Job Title: Group Leader, Vacuum Delivery IO0158

Requisition ID **6568** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Engineering of Systems** - **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: 18/09/2022
Domain: Construction Domain
Department: Machine Construction Department
Division: Tokamak Complex Division
Section: Vacuum Delivery & Installation Section
Group: Vacuum Delivery
Job Family: Line Management and Group Leaders
Job Role: Group Leader
Job Grade: P4
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As a Group Leader, you will manage the activities of the Vacuum Delivery (VD) Group which is within the ITER Vacuum Delivery and Installation (VDI) Section. In this position, you will have responsibility for design, manufacturing, testing, installation and commissioning of ITER's cryogenic pumps and cryogenic distribution system, vacuum control and instrumentation and nuclear dust filtration. Responsibility for vacuum engineering activities including ultra-high vacuum (UHV) sealing, component validation, vacuum system construction and operations.

Background

The ITER vacuum systems are of unprecedented size and complexity consisting of a large number of large volume vessel systems including the Cryostat (~ 8500 m3), the Torus (~1330 m3), the Neutral Beam injectors (~180 m3 each) and a large number of lower volume systems. The vacuums of ITER are achieved and sustained with more than 400 custom and commercial pumps and the successful construction of ITER is dependent on excellent vacuum engineering. Many vacuum components are in manufacturing or have been delivered and installation of the said components has commenced.

Key Duties, Scope, and Level of Accountability

- Supervises the Group's members and the activities, providing effective leadership for the Group, ensuring team members are motivated and consistently developing their skills and experience;
- Ensures surveillance of the manufacturing of vacuum systems ensuring quality and delivery schedules;
- Follows, defines and manages Procurement Arrangements (PAs) and contracts for the supply of: cryopumps, cryo distribution, vacuum and cryogenic instrumentation and dust filters;
- Responsible for design, layout and integration of mechanical, cryogenic and other pumping systems in accordance with relevant codes and standards;
- Develops designs and standards for components with high integrity vacuum containment and safety important tritium confinement functions to be used across the ITER project;
- Responsible for project management and ensuring quality standards of procurement contracts with industry and research laboratories including for items with safety important functions;
- Manages the preparation of installation methodologies and engineering work packages for the installation of the vacuum systems;
- Manages and oversees interfaces, acceptance testing, commissioning and operational schemes to ensure vacuum systems will operate reliably supporting ITER to achieve its overall performance;
- May be requested to be part of any of the project/construction teams and 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.

Note: 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;

Measure of Effectiveness

- Effectively leads and coordinates the Vacuum Delivery Group;
- Completes assigned tasks on time, within budget and with necessary quality;
- Ensures that contracts progress according to quality and schedule;
- Achieves components fabrication, installation and testing according to the defined cost and schedule;
- Coordinates and directs efficiently efforts of the IO and the DA's in respect to achieving component deliveries;
- Communicates effectively and establishes good work relations and a collaborative attitude on vacuum related issues with all staff members and external stakeholders consistent with the IO project values;
- Responsible for adherence to technical standards, in particular ensuring vacuum standards are maintained across the project.

Experience & Profile

- ***Professional Experience:***
  - Minimum 10 years' experience in vacuum and cryogenic components/systems design for large complex systems within harsh or nuclear environments.
- ***Education:***
  - Master's degree or equivalent in mechanical engineering or other relevant discipline.
- ***Language requirements:***
  - Fluent in English (written and spoken).
- ***Technical Competencies and demonstrated experience in:***
  - Management of Engineering: Manage both design and on-site assembly/installation of complex plant;
  - Specialized Domain of Expertise (vacuum, cryogenics and gas dynamics): Technical management experience of the design, layout, integration, testing and commissioning of vacuum and cryogenic systems;
  - Pressure Codes (eg. EN 13445, ASME 8) and Vacuum Standards:

- Quality Control: Verifying the compliance of the procedures for the installation of vacuum and cryogenic components/systems with all applicable requirements;
- Leading multi-disciplinary international teams and interacting with high level stakeholders, host authority and experts in different construction and engineering disciplines;
- Managing the design lifecycle with CAD tools and designers;
- Procurement, project and contract management: defines requirements, performs sourcing activities, monitors contract delivery, and manages external parties to ensure implementation per contractual requirements;
- Problem solving; assess problems, identify root causes, and reach solutions in a way to reach project objectives within time and cost;
- Presentation writing: write, review, and present technical documents in the domain of expertise, transmitting knowledge and data with precision;
- Fusion or other high energy physics experience would be advantageous;
- Hydrogen isotope handing experience would be 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 gather and analyze multiple and diverse sources of information to understand problems accurately before moving to proposals;
  - Instill trust: Ability to motivate 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.