

Job Title: Process Engineer, Chemical IO1169 & IO1170

Requisition ID **8267** - 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 with 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.

The IO is committed to fostering a fair and equitable environment across all areas of the project, including compensation and benefits.

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: 25/01/2026

Department: Engineering Services Department

Division / Program: Plant & Process Engineering Division

Section / Project:

Job Grade: P1/P2 ([SALARY SIMULATOR](#))

Language Requirements: Fluent in English (written & spoken)

Contract Duration: Initial Employment Contract up to five years with possibility for extension

Please note that the entry grade of this position begins at P1 and the final grade offered to the selected candidate is subject to the decision of the IO Director General.

Overview

Are you looking for an exciting opportunity at the heart of an ambitious fusion energy project? Join our Plant & Process Engineering Division (PPED), within the Engineering Service Department (ESD) as a Process Engineer

As a **Process Engineer, Chemical** your goals will include:

- Performing, reviewing, overseeing and accepting the design, manufacturing, testing, installation and commissioning activities of selected Tritium Plant sub-systems of ITER.
- Supporting process plant solution delivery to ensure they are comprehensive and that the defined requirements are achieved and clearly demonstrated.
- Using engineering analysis to inform design decisions whilst ensuring work aligns with relevant codes and standards.
- Producing high-quality engineering solutions across a broad range of process engineering topics over the lifecycle of the system.
- Ensuring deliverables are produced according to project schedule and budget, within a quality-assured environment that requires rigor and a systematic way of working.

The ESD Department provides the required skilled engineering resources or services, which are necessary for the successful completion of the ITER Project.

PPED Division provides technical support to the ITER project in the field of Process Engineering. Being a member of the Plant & Process Engineering Division, you will have the opportunity to share and develop your expertise with other colleagues working in the same discipline on different ITER units.

Key Duties and Responsibilities

Primary Responsibilities:

- Produces and monitors the Tritium Plant sub-systems designs including system design, component selection, analysis (e.g. transient) and layout.
 - Prepares and/or reviews design solutions and technical specifications for Tritium Plant sub-systems equipment, in accordance with the requirements and guidance.
 - Performs the functional analysis of the Tritium Plant sub-systems to check that the design fulfils the requirements of full plant lifecycle including testing, commissioning, operation, maintenance and decommissioning;
 - Prepares and maintains design documents, in addition to communicating them with relevant interfaces and technical units.
 - Follows-up and reviews the design, manufacturing, testing, installation and commissioning activities of Tritium Plant sub-systems components and systems, including those performed by contractors.
 - Identifies and manages interfaces related to the Tritium Plant sub-systems with Responsible Officers and stakeholders of other systems.

Additional Responsibilities:

- Supports commissioning and plant performance testing / troubleshooting including preparation of documentation for testing and commissioning whilst considering client requirements as well as availability of suppliers.
- Applies relevant Quality Assurance (QA) & Quality Control (QC) requirements and standards for tools, components and systems.
- Produces Process Flow Diagrams, Piping and Instrumentation Diagrams, Input to Layout Drawings, and Specifications, Equipment Process Data Sheets, Instrument Process Data Sheets, Control Descriptions, Cause and Effect Diagrams and takes part in HAZOPs.

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** in supporting engineering design, integration and installation of plant systems in the field of nuclear or hazardous environments.
- **Process Engineering, Chemical:** Applying chemical engineering principles to the specification, design, testing, installation and maintenance of plant systems and interfaces in hazardous environments.
- Manufacturing, testing, qualification and commissioning of plant systems in a nuclear environment.
- **Design** (create technical designs based on project requirements): Component design development, including process and/or high category nuclear safety systems, design engineering and analysis.
- **Project Management and Procurement** within an engineering context, including procurement and contracts (writing technical specifications, planning, measuring progress of project work, deliverables, managing risks/costs and reporting on progress).
- **Technical Documentation:** Producing technical requirements specifications, performing consistency checking and general management of documents.
- **Managing Complexity and Problem Solving:** Ability to analyze multiple and diverse sources of information to understand/define problems accurately before moving to proposals.
 - **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:

- Knowledge of safe handling of tritium, hydrogen or high purity gas treatment processing technologies.
- **Software:** Process simulation software (e.g. ASPEN or similar).
 - **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:**

- Master's degree or equivalent in nuclear, chemistry, chemical 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.*

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.