Job Title: Construction Integration Engineer IO0266

Requisition ID **6632** - 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: 13/11/2022
Domain: Engineering Domain
Department: Central Integration Office
Division: Physical & Functional Integration Div.
Section: Design Integration Section
Group: Machine Integration
Job Family: Engineering
Job Role: Engineer – 3
Job Grade: P3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

As an Integration Engineer, you will oversee the design integration of the plant systems with all interfaces in the area of port cells, including interspace and port systems. You will support the port cells Area Manager for all engineering tasks related to the port systems integration and construction management and resolve the integration issues for the completion of Engineering work package for Port systems in line with the construction phase of the nuclear buildings and the plant systems installation.

Background

The port cell(s) is a critical and congested area, submitted to specific fire loads, confinement and radiation constraints. This area is occupied by an enormous number of different components needed during operation, and for some operated (by dedicated tools if needed) during maintenance phases. The integration in this area of all systems considering all functional requirements, interfaces, maintenance and operational conditions is complex, and then requires high level of coordination and knowledge in all above engineering domains from design to maintenance. The Construction and Integration engineer is working for Design Integration Section (DIS), part of the IO centralized integration team (CIO). DIS has the duty to manage the overall physical integration and to control the configuration of the 3D model for all staged approaches phases up from design completion to operation.

Key Duties, Scope, and Level of Accountability

- Maintains the plant configuration baseline of all systems and performs integration assessment of the interfaces definition between the components and systems (functional and physical) in the port and port cell systems including the as-built data;
- Assures the accessibility and maintainability of the port and port cell systems;
- Monitors and controls the installation of main port components in accordance to interface definition and functional tolerance requirements;
- Proposes alternatives in design to the different stakeholders as required in the event of technical issues identified by Design Integration or other departments, especially for design or installation improvement;
- Conducts studies to assess and mitigate the impact of transverse tolerance Deviation Requests (DRs) and Non-Conformities (NCs), including clash detection;
- Prepares technical specifications and selects suppliers for engineering support contracts for port cells integration and follows these contracts with resources and/or additional engineering studies in port cells, in line with the budget agreed;
- Assesses assembly sequences in an integrated manner for mechanical components on the basis of construction process documents;
- Manages, in line with port cells integrator from Domestic Agencies (DA), the port systems (e.g. port plug) assembly and maintenance studies, in particular ensuring that all safety related aspects are properly considered (dose rate limitation to personnel and contamination confinement);
- Ensures design control through participation to Design Reviews, organizing design integration reviews (DIR) and piloting model approval process (MAM/CMAF);
- Assesses component tolerances on mechanical components on the basis of functional tolerance drawings;
- Manages volume reservations inside the port area with consideration of special needs for man access and tooling during installation and operations;
- Supports meeting preparation and post processing (defining and solving actions, reports, CAD model approval and other configuration management related documentation);
- Manages, defines action plans and resolves the open points identified in the scopes of ports and port cells;
- 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 nights, weekends and public holidays.

Measure of Effectiveness

- Enhances in an exhaustive manner the definition of the port systems configuration and ensures the coherency in the configuration of the plant layout considering all requirements;
- Ensures consistency and full integration with PBS integrators and Domestic Agencies;
- Follows major ITER milestones and provides forecast and planning for the Port Integration work, and covers regular reports on team performance according to defined schedule;
- Ensures the correct implementation of transverse functions of the port and port cell systems;
- Manages and resolves interface issues in a timely manner following deviation requests or non-conformity reports during the whole construction and commissioning phase of the Tokamak;
- Manages the port systems as-built configuration with respect to construction intermediate and final dimensions, together with assembly final positioning of components within the defined cost and schedule;
- Reviews and completes Construction work packages in an exhaustive manner with respect to interface definition.

Experience & Profile

- ***Professional Experience:***

- Minimum 8 years' experience in integration and interface management of large components and structures in the field of scientific or nuclear projects within complex international environments or projects.

- ***Education:***
  - Master degree or equivalent in Mechanical Engineering field 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:***
  - Configuration Management and Identification/Control: Ensuring compliance of installation & construction activities to configuration control rules;
  - Interface Management: Evaluation of interfaces, creation of related interface actions and follow up of issues until their resolution;
  - Installation and handling of large & heavy mechanical components with small tolerances;
  - Knowledge of quality assurance programs, safety and regulatory requirements for nuclear plants would be advantageous;
  - Good knowledge of CATIA V5 (or similar CAD system);
  - Project Management & Contracts: Measuring project work and managing contracts within the constraints of human and financial resources;
  - Knowledge of basic mechanical & piping assembly technologies would be advantageous;
  - Familiarity with schedule planning tools.
- ***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.