

Job Title: Safety Control Systems Engineer IO1033

Requisition ID **3722** - Posted **01/03/2021** - (France, 13067 St Paul Lez Durance Cedex) - **Control and Data Acquisition - 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: 11/04/2021

Domain: Science & Operation

Department: Science, Controls & Operation

Division: Controls

Section: Facility Control System

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 Safety Control Systems Engineer, you will work with the Central Safety Systems (CSS) team and contribute to all activities linked to the design and manufacturing of the Safety Control System, to the licensing of this system and to the installation, integration and commissioning. Together with the CSS team, you will ensure that 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 in the Central Safety system for Nuclear.

Background

The Safety Control System for Nuclear (SCS-N), provided by the Controls Division (CD), 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 (IEC 61513 and associated standards).

Major Duties/Roles & Responsibilities

- Supervises the integration of all subsystems composing the SCS-N in compliance to nuclear safety I&C standards requirements;
- Develops the tests and commissioning procedures in consistence with systems requirements;
- Follow-up the tests performed in factory and on-site by Contractors and ensures procedures are correctly implemented;
- Performs the commissioning tests on-site and resolves technical issues if any;
- Develops enhancements to the nuclear safety I&C control system according to the relevant nuclear standard requirements;
- Develops detailed specifications and designs of sub-systems composing the nuclear Safety Control Systems;
- Develops and maintains documentation for the full acceptance of the CSS-N in accordance with nuclear safety I&C standards requirements and Management & Quality Program;
- Contributes to the validation of the SCS-N hardwired and computerized I&C functions by ensuring tests are performed in respect to functional requirements;
- Contributes to the standalone and integrated commissioning phases for the safety systems;
- Contributes to the management and technical follow-up of the contract related to nuclear safety I&C;
- Collaborates with the ITER Safety Department in order to ensure that the safety requirements are correctly implemented within the CSS-N.
- 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

- Defines the integration plans and procedures for the integration of the Safety Control Systems within established scope;
- Ensures that acceptance tests are performed with high quality standards;
- Accurately prepares documentation on time and consistent with applicable requirements and standards;
- Develops the internal interfaces between Safety Control Systems devices;
- Prepares the detailed interfaces between Safety Control logic solvers and sensors/actuators delivered by the different plant safety systems;
- Prepares and executes effectively the validation, installation and commissioning of the Safety Control Systems.

Experience & Profile

- **Professional Experience:**
 - At least 8 years' experience working as Engineer in the field of safety I&C systems engineering.
- **Education:**

- Master degree or equivalent in Industrial control, nuclear engineering 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 & manufacturing of large scale heterogeneous safety I&C systems;
 - Integration of I&C safety systems in large facilities;
 - Systems Engineering and Design: Engineering design planning, input, change control;
 - International safety I&C standards: IEC 61513 and related standards for nuclear safety I&C systems;
 - Conducting acceptance and commissioning tests of safety I&C systems;
 - Problem Solving: Ability to assess problems, identify root causes, and reach practical solutions to reach project objectives within time and cost;
 - Experience in Siemens safety PLC and/or in HIMA Planar 4 platforms/architectures is considered 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.
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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.