

Job Title: Electrical Engineer IO0778

Requisition ID **8036** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Engineering of Systems - New Posting**

Fusion, the nuclear reaction that powers the sun and the stars, is a promising long-term option for a sustainable, non-carbon emitting global energy supply.

The ITER Organization (IO), based in the southern France, welcomes best talents who can together prepare the way to this new energy in a truly multi-cultural work environment.

We offer challenging assignments in a wide range of areas and encourage applications from candidates with all levels of experience. Applications from under-represented ITER Members' nations and women candidates are strongly encouraged, as IO strongly believes that a diversified, equitable, and inclusive workplace is crucial in solving one of the most complex scientific and engineering projects in the world today.

As the IO attracts and retains people coming from a vast array of different backgrounds and cultures, discrimination and exclusion cannot be tolerated. The IO believes it is our diverse perspectives and background 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. The IO is committed to fostering a fair and equitable environment across all areas of the project, including compensation and benefits.

ITER CARE Values (Collaboration / Accountability / Respect / Excellence):

We perform our work with care, we care for the well-being of colleagues, our families and ourselves, and we care about the health of the planet for generations to come. CARE drives our work and our behaviors at ITER.

To see why ITER is a great place to work, please look at this [video](#)

Application Deadline: 28/09/2025

Department: Engineering Services Department

Section / Project: Electrical Engineering Section

Job Grade: P3/P4 ([SALARY SIMULATOR](#))

Language Requirements: Fluent in English (written & spoken)

Contract Duration: Initial Employment Contract up to five years with possibility for extension

Please note that the entry grade of this position begins at P3 and the final grade offered to the selected candidate is subject to the decision of the IO Director General.

Overview

Are you looking for an exciting opportunity at the heart of an ambitious fusion energy project? Join our Electrical Engineering Section within the Engineering Service Department (ESD) as an Electrical Engineer.

As an **Electrical Engineer**, your goals will include:

- Leading the engineering design, manufacturing supervision, construction, testing, commissioning and system integration of electrical components and systems.
- Ensuring deliverables are produced according to project schedule and budget, within a quality-assured environment that requires rigor and a systematic way of working.
- Developing, under the leadership of your discipline manager, your skills and experience for the benefit of the Project.

The specializations covered under this vacancy is:

High Voltage: High-voltage technology (above 500 kV), including vacuum-, gas-, and solid-state-insulated power conversion components, transmission lines, and electro-mechanical apparatus. The scope also includes performing finite element analyses to compute electric field maps. The required competencies for this area include expertise in both electrical engineering and high-voltage physics.

Radio Frequency: Engineering design, development, integration, testing, and maintenance of systems and components operating in the radio frequency (RF) spectrum as applied to fusion technology and devices, typically 1 MHz and 170 GHz. This scope includes the AC/DC power converters used to supply relatively high voltages (up to 100 kV) to RF generators; the high-frequency electronics (whether solid-state or vacuum tube-based) used to generate the RF power, and the associated waveguides and matching units required for transmission and coupling. In addition to core RF knowledge, they include expertise in high-power electrical components and local instrumentation and control (I&C), with good understanding of the protection, control, and operation of actively regulated components and systems.

The ESD provides the required skilled engineering resources or services, which are necessary for the successful completion of the ITER Project.

The Electrical Engineering Section provides technical support to the ITER project in the field of different areas of proficiency, including electrical engineering design, analyses, manufacturing and commissioning of electrical systems and components. Being a member of the Electrical Engineering Section, you will have the opportunity to share and develop your expertise with other colleagues working in the same discipline on different ITER units.

Key Duties & Responsibilities

Primary Responsibilities:

- Manages, is accountable and acts as key reference for the scope of activity.
- Leads and implements actions required to resolve technical and engineering issues.
- Develops plans and procedures for the activities to be performed.
- Manages and controls the engineering analyses and calculations of components and integrated system engineering and develops the procedures for the required Type, Factory and Site Acceptance Tests.
- Provides engineering support (analyzing system requirements, including managing interfaces, producing study reports, producing conceptual or engineering drawings) for the plan, design and procurement of the electrical components and systems.
- Witnesses Type, Factory and Site Acceptance Tests and produces progress and test reports, outlining problems areas and proposing corrective measures.
- Produces and reviews complete technical work packages required for procurement contracts and on site installation.
- Performs supervision and engineering support of the components testing and installation, including the development of installation and testing sequences.

Additional Responsibilities:

- Implements and ensures consistent application across all processes for Quality Assurance (QA) & Quality Control (QC) requirements and standards for components and systems, in close relation with the Quality Management Division (QMD).
- Monitors, guides on and implements nuclear safety requirements in the engineering outputs.
- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.
- Supervises and follows-up the on-site contractor for installation, on site testing and commissioning activities.
- Ensures that lessons learned and engineering solutions are well propagated within the team and implemented to mitigate future issues.

Please note that job descriptions cannot be exhaustive, and the staff member may be required to undertake other duties, which are broadly in line with the above primary responsibilities.

This position is shift and/or on-call based, and crucial to maintaining continuous operations and ensuring the highest level of service for our stakeholders. This requires shift rotation and/or availability including day, evening, and night shifts, as well as weekends and holidays, depending upon project or team needs.

Experience & Competencies

Essential:

- **Extensive experience** in managing the design, procurement, installation and onsite troubleshooting in the field of electrical components and systems, within complex and highly regulated environments or projects.
- **High Voltage:** Design and operation of High Voltage systems (above 500 kV range), performing finite element analyses to compute electric field maps. Expertise in both electrical engineering and high-voltage physics.
- **Radio Frequency:** Design and/or operation of power electronics applied to Radio Frequency (RF) systems is required, including expertise in high-power electrical components and local instrumentation and control (I&C), with good understanding of the protection, control, and operation of actively regulated components and systems.
- Preparing and reviewing technical specifications of large power supplies for procurement purpose and managing the contract execution, including “turn-key” contracts.
- Leading the development of test plans and performing onsite tests of electrical equipment and instrumentation.
- **Communicate Effectively:** Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment.
- **Continuous Improvement:** proposing changes to processes and systems to enhance efficiency, quality, and productivity over time.
- **Quality Management Systems (QMS):** apply the applicable procedures related to your field of activity.

Desirable:

- Experience in multi-national and cross-cultural working environments.
- **Organizational Savvy:** maneuvering comfortably through complex policy, process, and people related organizational dynamics.
- **Optimizes Work Processes:** knowing or identifying the most effective and efficient processes to get things done, with a focus on continuous improvement.

Qualifications

Essential:

- Master's degree or equivalent in Electrical Engineering field with specialization as per the scope of activity in power conversion, electrical power distribution, electro-mechanical engineering, high-voltage electrical engineering or radio frequency engineering.
- *The required education degree(s) may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.*

The following items apply to all jobs and job holders for the duration of tenure at ITER Organization:

- **The CARE Values are a framework of principles that guide our actions and define the culture and spirit of the ITER Project:**

Collaboration: We collaborate with commitment and flexibility using the power of teamwork, building partnerships, and working with others to reach shared objectives;

Accountability: We are accountable for the whole project - we take responsibility for our specific actions and are transparent in our daily work, holding self (ourselves) and others accountable to meet commitments;

Respect: We treat each other with respect and dignity at all times, knowing that all of us belong here. We appreciate the value that our multicultural and diverse community brings to the ITER Project;

Excellence: We are driven by excellence; we are agile and innovative while maintaining the highest standards of safety, quality and integrity;

- **ITER Core Technical Competencies:**

- 1) **Nuclear Safety, Environment, Radioprotection and Pressured Equipment**
- 2) **Occupational Health, Safety & Security**
- 3) **Quality Control & 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 perform other duties in support of the project as defined by your line manager, and when relevant upon the request of the matrix manager;
- May be requested to work outside the ITER Organization reference working hours, including nights, weekends and public holidays, due to business needs - this may include on-call, shift work, etc.
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- 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.**
- Informs management of any important and urgent issues that cannot be handled by line or matrix management and that may jeopardize the achievement of the Project's objectives;

The ITER Organization (IO) is an Equal Opportunity organization committed to diversity and inclusive in the workplace.