Job Title: Power Distribution Engineer IO0822

Requisition ID **7059** - Posted **31/05/2023** - (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.

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: 25/07/2023
Department: Plant Construction Department
Division: Electrical Implementation Division
Group: Power Supply Development
Job Family: Construction
Job Role: Coordinating Engineer
Job Grade: P4
Language Requirements: Fluent in English (written & spoken)
Contract Duration: Up to 5 years

Purpose

As a Power Distribution Engineer, you will be responsible to execute the design, procurement, qualification and installation of the Electrical Power Distribution Components in ITER. This includes the Emergency Power Supply systems, which require specific qualification and testing for specific environmental conditions such as seismic and Static Magnetic Field.

Additionally, you will collaborate with different stake holders, 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 the 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 and procurement of the Electrical Power Distribution System, including the Emergency Power Supplies for the investment protection and safety relevant electrical consumers. It is also responsible for the testing and qualification of the components to be installed, including seismic and the Static Magnetic Field (SMF) qualification. This work is related to the design of the Medium and Low Voltage electrical power distribution network.

Key Duties, Scope, and Level of Accountability

- Manages, and acts as a key reference in, the design of the Electrical Power Distribution (EPD) System, including the safety and non-safety Emergency Power Supplies (EPS) components;
- Follows-up the licensing process and preparation of safety reports for the safety relevant Emergency Power Supplies (EPS) components;
- Manages and controls the design, procurement and qualification activities associated with Emergency Power Supplies;
- Assures surveillance during installation activities as well produces the procedures for commissioning of the EPS Component and assures surveillance and direct participation in Commissioning of EPS System;
- Oversees collection of electrical data sheets of connected components/systems, production of single line diagrams, cabling diagrams, electrical calculations (cable sizing, breaker rating, etc), test procedures and acceptance criteria for component qualification, and cable routing with automatic tools;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- Executes Load Flow, Short Circuit, Protection Coordination and Selectivity analyses for EPD components and system;
- Produces and reviews electrical diagrams and design description documents for the component systems under her/his responsibility;
- Produces the testing/qualification procedure and acceptance criteria for electrical components and devices, including seismic and Static Magnetic Field qualification;
- Assesses the results after the qualification of the components and, in case of failures, propose solutions to solve the qualification issues;
- Manages the manufacturing and installation, and 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;
- Ensures that lessons learned and engineering solutions are well propagated within the team and implemented to mitigate future issues;
- Monitors, guides on and implements nuclear safety requirements in the engineering outputs;
- May be requested to perform other duties in support of the project;
- May be required to work outside the ITER Organization (IO) reference working hours, including nights, week-ends and public holidays.

Measure of Effectiveness

- Implements actions to complete design, manufacturing, testing/qualification and installation of Electrical Power Distribution components and system within defined timelines;
- Fixes technical issues related to engineering design, testing/qualification, and construction meeting technical requirements;
- Guarantees consistency in the engineering design, communication and integration with the ITER construction engineers to meet the project schedule and requirements;
- Alerts line management promptly on possible risk areas with appropriate preventive and corrective action plan(s);
- Ensures compliance and traceability, and records of all relevant documents as per nuclear safety requirements and quality standards.

Experience & Profile

- ***Professional Experience:***
  - Minimum 10 years' experience in electrical engineering design of large electrical installations, within complex international environments or projects.
- ***Education:***
  - Masters' degree or equivalent in Electrical 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:***
  - Design (creating technical design based on project requirements): produce designs for systems according to Project and safety requirements, including design input and change control, design development, design verification and validation;
  - Developing, writing and reviewing technical specifications, documentation packages, instructions and guidance, contributing or leading design review; developing models, and calculation;
  - Execution of Load Flow, Short Circuit, Protection Coordination and Selectivity analyses for power distribution components and system, including testing/qualification of electrical components;
  - Contract, and procurement, management and execution: define needs and requirements, perform sourcing activities, and manage delivery including managing external parties to ensure implementation according to contractual agreements;
  - Software tools for execution of electrical calculations of electrical power distribution systems (eg Power factory, Caneco BT, ETAP);
  - CAD software (e.g. SSD, Autocad, AVEVA E3D, CATIA/ENOVIA);
  - Interface management: identifying, resolving and maintaining technical and functional interfaces;
  - Project Management: planning, measuring progress, managing risks and costs, and reporting on progress to manage programs or initiatives within the constraints of human and financial resources;
  - Identifying risks and proposing mitigation actions, alerting on potential issues, reporting on progress;
  - Quality Management: knowledge of product and/or management requirements for international quality standards, methods, and practices;
  - Knowledge of French electrical standards for electrical installations in Basic Nuclear Installation will be considered an advantage.
- ***IO Core 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 (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 or Department 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.