

Job Title: Electrical Technician (Power Distribution / Electromechanical) IO0561_IO097_IO0262

Requisition ID 8021 - 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 will 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
Division / Program:
Job Grade: G4/G5 (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 G4 and the final grade offered to the selected candidate is subject to the decision of the IO Director General.

*The ITER Organization is opening multiple vacancies. The selection process will be conducted with the objective of filling **multiple vacant positions** with also the purpose of drawing up a reserve list of rostered candidates for future vacant positions. The reserve list initially remains valid for two years, with the possibility of extension at the Director General's discretion.*

Overview

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

- As an **Electrical Technician**, your goals will include:
- Preparing and/or updating the operation procedures of different electrical systems according to the operation experience feedback.
 - Performing and supervising on site activities such as testing, maintenance and operation.
 - Following up the resolution of onsite engineering changes, and installation non-conformances per the assigned scope.
 - Ensuring deliverables are produced by the Contractors, 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.

These vacancies are for the following specializations:

Power Distribution: AC power distribution at all voltage levels (400V – 400kV); high-voltage switchyards; emergency diesel generators; AC and DC uninterruptible power supplies, including the associated AC and DC power distribution systems, cables and protective relays. The scope also includes performing analyses and calculations such as load flow, short circuit, cable ampacity, time-overcurrent protection, protection selectivity, and motor starting, using specialised software tools such as ETAP and Caneco BT. The required competencies and qualifications for this area include expertise in both main power components and local instrumentation and control (I&C), including an understanding of the setting up of protective relays.

Electro-mechanical: Design and operation of electrical machinery (rotating machines and transformers), magnets, switchgear, control gear, and busbars, including the execution of tests throughout the various stages of the component lifecycle, for example special tests (custom-designed) to support R&D and qualification, Type Tests, Factory Acceptance Tests, and Site Acceptance tests. This specialization also necessitates the understanding of heat transfer technologies and the operating principles of mechanical machinery, including pumps, compressors, and both radial and centrifugal fans.

The ESD provides the required skilled engineering resources or services, which are necessary for the successful completion of the ITER Project. The Electrical Engineering Division provides technical support to the ITER project in the field of engineering design, analyses, manufacturing and commissioning of electrical systems and components. Being a member of the Electrical Engineering Division, 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**
- Participates in the engineering design, manufacturing supervision, construction, testing, commissioning and system integration of electrical components and systems.
 - Contributes to the development of plans and procedures for the activities to be performed, including the coordination of electrical contractor activities on site and at the factory.
 - Collaborates in the investigations and troubleshooting of electrical distribution issues by performing necessary tests and analyses the results to propose solutions to the problem.
 - Perform on site testing and supervision of contractors.
 - Provides engineering support (analyzing system requirements, including managing interfaces, performing electrical calculations, producing conceptual or engineering drawings) for design, procurement, installation, testing and operation of the electrical components and systems.

- Additional Responsibilities**
- Collects all required information to submit access requests on time and in accordance with internal regulations, as requested.
 - Implements the Quality Assurance (QA) & Quality Control (QC) requirements and standards for components and systems, in close relation with the Quality Management Division (QMD).
 - Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.
 - Witnesses Type and Factory Acceptance Tests at the premises of the component manufacturers.

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:

- **Proven experience** in experience in operation, maintenance, and troubleshooting in the field of electrical components and systems, within complex and highly regulated environments or projects.
- **Power Distribution:** Design, test, operation, maintenance, and troubleshooting of components and systems that distribute and deliver electricity at medium and low voltage from the main incoming feeders at medium voltage to individual connected loads of rated power up to about 5 MVA/load. Key required competencies may also include designing distribution networks, including the main components such as distribution transformers, distribution boards and power cables, analysing the electrical loads, and ensuring reliability and prioritizing safety and standards compliance.
- **Electro-Mechanical Engineering:** Installation, testing and operation of electrical distribution systems at low and medium voltage, electrical machineries up to 5 MVA/unit, high current (above 10 kA) busbar systems. Key required competencies also include basic knowledge of rotating mechanical machineries (for example pumps and compressors), and I&C systems for local control and protection.
- **Onsite Supervision:** Assuring the Operator Supervision Rule during electrical systems installation in all ITER buildings. Coordination and supervision of the Domestic Agency’s (DAs) pre-selected electrical contractors working in the same buildings.
- **Managing Complexity:** ability to analyze multiple and diverse sources of information to understand/define problems accurately before moving to proposals.
- **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:

- Demonstrated capacity for problem-solving and project management, knowledge of the basic principles of the project scheduling and earn value management for procurement and installation contracts
- **Quality Control:** techniques and activities, including monitoring, inspection and corrective measures, to ensure that components, products and services comply with all applicable requirements and standards.
- **Optimizes Work Processes:** knowing or identifying the most effective and efficient processes to get things done, with a focus on continuous improvement.

Qualifications

Essential:

- Bachelor’s degree or equivalent in Electrical Engineering field or other relevant discipline.
- *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.