Job Title: Instrumentation & Control Technician IO0989

Req ID **1783** - Posted **22/05/2020** - (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: 05/07/2020
Domain: Science & Operation
Department: Science,Controls & Operation
Division: Controls
Section: Facility Control System
Job Family: Project Engineering
Job Role: Technician - 2
Job Grade: G3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As an Instrumentation & Control (I&C) Technician, you will support the Central Control Systems to be delivered by the Facility Control Section in the integration and commissioning of Plant Systems related to Interlocks or Safety.
In contributing to the deployment, operation and maintenance of the Central Interlock System (CIS) and Central Safety System (CSS) within the responsibility of the FCS Section, you will participate in the development and testing of the control system devices used within or interfacing with the Control Systems. Additionally, you will be required to provide hands-on services and help on electronics and automation issues in interlock and safety prototypes.

Background information:
The CIS and CSS forms together with CODAC, the ITER I&C Central Control Systems. The CIS provides investment protection, for the ITER systems, by inhibiting combinations of actions among all plant systems that might endanger the integrity of any ITER component. The CSS aims to protect people and the environment for the entire ITER site, by implementing the safety I&C functions allocated to it and coordinating the safety I&C functions implemented by Plant Safety Systems (PSS).

Major Duties/Roles & Responsibilities

- Drafts detailed test procedures to integrate the Plant Interlock / Safety System I&C with the Central Interlock / Safety System;

- Executes test procedures and generates the associated test reports;
- Diagnoses errors and implements solutions related to Programmable Logic Controllers (PLC) and their interfaces with the Central Interlock / Safety System;
- Updates and maintains interface documentation between CIS/CSS and Plant Interlock / Safety System I&C;
- Develops off-line test facilities, focusing on PLC, to be used as a tool for diagnosing errors and implementing improvements;
- Participates in the acceptance testing and commissioning of CIS and CSS;
- Participates in the integration of PIS and PSS to CIS and CSS;
- Supports PLC developers and integrators;
- Implements and documents PLC code;
- Sets up test environments, with focus on PLC, for plant system I&C integration needs;
- Supports the application and use of ITER Instrumentation & Control standards;
- 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 detailed I&C integration procedures and contributes effectively to their successful integration in the Central Interlock System or Central Safety System in a timely manner.
- Successfully promotes and implements solutions for problems encountered in a timely manner, in order to achieve the integration of the ITER plant systems.
- Efficiently supports the commissioning, operation and maintenance of integrated ITER Plant Systems.
- Maintains up-to-date the documentation related to plant systems I&C interface with Central Interlock System or with Central Safety System
- Uses ITER Instrumentation & Control standards promoted by the Controls Division in order to a high level of accuracy.

Experience & Profile

- ***Professional Experience:***
  - At least 3 years' experience working within I&C or PLC programming, preferably Siemens S7, within a scientific or large industrial plant environment;
- ***Education:***
  - At least 2 years post-secondary education or equivalent in Electronic / Computer Science 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:***
  - Relevant experience in acceptance testing and commissioning of I&C industrial systems; medium size: 1000 I/Os with hierarchical architecture;
  - Developing safety PLC software programs, preferably using Siemens software environment tools (step-7, TIA portal);
  - Safety system architecture best practices;
  - Troubleshooting, wiring and testing electrical low-voltage enclosures;
  - The use of common laboratory tools like oscilloscopes, multi-meters and signal generators;
  - Acceptance testing and commissioning of I&C industrial systems;
  - Siemens WinCC Open Architecture (WinCC OA) is considered as 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, **r**adioprotection 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.