Job Title: Blanket Officer IO0429

Requisition ID **4980** - 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: 09/01/2022
Domain: Engineering
Department: Engineering Design
Division: Internal Components
Section: Blanket
Job Family: Engineering
Job Role: Engineer – 3
Job Grade: P3
Language requirements: Fluent in English (written & spoken)
Contract duration: Up to 5 years

Purpose

In this role of Blanket Officer, you will be responsible for the design, analysis and procurement of the Neutral Beam (NB) Port Liners (a blanket sub-system), as well as for their assembly, commissioning and installation activities in line with the given interface, scope, budget, and schedule requirements.

Background

The blanket system is the primary heat exchange mechanism for the thermal power from the ITER plasma. Together with several other systems, the blanket provides the neutron shielding for the superconducting magnets. It also serves as the limiting surface that defines the plasma boundary during start-up and shutdown. The NB Port Liners are a sub-system of the blanket, components that serve a protective role in the vicinity of the irregular ports near the diagnostic and heating neutral beams. The blanket components will be attached to the inner surfaces of the vacuum vessel, installed via bolted interfaces, with welded connections to join the hydraulic cooling circuits. The majority

of the assembly works will take place during the second assembly phase, following First Plasma operations.

Key Duties, Scope, and Level of Accountability

- Acts as the Technical Responsible Officer of the NB Port Liners, procured directly by the ITER Organization;
- Finalizes any open design and analysis issues on the NB Port Liners, including those associated with deviation requests and non-conformance requests;
- Ensures the production and assessment of 3D models and 2D drawings;
- Manages the related Research & Development, as well as design validation and qualification tests of the NB Port Liners;
- Manages the interfaces and Quality Assurance (QA) procedures of the procured items;
- Follows-up on and resolves all interface issues between the NB Port Liners, Science & Operations Department, and the Heating & Current Drive Division;
- Maintains the sub-System Requirement Document (s-SRDs), interface sheets, and associated requirement compliance and traceability matrices;
- Follows-up of the procurement of the Neutral Beam (NB) Port Liners, including the preparation of input documentation, the planning of work packages, the review and approval of deliverables, and other general needs to ensure successful delivery and installation of the components to ITER;
- Upon request, supports other procurement activities (potentially including the follow-up of the First Plasma Protection Components' procurement);
- Supports the Section's effort on the definition of maintenance plans, repair plans, and on remote handling design, assessment, and planning for the Blanket System;
- Upon request, supports hot cell interfacing requirements and development, in addition to other ad-hoc analysis Blanket issues;
- 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.

Measures of Effectiveness

- Successfully performs all activities as responsible for the completion of the design, qualification and testing of the NB Port Liners of the Blanket System for assembly, installation and commissioning activities;
- Effectively manages the procurement of the NB Port Liners, ensuring that preparation/input documentation is produced on time and as per requirements;
- Ensures the timely production and assessment of 3D models and 2D drawings;
- Generates and maintains coherent, comprehensive and understandable design documentation for the NB Port Liners;
- Maintains effective communication on the system/project within the ITER Organization or with the Domestic Agencies as required by this position;
- Contributes to keeping the NB Port Liners effort within planned schedule, costs and effectively manages resources allocated to the system/project;
- Successfully supports Blanket activities on remote handling and procurement.

Experience & Profile

- *Professional Experience:*
  - Minimum 8 years' experience in the design, analysis and interface management of complex high heat flux components in the field of fusion or nuclear within complex international environments or projects.

- *Education:*
  - Master's degree or equivalent in a mechanical engineering field or other relevant discipline;
  - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or training certificates in relevant domains.
- *Language requirements:*
  - Fluent in English (written and spoken).
- *Technical Competencies and demonstrated experience in:*
  - **Specialized Domains of Work (In-Vessel Systems) :** Design and analysis of complex high heat flux components interfacing with large components and structures, support systems;
  - **Interface Management:** Identify, resolve and maintain complex interfaces with cooling systems, diagnostics, assembly and remote handling tools;
  - **Quality Control:** Verify compliance of the products with all applicable requirements;
  - **Project Management (including procurement and contracts):** Planning, measuring progress of project work, managing risks/costs and reporting on progress of contracts' deliverables;
  - Mechanical manufacturing techniques, welding and non-destructive testing methods, as well as geometrical and dimensional tolerances;
  - ANSYS or of similar Finite Element software would be advantageous;
  - Computer Aided Design (CAD), preferably with the CATIA software, would be advantageous.
- *Behavioural 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 analyse multiple and diverse sources of information to understand/define problems accurately before moving to proposals;
  - Instill trust: ability to apply high standards of team mind-set, 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.