

Job Title: Electrical Engineering Officer IO1080

Requisition ID **5682** - 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: 06/03/2022

Domain: Construction

Department: Plant Construction

Division: Electrical Implementation

Section: I&C Infrastructure

Job Family: Engineering

Job Role: Engineer – 2

Job Grade: P2

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

In this role as an Electrical Engineering Officer, you will contribute to the development and completion of ITER's low voltage electrical power distribution systems. You will collaborate with different stakeholders, such as engineers, designers and construction teams to ensure the electrical supply to the Plant Systems and to issue the corresponding Engineering Work Packages (EWP) on time for the manufacturing and installation of the electrical power distribution equipment.

Background

ITER Instrumentation and Control Infrastructure Section (ICIS) inside the Electrical Implementation Division (EID) is responsible for the design of the cable tray system network, cable routing and electrical power distribution system. It is also responsible for creating and releasing the corresponding EWPs for the construction of ITER plant systems inside the Tokamak Building and many other non-nuclear or associated buildings.

The current position is related to the design of the Low Voltage electrical power distribution network. The design process includes: Collection of Electrical Loads from the consumers, production of Single Line Diagrams and electrical Cabling Diagrams, electrical calculations (cable sizing, breaker rating, etc), modelling the cable trays and conduits in 3D using specified software, and cable routing with automatic tools. The design activities requires close co-ordination with the design office in terms of development of

the proper component catalogues and many utilities to provide correct parameters. Also, it's required to have close co-ordination with the electrical loads consumers.

Major Duties/Roles & Responsibilities

- Acts as a key reference in the design of the Steady State electrical power distribution System;
- Harmonizes the work between CAD and engineering inputs and works with relevant stakeholders to;
 - Take the documentation of the Electrical Loads database as input, and prepare the Single Line Diagrams and Cabling Diagrams, including reviewing the cable routing;
 - Perform quality checks;
 - Review the CAD deliverables (including drawings).
 - Check cable sizing for the electrical loads, according to the applicable standards and installation methods
- Calculates the load flow in the electrical network, circuit breakers and design of electrical boards;
- Performs system studies for the electrical network and reviews schematics drawings;
- Prepares the manufacturing documentation and qualification procedures for electrical boards;
- Prepares technical work instructions for the production of EWPs and ensures their propagation to all stakeholders;
- Provides support to the team in resolving engineering related issues that may arise during the execution of the work, mainly related with electrical systems;
- Produces progress reports, outlining problems areas and proposing corrective measures;
- Prepares the list of CAD activities and CAD resources required for the activities.
- Monitors, guides and implements nuclear safety requirements in the engineering outputs;
- Monitors change management during construction and provides support to the mechanical engineering teams to resolve the construction issues, including Request for Information (RFI) from the contractors;
- Supports the line management on material procurement for construction based on the engineering work packages;
- 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 shifts, nights, weekends and public holidays.

Measure of Effectiveness

- Efficiently implements actions to move the project forward, specifically related to industrial quality engineering drawings for the release of engineering work packages;
- Fixes technical issues related to engineering drawings promptly and in line with relevant codes & standards;
- Ensures consistency in the engineering design by efficiently communicating with the ITER construction engineers during the construction phase and future operations phase;
- Alerts line management promptly on possible risk areas with appropriate preventive and corrective action plan(s);
- Proactively follows and actions multi-CAD activities, so that all the catalogues have been developed before the start of the 3D design work;
- Ensures that lessons learned and engineering solutions are well propagated within the team and implemented to mitigate future issues;
- Ensures compliance and traceability and records of all relevant documents as per nuclear safety requirements and quality standards.

Experience & Profile

- **Professional Experience:**
 - Minimum 5 years' experience in electrical engineering design in the field of large nuclear installations within complex international environments or projects.
- **Education:**

- Master degree or equivalent in Electrical Engineering or equivalent
- 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 & Technical Expertise:** Cable sizing, circuit breaker ratings and electrical board design and qualification;
 - **Design, manufacturing and installation** of electrical power distribution networks (creating technical design based on project requirements): :Writing and reviewing technical documentation packages, instructions and guidance; Contributing or leading design review; developing models and calculations; Electrical calculations (eg Power factory, Caneco BT, ETAP);
 - **Systems Engineering and Design Control** (Design Input and Change Control, Design Development and Interface Control, Design Verification and Validation): Experience of CAD software (e.g. SSD, Autocad, AVEVA E3D, CATIA/ENOVIA);
 - **Interface Management** (identifying, resolving and maintaining technical and functional interfaces): Knowledge and skills needed to work independently in the specific domain of work; Analyzing and proposing solutions for interface or challenging technical issues problems, drawing on experience and expertise;
 - Procurement and budget processes for the project using SMARTPLANT and MS Project would be advantageous.
- **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;
 - Project Management (managing a specific program or initiative within the constraints of human and financial resources).

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.