Request for Information and Field Change Request (RFI/FCR) issued for the fabrication and installation of the CWS item;
- Collaborates and interfaces across IO regarding specific items relevant to the CWS piping systems (e.g. Penetrations in Nuclear Confinement areas and fire zones);
- 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

- Performs and reviews the piping, supports and equipment stress analyses for the CWS within defined timeline;
- Assures the ad-hoc on time preparation and completion of EWPs for construction activities in Balance of Plant and Tokamak Complex per the installation baseline time schedule;
- Manages delivery of service contracts within defined timeline and scope;
- Completion of EWP(s) within defined timeline and scope;
- Ensures safety and quality requirements are implemented and communicated throughout appropriate teams and channels for CWS;
- Maintains and improves communication and interfaces with the ITER Construction and Operation Divisions engineers throughout the CWS Construction and commissioning stages.

Experience & Profile

- **Professional Experience:**
 - At least 8 years' experience in managing mechanical design and stress analyses and procurement of piping systems in the field of Oil, Gas, or Nuclear installations.
- **Education:**
 - Master degree or equivalent in Mechanical, Industrial or Nuclear 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:**

- Mechanical design and sizing of piping and equipment for plant industrial systems, nuclear facilities etc;
- Integrated management of construction and engineering: manages overall installation strategies and engineering solutions within time and cost;
- Project Management including procurement and contracts: planning project work, managing risks, costs, financial and staff resources within contractual scope, measures and reports on progress;
- Quality Assurance and Quality Control: knowledge of requirements for international quality standards (for both management and product), methods, and practices;
- Problem Solving (assess problem, identify root causes and reach practical solutions in a consistent way to meet project objectives):
- CAESAR II, STAAD PRO, ANSYS and other similar computer software commonly used for design of CWS systems;
- AVEVA (E3D and Diagrams), CATIA (ENOVIA) and SMART PLANT is preferable.
- **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;
 - Being resilient: rebounding from setbacks and adversity when facing difficult situations.

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.