

Job Title: Vacuum Engineer VAS-003

Requisition ID **6843** - 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.

ITER Organization (IO) is an Equal Opportunity/Inclusive organization committed to diversity in the workplace, with diversity and Inclusiveness being one of the ITER Values.

As IO attracts and retains people coming from a vast array of different backgrounds and cultures, bias and exclusion cannot be tolerated. IO believes it is our diverse perspectives and backgrounds that gives unique strength and value to the ITER mission, regardless of race, member nation, gender, religion, status, sexual orientation, or disability - all are welcome and respected at ITER.

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: 05/03/2023

Domain: Construction Domain

Department: Machine Construction Department

Division: Tokamak Complex Division

Section: Vacuum Delivery & Installation Section

Group: Vacuum Transverse Activities

Job Family: Construction

Job Role: Engineer – 3

Job Grade: P3

Language requirements: Fluent in English (written & spoken)

Contract duration: 3 years

Specific note: *This vacancy is for 3 years, while it will be subject to the contract renewal process according to the staff regulations.*

Purpose

As a Vacuum Engineer, you will be responsible for vacuum system engineering and project management to deliver operational vacuum systems. This includes design, specification, procurement, manufacturing, and preparation for installation. Specific responsibility will be held for a number of contracts for vacuum components supply, bespoke fabrication, and engineering services.

Background

The vacuums of ITER are achieved and sustained with more than 400 custom and commercial pumps. The vacuum system is first of a kind in terms of size and complexity and the successful construction of ITER is dependent on excellent vacuum engineering. Many of the vacuum components are under construction or have been delivered and installation of the said components has commenced. This position will support the vacuum system finalization, delivery, installation, commissioning and operation.

Key Duties, Scope, and Level of Accountability

- Designs and integrates complex vacuum and cryogenic systems, including connections between systems and multiple clients;
- Prepares technical specifications for vacuum components and engineering services, project manages the procurements;
- Manages validation of vacuum performance and integrity of vacuum components to ensure full functionality including those performing nuclear safety functions;
- Develops inputs for installation and commissioning of the ITER vacuum systems including those integrated on the main vacuum plasma chamber, cryostat, neutral beam accelerators and diagnostic systems;
- Coordinates and surveys manufacturing and construction activities at the Suppliers premises or on IO site;
- Performs commissioning of the ITER vacuum systems;
- May be required to work outside ITER Organization reference working hours, including nights, week-ends and public holidays.

Measure of Effectiveness

- Delivers documents on time with clear and concise data, including technical specifications and progress reports;
- Completes work within defined timelines and contractual agreements;
- Identifies practical, cost-effective, manageable and efficient solutions to issues within constraints;
- Effectively communicates with stakeholders associated with interfacing systems and management;
- Ability to work effectively in teams and contribute to the overall success of the ITER project;
- Performing work within safety and quality parameters.

Experience & Profile

- **Professional Experience:**
 - Minimum 8 years' experience in complex vacuum systems design, manufacturing, testing, installation and commissioning within complex international environments or projects.
- **Education:**
 - Master's Degree or equivalent in Mechanical 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:**
 - Specialized domains of work and technical experience: vacuum, gas handling, gas dynamics, cryogenics, vacuum leak detection techniques, welding techniques, NDT, pressure vessel codes;
 - Procurement and Contracts Management of manufacturing contracts for complex fabrications;
 - Experience in managing the production of designs in CAD and other design tools;
 - Commissioning of complex vacuum systems including pumping and leak detection systems;
 - Quality Control: Verifying the compliance of complex systems during supply completion, through design and up to operation;
 - Working to pressure and piping codes and good understanding of structural analysis;

- Experience of engineering in a high energy physics or other nuclear environment 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 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 (Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members) :
 - 1) Nuclear Safety, Environment, Radioprotection and Pressured Equipment
 - 2) Occupational Health, Safety & Security
 - 3) Quality Assurance Processes
- 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.
- For staff expected to perform on-call, shift hours, or other work outside ITER Organization reference working hours, including nights, weekends, and public holidays, the possession of a driving license valid in France is required. No commuting vehicle will be provided by the ITER Organization.