

## Job Title: In-Field Structural Engineer IO0516

Req ID **2120** - Posted **04/11/2020** - (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:** 13/12/2020

**Domain:** Construction

**Department:** Plant Construction

**Division:** Field Engineering Installation

**Job Family:** Project Engineering

**Job Role:** Engineer - 2

**Job Grade:** P3

**Language requirements:** Fluent in English (written & spoken)

**Contract duration:** Up to 5 years

### **Purpose**

As an In-Field Structural Engineer, you will be responsible for coordinating, performing and verifying structural analyses for the as built configurations of steel framed structures, interconnecting piping, supports capacity, anchorage and interface loads between components. You will also develop technical solutions to adapt the design versus the actual conditions met during the construction activities.

Throughout all activities, it will be your objective to ensure that the interfaces between piping systems and civil structures are correctly defined and implemented both during the pre-construction and construction phases.

### **Background**

In the frame of the Field Engineering Installation Division, part of the Plant Construction Department, the In-Field Engineering Support group provides transversal mechanical engineering supports to both construction and design activities, i.e.:

- For all the Plant (Balance of Plant, Nuclear and Non-Nuclear Buildings), assure the in-field engineering assessment, which includes the resolution in real-time of Supplier Deviation Request and In-Field Non Conformities;
- Support the other divisions for the production of engineering design packages of safety and non-safety mechanical systems including pipes, piping supports, valves, cable trays, etc. up to the penetrations into the walls.

### **Major Duties/Roles & Responsibilities**

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- Undertakes on-site oversight activities to ensure that construction activities are carried out in accordance with approved designs and supervision plans;
- Assures the resolution of in-field design changes (Non-Conformance Reports (NCR), Deviation Requests, etc..) generated during construction activities;
- Technically reviews the drawings and the associated calculation reports to validate solutions for piping systems and steel frame structures subject to modification;
- Produces assessment reports to support and justify the proposed field design changes, during and prior to construction works;
- (Re-)Assesses the capacity of the embedded plates, including post drilled plates, resulting from system final design or field design changes in collaboration with CIO and/or Building TROs;
- Produces assessment reports for the interface loads versus connected equipment and building openings;
- Ensures full traceability of activities from design through to as-built records;
- Produces the so called red line drawings for the resolution of the in-field changes;
- Supports transversally and interacts directly with other engineering design teams to support the production of Engineering Working Packages by coordinating, performing or verifying structural calculations and drawings for pipes, piping supports, embedded plates (including post drilled plates) and other interface assessments versus the applicable load specifications;
- 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, week-ends and public holidays.

### **Measure of Effectiveness**

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- Autonomously coordinates, performs and verifies the calculation reports of the piping systems, structures and components in a timely manner;
- Ensures that resolutions for Request for Information, Non Conformance Report and In-Field Change Request are provided in a timely manner to minimize delays;
- Anticipates or resolves interface and integration issues promptly to minimize disruption to the schedule;
- Complies with applicable design codes and regulations and propagates their use where necessary;
- Contributes to cost saving and improvement of work efficiency and schedule by making suitable proposals when necessary;
- Manages effectively the various interfaces related to this scope of activities;
- Ensures full traceability of activities from design through to as-built records.

- Satisfies Safety and Quality Assurance rules, as well as working proactively to enable space management integration requirements;
- Maintains effective communication and excellent relations with interfacing teams within ITER and with external contractors;
- Demonstrates the ability to drive calculation activities and to lead coordination meetings for reaching the final goal in the most effective way with the highest standards.

## Experience & Profile

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- **Professional Experience:**
  - At least 8 years of experience working as a Structural Engineer in the field of Nuclear / Mechanical/Civil Engineering, with a strong level of competencies in both design and construction oversight, preferably within a nuclear environment.
- **Education:**
  - Master's degree or equivalent in Nuclear, Mechanical or Civil / Structural 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:
    - Designing structures, piping systems and components (including embedded plates);
    - Structural design codes such as AISC, Eurocode, ASCE, mechanical design codes such as ASME III related chapters and/or RCC and other international Codes & Standards for piping systems.
  - Problem solving:
    - Managing in-field design changes generated during installation activities and field installation supervision for plant systems;
    - Analyzing and proposing solutions for interface or challenging technical issues.
  - Quality Control: Quality Assurance/Quality Control procedures for the installation of safety related mechanical components and piping systems;
  - The use and application of:
    - GT Strudl, Staad Pro, SAP 2000 or similar software;
    - Pipe stress / CAE Pipe; e.g. CEASAR II or similar software;
    - 2D-3D CAD software (AVEVA PDMS and Catia) or similar software;
    - Microsoft Office suite.
  - Basic knowledge of Finite Element Method analysis and theory;
  - Experience in coaching junior engineers would be advantageous.
- **Behavioral Competencies:**
  - Coordinate: Ability to drive calculation activities and to lead coordination meetings for reaching the final goal in the most effective way but still with the highest standards;
  - Highly proactive and autonomous personality;
  - 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.

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***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.