

# Job Title: Piping Installation Engineer IO0653

Requisition ID **3304** - Posted **27/11/2020** - (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:** 10/01/2021

**Domain:** Construction

**Department:** Machine Construction

**Division:** Ex-Vessel Delivery & Assembly

**Section:** In-Cryostat, CTS & Auxiliaries

**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 a Piping Installation Engineer, you will be responsible for developing a pipe installation strategy and coordinating pipe work activities inside the Cryostat, including instruction preparation and on-site supervision. You will support the relevant system's responsible officers in ensuring the piping installation activities run as planned and in line with the schedule.

## **Background**

*The Tokamak Machine requires many fluid systems for the Vacuum Vessel, the Supra conducting Magnets, and the Thermal Shields. The pipework will use the following fluids: water, hazardous gas, non-hazardous gas, cryogenic services inside the cryostat, and vacuum, for pre-fabrication and installation.*

*This position is assigned to the Cryostat & Auxiliaries Group.*

## **Major Duties/Roles & Responsibilities**

- Develops a pipe installation strategy and demonstrates the assembly feasibility up to final inspection;
- Coordinates all piping activities inside the Cryostat of the Tokamak Machine, mainly focused on Helium and water supply lines for different components and systems such as Super-conducting Magnets (He at 4K), Thermal shield (He at 80K), Water cooling pipes (Primary Heat Transfer System);

- Coordinates technical topics with technical responsible design teams for interfaces management and concerned components and systems;
- Actively supports the setup of installation and inspection plans in accordance with ITER Quality Assurance/Quality Control (QA/QC) and nuclear safety procedures as well as vacuum handbook;
- Ensures the process qualification related to pipe welding and non-destructive examination (NDE) as well as Helium (He) and water leak tightness;
- Manages external resources for studies and works in close collaboration with system experts to identify mock-ups for qualification processes for critical configurations, in addition to preparing, launching and following these mock-up processes;
- Supports the Construction Process Description (CPD) documentation for each Construction Work Package (CWP) including piping work, reviews the engineering work packages for piping scope, segmentation/delivery conditions, necessary assembly sequences, tooling needs, accessibility checks;
- Assesses pipe related change requests and performs impact assessments;
- Maintains the interface documentation with systems (e.g. process flow descriptions);
- Contributes to the identification of Protective Important Activities (PIA) for pipe welding in relation to Protection Important Components (PIC) like the ITER Vacuum Vessel (VV);
- 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, weekends and public holidays.

## Measure of Effectiveness

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- Maintains effective communication and good relations within the ITER Organization and with the construction management-as-agent (CMA);
- Coordinates piping activities in an appropriate, professional manner and anticipates issues to minimize risks to quality, safety or the schedule;
- Elaborates, implements and maintains the Cryostat pipe installation strategy in relation to defined costs, schedule and risks;
- Ensures that documentation is kept up to date and accurate;
- Successfully communicates & collaborates with health and safety/nuclear safety in addition to all internal/external stakeholders.

## Experience & Profile

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- **Professional Experience:**
  - At least 8 years' experience as engineer for design and installation of complex pipes for nuclear, oil and gas projects, in highly regulated environment.
- **Education:**
  - Master degree or equivalent in 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 & Engineering:
    - Specific design, construction, assembly and installation of pipework Design and installation of pipes;
    - Safety & Nuclear Codes and Standards such as ASME and/or RCC-MR.
  - Construction execution and follow-up:
    - Execution of pipe field installation work, quality testing (e.g. NDT, Helium leak checking) in a large plant or complex environment like nuclear industry;
    - Management of documentation for aspects related to assembly work;
    - Assembly of huge and heavy components and structures would be an advantage.

- Project management:
  - Reporting and control requirements and methodology, analyze and conclude on overall project status, define and decide actions for recovery;
  - Monitoring cost and schedule.
- Use of a three dimensional piping software would be an asset.
- **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.