Job Title: Safety Control Systems Engineer SCSN-002

Requisition ID **6922** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Science and Technology Expertise** - **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.

ITER Organization (IO) is an Equal Opportunity/Inclusive organization committed to diversity in the workplace, with diversity and Inclusiveness being one of the ITER Values.

As IO attracts and retains people coming from a vast array of different backgrounds and cultures, bias and exclusion cannot be tolerated. IO believes it is our diverse perspectives and backgrounds 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.

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: 23/04/2023
Domain: Science & Operation Domain
Department: Science, Controls & Operation Department
Division: Controls Division
Section: Facility Control System Section
Job Family: Engineering
Job Role: Engineer – 3
Job Grade: P3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As a Safety Control Systems Engineer, you will work with the Central Safety System Responsible Officer (RO) and contribute to activities linked to the design of the Safety Control System, to the licensing of this system, and to the procurement, installation, integration, and commissioning.
In collaboration with the Responsible Officer, you will ensure the Safety Control System meets the project requirements and is delivered on time.
Additionally, you will be responsible for the integration of the Plant Safety Systems for Nuclear (PSS-N), in the Central Safety system for Nuclear.

Background information:

This position is structured in the Science and Operations Domain (SCOP), Controls Division (CD), and is part of the Facility Control System Section (FCS). The Control System Division is responsible for developing the central control systems and associated infrastructure required for the ITER machine and facility operation.

The Safety Control System for Nuclear (SCS-N), provided by FCS, ensures the protection of people and environment against radiological risks by performing nuclear safety instrumentation and control (I&C). The SCS-N is composed of the Central Safety System for Nuclear (CSS-N) and many Plant Safety Systems for Nuclear (PSS-N). The SCS-N is subject to licensing by the safety French authority (ASN) and shall comply with the international nuclear standards (IEC61513 and associated standards).

Key Duties, Scope, and Level of Accountability

- Prepares the detailed specifications and designs of sub-systems composing the nuclear safety Control Systems;
- Defines the integration plans for the Safety Control Systems, and assures all SCS-N subsystems are correctly integrated and aligned with nuclear safety I&C standards;
- Develops and maintains the needed documentation for full acceptance of the CSS-N, in accordance with nuclear safety I&C standards requirements and the ITER Organization (IO) Management & Quality Program (MQP);
- Contributes to the development of the nuclear safety I&C control system according to the relevant nuclear standard;
- Develops the required procedures to the functional qualification of the SCS-N hardwired and computerized I&C functions;
- Prepares and conducts the in Factory Acceptance Tests, Site Acceptance Tests, and commissioning tests of the Safety Control Systems;
- Contributes to the standalone and integrated commissioning phases for the safety systems;
- Contributes to the definition of the interfaces between central safety control system and plant safety systems;
- Participates in the preparation of the Safety Control Systems design reviews;
- Manages the procurement process, including the technical and financial evaluation of tenders, identifying gaps between propositions with technical requirements of specifications;
- Collaborates with the ITER Safety Department to ensure safety requirements are correctly implemented within the CSS-N;
- May be required to work outside ITER Organization reference working hours, including nights, week-ends and public holidays.

Measures of Effectiveness

- Establishes the safety control systems integration plans and procedures within defined timeline;
- Prepares the plant safety I&C system specifications required for the project;
- Develops the component interfaces within the Safety Control Systems, and sensors/actuators delivered by the different plant safety systems, within defined schedule and cost;
- Prepares and executes the validation, installation, and commissioning of the Safety Control Systems;
- Maintains, updates, and / or submits technical documentation as required to move work forward.

Experience & Profile

- ***Professional Experience:***
  - Minimum 8 years' experience in the engineering and commissioning of safety I&C systems within complex international environments or projects;
- ***Education:***
  - Masters' degree or equivalent in industrial control, nuclear 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:***
  - Design: create technical designs based on Project requirements, including large scale heterogeneous safety I&C systems;
  - Project management: planning, measuring progress, managing risks and costs, and reporting on progress to manage programs or initiatives within the constraints of human and financial constraints;
  - Contract, and procurement, management and execution: define needs and requirements, perform sourcing activities, and manage delivery including managing external parties to ensure implementation according to contractual agreements;
  - Interface management: identify, maintain, and / or resolve technical and functional interfaces to reach Project goals;
  - Integration of I&C safety systems in large facilities;
  - International safety I&C standards: IEC 61513, and related standards for nuclear safety I&C systems;
  - Quality Management: knowledge of product and/or management requirements for international quality standards, methods, and practices;
  - Practical experience in conducting acceptance and commissioning tests of safety I&C systems;
  - Siemens S7 safety PLC and/or in HIMA Planar 4 platforms/architectures is considered as an advantage;
  - Excellent computer and IT skills (Microsoft Windows, Word, Excel, Powerpoint) are mandatory.
- ***IO Core 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/define problems accurately before moving to proposals;
  - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.
- ***Additional Behavioral Competencies:***
  - Interpersonal Savvy: relating openly and comfortably with diverse groups of people, engaging in and promoting teamwork.

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 (Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members) :
  1) Nuclear Safety, Environment, Radioprotection and Pressured Equipment
  2) Occupational Health, Safety & Security
  3) Quality Assurance Processes
- 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.
- 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.