Job Title: Nuclear Engineer IO0721

Req ID **1807** - Posted **02/07/2020** - (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: 16/08/2020
Domain: Engineering
Department: Engineering Design
Division: Remote Handling & Rad-waste Management
Section: Hot Cell & Radwaste
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 a Nuclear Engineer, you will perform design and safety activities, in addition to contributing to the assembly, installation, commissioning and operation of the ITER Hot Cell Complex, including the Remote Handling and Rad-waste Systems contained within. You will have a variety of tasks across the Hot Cell project lifecycle, from Research and Development (R&D) right through to the commissioning and operation of the Hot Cell Remote Handling systems and Rad-waste treatment and storage systems.

Background

The role of the Remote Handling and Rad-waste management Section is to carry out the design, procurement, assembly and commissioning of the systems located in the Hot Cell Complex, which is devoted to the maintenance of the Tokamak Machine. The key functions are the remote maintenance of the In Vessel Components, the maintenance of the Tokamak Remote Handling equipment and the Rad-waste treatment.

Major Duties/Roles & Responsibilities

- Performs design activities, from the functional analyses to the development of technical solutions complying with the functional and safety requirement, at minimum cost,
- Performs safety analyses and ensures that the safety requirement are applied and fulfilled during the full lifecycle of the project,
- Manages R&D activities (mockups) on Hot Cell Remote Handling and Rad-waste processes, aiming at demonstrating a feasibility and qualifying mechanical systems versus functional performances and safety

requirements,
- Oversees the implementation of the safety requirements, from the design phase, the qualification programs to the procurement, the assembly and the commissioning. Goal is to refine and propagate the requirement, while formalizing all the evidence that safety objectives are fulfilled;
- Proposes solutions and options to solve technical issues with respect to the Hot Cell and Rad-waste Building designs, in particular for all systems involved into the shielding and confinement function, both in normal and incidental situation,
- Supports the procurement process for the development, the manufacture and the test of the systems, in particular on safety aspects, from writing technical specifications to monitoring the delivery;
- Contributes to the assembly and installation, Commissioning & Operation of the ITER Hot Cell remote handling systems, ITER Rad-waste treatment and storage systems;
- Interacts when necessary with the French Authorities and with the French Disposal Facilities where all ITER Rad-waste will eventually be transported;
- Supports the licensing activities for the update of the Safety Report, the establishment of the General Safety Rules for Operation, the systems and integrated commissioning tests related to safety, in close collaboration with the Safety and Quality Department;
- Establishes and updates the required baseline documentation and the design, interfaces, procurement, assembly, commissioning and operation technical documentation;
- Develops the required safety documentation and operating procedures for the Remote Handling and Rad-waste Treatment and Storage system in the Hot Cell & Rad-waste facilities, in close collaboration with relevant stakeholders;
- Enhances fruitful and trustful collaboration within the HCC Project Team, 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.

Note: 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.

Measure of Effectiveness

- Ensures full compliance of the process, during the full life cycle, with the safety requirements;
- Enhances the system performance or reduces the system costs where possible, while maintaining technical and safety requirements;
- Monitors efficiently the implementation of technical solutions to solve issues and/or correct situation for Hot Cell and Rad-waste Building designs to quality, schedule and cost;
- Provides efficient and timely support to the Remote Handling and Radioactive Materials Division integration activities;
- Assures that ITER Organization's (IO) goals are achieved in a timely and effective manner, which meets safety, quality, cost and schedule targets;
- Collaborates well and professionally with all internal and external stakeholders.

Experience & Profile

- *Professional Experience:*
  - At least 8 years of experience as a Nuclear Engineer within a complex nuclear environment, designing complex mechanical systems and/or nuclear facilities.
- *Education:*
  - Master degree or equivalent in a nuclear engineering 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:*

- Solving technical engineering design problems related to systems involved into confinement and shielding in nuclear environment;
- Performing safety analyses and propagating safety requirements during the full life-cycle of nuclear project;
- Implementing Nuclear safety regulations and monitoring their proper implementation;
- Supporting procurement processes of large contracts for complex nuclear projects, and writing Technical Specifications;
- Performing and analyzing nuclear safety analyses would be an advantage;
- System engineering of large and complex systems and facilities would be an advantage,
- Knowledge in Tritium and Beryllium aspects would be an advantage;
- Ability to use CATIA and/or AVEVA would be an advantage.

- *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 lline management and that may jeopardize the achievement of the Project's objectives.