

Job Title: Process Engineer IO0193

Requisition ID **4600** - 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: 24/10/2021

Domain: Construction

Department: Plant Construction

Division: Mechanical Implementation

Section: Cooling Mechanical & Welding

Job Family: Engineering

Job Role: Engineer – 3

Job Grade: P3

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

You will be a Process Engineer for the ITER Cooling Water Systems (CWS) and namely the Technical Responsible Officer for the finalization and preparation of the procurement of one particular circuit (CCWS-1A), and the associated contract responsible officer for items to be procured for this particular loop.

You will finalize the functional and physical interfaces of the relevant process, as well as prepare/update the Technical Specifications for the procurement of the relevant main equipment and piping systems, in addition to preparing the relevant tenders. You will also contribute to the manufacturing follow-up as necessary for the thermal hydraulic process and for the Final Acceptance Tests (FATs).

You will also have a specific role to follow-up the procurement and the qualification of the CWS thermal insulation and cold/ elevated external temperature protection of the CWS piping, supports, valves and equipment.

Background

The Cooling, Mechanical and Welding Section (CMW) is responsible of the design and procurement of new Secondary Cooling Water Systems (CWSs). This role contributes to the completion of these activities through collaboration with engineers, analysts, and designers across ITER Organization (IO) to ensure the design is finalized according to quality, engineering, and industrial standards.

Key Duties, Scope and Level of Accountability

- Performs thermal-hydraulic and functional analyses to assess the operational/transient scenarios of all the CWS systems;
- Finalizes all the functional and physical interfaces with the clients regarding the relevant processes of the CCWS-1A;
- Develops and finalizes the design of CCWS-1A;
- Prepares and/or updates the Technical Specifications for the procurement, fabrication and testing of the CCWS-1A equipment and is the technical responsible officer for the associated tenders;
- Follows up the manufacturing of the CCWS-1A piping, supports, valves and equipment (e.g. pumps, heat exchangers and other related equipment) including the final acceptance tests (FATs);
- Manages the procurement and qualification of the thermal insulation and cold / elevated environmental temperature protection of CWS piping, supports, valves and equipment;
- Prepares and monitors the Engineering Work Packages (EWPs) for the CCWS-1A;
- Support the CWS section for the commissioning activities, namely for the CCWS-1A circuit;
- 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, weekends and public holidays.

Measure of Effectiveness

- Performs accurate functional analysis and thermal-hydraulic analyses for CWSs;
- Completes/updates the relevant functional analysis for CCWS-1A to timely complete the interphases with the clients prior to launch procurements;
- Prepares technical specifications, plans and implementing procedures for the procurement of the CWS and CCWS-1A in a timely manner;
- Effectively plans and supports Procurement and Contracts Division in the preparation of the tenders for the CWSs, and namely for the CCWS-1A, procurements according to the required time schedule and available budget;
- Efficiently monitors/follows up the manufacturing and testing activities for CWS and namely for CCWS-1A;
- Efficiently prepares guidance for the CWS commission tests and proposes corrective actions in case the tests are not successful.
- Collaborates successfully with technical partners in Domestic Agencies and other units within IO;
- Ensures that data, reports and documents are produced in the correct format and to a high standard of accuracy.

Experience & Profile

- **Professional Experience:**

- Minimum 8 years' experience in design, analysis and procurement of equipment for Cooling Water Systems (in particular for the functional analysis and thermal-hydraulic analysis of complex systems/piping systems) in the field of nuclear installations, within complex international environments or projects.

- **Education:**

- Master degree or equivalent in Process, Nuclear or Mechanical Engineering field 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 of complex systems (functional analysis of the process, equipment sizing etc. for nuclear or complex installations (create technical designs based on project requirements): System design development, including process and/or high category nuclear safety systems, design engineering and analysis;
- Manufacturing, testing, qualification and commissioning;
- Quality control for FATs as well as for the relevant commissioning: verifying compliance of components with applicable requirements;
- Project Management within an engineering context (writing technical specifications, planning, measuring progress of project work, deliverables, managing risks/costs and reporting on progress);
- International procurement and tendering for engineering contracts, including all requirements such as safety, quality, scope, schedule and cost, from procedures, delivery, and management of stakeholders for components/equipment for CWS complex systems (e.g. for valves and equipment for Pumps and Heat exchanges);
- Problem Solving related to functional and physical interfaces of Cooling Water Systems/other complex installations: assesses problems, identifies root causes and reaches practical solutions in a consistent way to reach project objectives;
- The use of computer software for CWS thermal-hydraulic analyses (such as AFT Fathom, Relap, Arrow, Impulse or similar) and equipment sizing (such as HTRI for Heat Exchangers);
- International quality standards (for both management and product), methods, and practices is considered advantageous;
- 2D and 3D CAD (e.g. AVEVA Diagrams and E3D, CATIA/ENOVIA, AutoCAD) is considered advantageous.

- **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/define problems accurately before moving to proposals;

- 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.