

## Job Title: Chemical Process Engineer IO1017

Requisition ID **4360** - 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:** 30/09/2021

**Domain:** Engineering

**Department:** Engineering Design

**Division:** Fuel Cycle

**Section:** Tritium Plant

**Job Family:** Engineering

**Job Role:** Engineer – 3

**Job Grade:** P3

**Language requirements:** Fluent in English (written & spoken)

**Contract duration:** 5 years

### **Purpose**

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As Chemical Process Engineer, you will perform and/or oversee design, manufacturing, testing, installation and commissioning activities of selected Tritium Plant sub-systems of ITER. Additionally, you will ensure process plant solutions are comprehensive and that the defined requirements are achieved and clearly demonstrated.

### **Background**

The Tritium Plant Section is responsible for the design and delivery of the Tritium Plant and the Radiological and Environmental Monitoring System of ITER. The tritium plant comprises the tokamak fuel cycle processing systems, as well as tritium confinement and detritiation systems.

### **Major Duties/Responsibilities**

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- Produces and monitors Tritium Plant sub-system designs including overall system design, component selection, analysis (e.g. transient) and layout;
- Prepares and/or reviews technical specifications for Tritium Plant sub-system equipment, in accordance with the requirements and makes sure that clear demonstration of the requirements can be achieved with the proposed design solutions;
- Provides and/or reviews design solutions for Tritium Plant sub-system equipment;
- Performs functional analysis of the Tritium Plant sub-System 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 stakeholders and interfaces including System Integration, Safety Responsible Officers, Design Integration and Domestic Agencies;
- Follows-up and reviews the design, manufacturing, testing, installation and commissioning activities of Tritium Plant sub-system components and systems, including those performed by contractors;
- Ensures that work is performed in accordance with quality assurance procedures and quality control is performed effectively for equipment supply and installation;
- May be requested to be part of any of project/construction teams and to perform other duties in support of the project schedule;
- May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays;

### Measures of Effectiveness

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- Demonstrates that proposed design solutions are compliant with quality & safety requirements and implemented with the overall ITER schedule;
- Produces high quality, clear and thorough analysis and documents within the defined schedule;
- Produces sub-systems designs to quality and in a timely manner;
- Produces, maintains and records up to date documentation;
- Anticipates and/or proposes practical, cost-effective, manageable and efficient solutions to solve issues;
- Communicates efficiently with all stakeholders associated with interfacing systems and management;
- Works effectively in teams and contributes to the overall success of the Fuel Cycle design/build project.

### Qualifications and Experience

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- **Professional Experience:**
  - At least 8 years' experience relevant to engineering design, integration, installation and maintenance of gas processing systems.
- **Education:**
  - Master's degree or equivalent in nuclear, chemistry, chemical engineering or other relevant discipline;
  - Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.
- **Language Requirements:**
  - Fluent in English (written and spoken).
- **Technical Competencies and demonstrated experience in:**

- Specialized domains of work and technical expertise: safe handling of tritium and radiologically contaminated materials typical for fusion, capability in undertaking fire & explosion risk assessment and implementing solutions;
  - Design (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: verifying compliance of components with applicable requirements;
  - Project Management 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): International procurement and tendering for engineering contracts, including safety, quality, scope, schedule and cost is required;
  - Problem Solving: assesses problems, identifies root causes and reaches practical solutions in a consistent way to reach project objectives;
  - Capability in Process Simulation software (e.g. ASPEN) would be 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 problems accurately before moving to proposals;
    - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.
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***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.