

# Job Title: Cryogenic Systems Responsible Officer IO0101

Requisition ID **4921** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Construction and Installation - 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:** 02/01/2022

**Domain:** Construction

**Department:** Plant Construction

**Division:** Mechanical Implementation

**Section:** Cryogenics

**Job Family:** Engineering

**Job Role:** Coordinating Engineer

**Job Grade:** P4

**Language requirements:** Fluent in English (written & spoken)

**Contract duration:** Up to 5 years

## **Purpose**

In this role of Cryogenic Systems Responsible Officer, you will prepare and manage the technical integration of the Cryogenic distribution system. In view of the testing phase to come, you will aim to demonstrate the performance of this system for successful operation.

## **Background**

*The cryogenic system (plant and distribution boxes) is providing the cold flows to cool the magnet, vacuum and thermal shield system of the ITER machine. The cryogenic plant and distribution system is composed by industrial equipment's such as, screw and centrifugal compressors, Expansion turbines, refrigeration and distribution cold boxes and sets of other industrial machines driven and monitored by a complex Instrumentation and control architecture system. The plant is currently in the commissioning stage for the next 2 years, and will be in operation thereafter, while the distribution system in the tokamak building is ongoing and will enter the testing phase during the coming 4 years. The selected candidate will be part of a group of 4 to 6 engineers and technicians involved in supporting the integration and installation of the cryogenic distribution system.*

## **Key Duties, Scope, and Level of Accountability**

- Coordinates and consolidates the Reliability, Availability, Maintainability & Inspectability (RAMI) analysis for the whole cryogenic distribution system;
- Defines and coordinates the future implementation of the safety functions of Cryogenic distribution system in the tokamak building (Confinement, Fire, Helium losses preservation);
- In collaboration with the process control group, and project manager, establishes the testing procedure of the Cryogenic distribution Instrumentation & Control (I&C) system, including the process functions of each sub system;
- Coordinates and monitors the activities of specialists, technicians and contractors involved in manufacturing, construction and testing of the cryogenic distribution system;
- Revises and improves process/design interfaces of the Cryogenic distribution process boxes with the cryogenic and warm transfer lines;
- Prepares and coordinates the installation, testing and commissioning of the Cryogenic distribution system;
- In collaboration with procurement team, manages contracts and procurement activities of the Instrumentation, Electrical and Control Cryogenic system, for calls for tenders, choice of suppliers and contracts' execution;
- Acts as an interface between CODAC, Cryogenic Project Teams and the Domestic Agencies (DA) contractors in order to ensure the homogenous approach regarding the Cryogenic I&C system design and implementation;
- 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

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- Defines and implements the cryogenic system process control within the defined schedule;
- Ensures a consistent and coherent development of the Instrumentation & Control (I&C) Cryogenic Plant System Control;
- Manages effectively the interfaces between the cryogenic plant, cryogenic/warm transfer lines and distribution cold boxes ;
- Generates and maintains coherent, comprehensive and understandable programs and schedules for building, testing and commissioning of the cryogenic distribution system connected to the cryoplant;
- Manages plans for installation, tests and commissioning within the planned schedule, costs and effectively manages resources allocated to the system/project,
- Generates and maintains coherent, comprehensive and understandable design documentation;
- Maintains effective communication with all parties delivering subsystem.

## Experience & Profile

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- **Professional Experience:**
  - Minimum 10 years' experience in the development of large cryogenic system in the field of fusion/accelerator applications or chemical processing plants within complex international environments or projects.
- **Education:**
  - Master's degree or equivalent in an 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 Work (Cryogenic Equipment):** Design, installation and commissioning of cryogenic distribution cold boxes, purification/dryer systems, gas storages and compressors, including thermal-hydraulic analysis of the cryogenic process boxes;

- **Interface Management:** Identifying, resolving and maintaining technical and functional interfaces;
- **Project Management (including procurement and contracts):** Planning, measuring progress of project work, managing risks/costs and reporting on progress;
- **Design codes and standards** of experimental cryogenic equipment would be advantageous;
- **Coordinating activities** and leading technical staff;
- **Control, Data Access and Communication systems, industrial Siemens PLC system software & Hardware or other similar architecture** will be required In addition to the standard IT office tools,
- **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.