Job Title: Instrumentation & Control Engineer TCWS-051

Requisition ID **6382** - 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: 24/07/2022
Domain: Construction Domain
Department: Plant Construction Department
Division: Mechanical Implementation Division
Section: Tokamak Cooling Water System Section
Group: TCWS Delivery
Job Family: Construction
Job Role: Engineer – 2
Job Grade: P2
Language requirements: Fluent in English (written & spoken)
Contract duration: 4 years

***Specific note*: This vacancy is for less than 4 years, the employment contract is valid until December 2025, while it will be subject to the contract renewal process according to the staff regulations.**

Purpose

As an Instrumentation and Control Engineer, you will support the construction, design and procurement of the Instrumentation & Control (I&C) systems for the Tokamak Cooling Water System (TCWS). As part of this role, you will support installation and commissioning of these defined systems. You will also monitor the procurement process and provide technical support to colleagues in the Procurement and Contracts Division.

Background

The ITER TCWS has three separate primary heat transport systems supported by three additional systems, with a requirement to remove approximately 1,000 Megawatts of heat. These systems perform safety functions for confinement of radioactive material, confinement of high energy liquid, and decay heat removal which is generally lower in magnitude (less radioactive material, pressure, and decay heat) but of similar function to commercial fission reactors. The systems have 33 km of nuclear-grade piping, which is a comparable size to a commercial fission reactor water system.

Key Duties, Scope, and Level of Accountability

- Develops the global functional analysis, architecture and process control for the I&C systems of the TCWS;
- Develops the construction design of TCWS I&C systems, including software (Note: software is included wherever TCWS I&C systems are mentioned);
- Monitors contracts for the procurement of TCWS electrical and I&C systems and writes technical specifications as required;
- Ensures that all requirements and interfaces are duly propagated in the design and construction of the TCWS Electrical and I&C systems;
- Supports Procurement Arrangements and provides information as required related to procurements progress to the US DA;
- Supports the installation, commissioning and operation of the TCWS electrical and I&C systems interfacing as necessary with internal and external stakeholders;
- Manages the delivery and installation (including Engineering Work Packages) of TCWS I&C systems;
- 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.

Measure of Effectiveness

- Develops the TCWS I&C systems construction design in accordance with the overall project schedule;
- Monitors TCWS I&C contracts ensuring that components (and software) are delivered on time, within budget and respecting all requirements and interfaces;
- Issues Engineering Work Packages for TCWS I&C systems, in accordance with the construction schedule;
- Updates and maintains I & C design documentation to the expected standards;
- Manages the schedule efficiently to ensure the timely delivery and installation of TCWS Electrical or I&C systems.

Experience & Profile

- ***Professional Experience:***
  - Minimum 5 years' experience working in I&C engineering including installation, commission within complex international environments or projects.
- ***Education:***
  - Master degree or equivalent in Electrical or Instrumentation 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:***
  - Specialized Domains of Expertise (I&C Engineering): Design, procurement, installation and commissioning of I&C systems, including the ability to generate construction design documents in Visio;
  - Procurement and Contract Management including writing technical specifications;
  - Problem Solving: Resolving complex and challenging technical issues or problems, drawing on experience and expertise;
  - Quality Control: Verifying the compliance of I&C within nuclear industry with all applicable requirements

- Nuclear field experience for a large and complex cooling water system would be a strong advantage;
- Installing, testing and operating large and complex cooling water system would be highly desirable.

- ***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.