Job Title: Process Engineer IO1070 & IO1071

Requisition ID **5681** - 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: 06/03/2022
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: Up to 5 years
Two positions

Purpose

In this role as a Process Engineer, you will perform and/or oversee design, manufacturing, testing, installation and commissioning activities of selected Tritium Plant (TP) sub-systems of ITER.
One position will focus specifically on the Detritiation sub-systems, whilst the other will perform activities on a broader range of TP sub-systems.
For both positions, you will ensure process plant solutions are comprehensive and that the defined requirements are achieved and clearly demonstrated.

Background

The Tritium Plant comprises the tokamak fuel cycle processing systems, as well as tritium confinement and detritiation systems. The Tritium Plant Detritiation System is a primary safety system serving the Tokamak and Hot Cell Complexes, its key role is to provide dynamic confinement and reduce tritium emissions. The Tritium Plant also has multiple sub systems that collect, purify, enrich and store the fuel (Tritium and Deuterium) for the Tokamak reactor.

Major Duties/Responsibilities

- Produces and monitors sub-systems' designs including system design, component selection, analysis (e.g. transient) and layout;

- Prepares and/or reviews technical specifications for the sub-systems equipment, in accordance with the requirements;
- Provides and/or reviews design solutions for the sub-systems equipment;
- Performs functional analysis of the 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 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 sub-systems components and systems, including those performed by contractors;
- Identifies and manages interfaces related to the sub-systems with Responsible Officers and stakeholders of other systems;
- 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

- 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

- ***Professional Experience:***
  - At least 8 years' experience managing engineering design, integration and installation of waste gas processing/abatement systems, or complex gas/liquid processing systems in the field of nuclear or hazardous environments.
- ***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: Gas treatment processing technologies including detailed unit operation simulation and sizing e.g. gas discharge abatement technology such as absorptions towers, or Hydrogen Gas treatment processing technologies including reactors, adsorbers, permeators and ideally isotopic enrichment;
  - 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, including planning and execution;
- 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.

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.