Job Title: Electrical Engineer IO1077

Requisition ID **4801** - 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.

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: 05/12/2021
Domain: Construction
Department: Plant Construction
Division: Electrical Implementation
Section: I&C Infrastructure
Job Family: Construction
Job Role: Construction Engineer – 2
Job Grade: P2
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As an Electrical Engineer, you will develop various engineering design, drawings and models of electrical systems in ITER related to electrical penetrations. You will collaborate with different stake holders, such as engineers, designers and construction teams to ensure that the drawings and the Engineering Work Packages (EWP) are prepared to the highest quality, engineering and industrial standards, in addition to ensuring their release on the required date as per the schedule.

Background

ITER Instrumentation and Control Infrastructure Section (ICIS) is part of the Electrical Implementation Division (EID) and is responsible for the design of the cable tray system network, cable routing and electrical power distribution system. It is also responsible of creating and releasing of the corresponding EWPs for the construction of ITER plant systems inside the Tokamak Building and many other non-nuclear or associated buildings. The present design under consideration is mainly related to the penetrations for electrical cables. The design process includes: Single Line Diagrams, electrical Cabling Diagrams, modelling the cable trays and conduits in 3D using specified software, such as CATIA, cable routing with automatic tools and production of 2D installation drawings for the penetrations and associated filling materials. Such development requires close co-ordination with the design office in terms of development of the proper component catalogues and many utilities to provide correct parameters. From the approved 3D models, all 2D drawings are extracted along with support drawings, which are then supplemented with information for manufacturing.

Key Duties, Scope, and Level of Accountability

- Acts as a key reference for the production of the installation drawings for the electrical penetrations, as part the Penetration Working Group Design Team;
- Harmonizes the work between CAD and engineering inputs and works with relevant stakeholders to;
  - Take the systems electrical models and their electrical diagrams as input, consolidate and coordinate the development of electrical penetrations in the respective software (SSD, Autocad, AVEVA E3D, AVEVA Design, CATIA, and ENOVIA) so that after the finalization of the final model, the preparation of drawings can take place;
  - Perform quality checks;
  - Review the CAD deliverables resulting (including drawings).
- Resolves engineering drawing related issues that may arise during the execution of the work, mainly related with electrical penetrations and systems;
- Prepares technical work instructions for the production of EWPs and ensures their propagation to all stake holders;
- Prepares, monitors and fixes problems to secure the work progress against the agreed schedule;
- Produces progress reports, outlining problem areas and potential corrective measures;
- Prepares the list of CAD activities and CAD resources required for the activities;
- Follows-up the design and production of Electrical Diagrams, Cabling Diagrams, Wiring Diagrams and cable routing;
- 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 in a timely manner to minimize any delay to the schedule;
- Guarantees consistency in the engineering design by communicating and integrating well with the ITER construction engineers;
- Alerts line management promptly on possible risk areas with appropriate preventive and corrective action plan(s);
- Proactively follows up and monitors multi-CAD activities, so that all the catalogues have been developed before the start of the 3D design work;
- Ensures accurate compliance, traceability and records of all relevant documents as per nuclear safety requirements and quality standards;
- Ensures that lessons learned and engineering solutions are well propagated within the team and implemented to mitigate future issues.

Experience & Profile

- ***Professional Experience:***
  - Minimum 5 years' experience in electrical engineering design and follow up of complex installations, preferably in the Oil & Gas or nuclear field.
- ***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:***
  - **Design** (creating technical design based on project requirements): Preparing and reviewing electrical diagrams and layout drawings, performing quality checks and resolving electrical engineering issues for nuclear and non-nuclear environments;
  - **Systems Engineering and Design Control** (Design Input and Change Control, Design Development and Interface Control, Design Verification and Validation);
  - **Using CAD software** to develop and coordinate complex electrical engineering drawings (e.g. SSD, Autocad) and review 3D models (AVEVA E3D, CATIA/ENOVIA) is required;
  - **Interface Management** (identifying, resolving and maintaining technical and functional interfaces);
  - **Project Management** (managing a specific program or initiative within the constraints of human and financial resources): Supporting the procurement and budget processes using SMARTPLANT and MS Project (or equivalent) would be advantageous;
  - Electrical engineering related to nuclear safety would be advantageous;
  - Nuclear electrical penetrations experience 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.

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.