

Job Title: Blanket Assembly Engineer IO1056

Requisition ID **6421** - 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: 24/07/2022

Domain: Engineering Domain

Department: Engineering Design Department

Division: Internal Components Division

Section: Blanket Section

Group: Not applicable

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 a Blanket Assembly Engineer, you will be responsible for preparing and managing activities related to the blanket system installation and associated sub-assemblies. This will cover the full life cycle of assembly and installation processes and tools, maturing them from concept design through development and validation, final commissioning, qualification and end use.

You will prepare the assembly procedures and working instructions for the development and qualification of assembly tools, for the purposes of installing large components with precise alignment 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 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, though some assembly preparations are necessary as well for the first assembly phase.

Key Duties, Scope, and Level of Accountability

- Manages and participates in the preparation of the Blanket System assembly activities;
- Is responsible for the conceptual design, qualification, and launching of assembly installation contracts, including any related Research & Development (R&D) associated with assembly tooling for the blanket system;
- Prepares the blanket sub-system commissioning and installation activities (e.g. commissioning plans, technical specifications for construction, engineering work packages, 2D drawing management) in line with the given physical and functional system interfaces, scope, budget and schedule requirements;
- Provides transverse support to the blanket system Technical Responsible Officers on Procurement Arrangement-related tasks, to ensure that component quality and schedule align well with assembly-related tasks and activities;
- Oversees on-site activities for blanket related assembly work, including the coordination of on-site contractors;
- Prepares and manages external international contracts requiring authoring of SMART specifications, membership of tender evaluation board and the responsibility of delivering the full scope of work;
- 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.

Note: 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.

Measures of Effectiveness

- Ensures Blanket Assembly contracts effectively managed and delivered on time;
- Ensures the successful preparation of Engineering Work Packages for the blanket system by ensuring suitable blanket assembly process definition and tools availability;
- Proactively plans and manages assembly-related activities for qualification, training, and preparations;
- Prepares sub-assembly and installation procedures and/or working instructions detailing the safe implementation of complex processes with multiple interface considerations as per the defined budget and schedule;
- Contributes to keeping the blanket system assembly effort within planned schedule and costs;
- Communicates well and maintains high professional standards when interfacing with staff from the ITER Organization, Domestic Agencies and all other stakeholders.

Experience & Profile

- *Professional Experience*
 - At least 8 years' experience in the design of purpose-built installation and sub-assembly tools; in access equipment and congested environments and confined spaces; in radiological, hazardous, and clean room facilities, all in support of construction of complex international projects.
- *Education*

- Master's degree or equivalent in the 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.
- A recognised industrial safety qualification/training would be advantageous.
- *Language requirements*
 - Fluent in English (written and spoken).
- *Technical Competencies and demonstrated experience in:*
 - Specialised Domain of Expertise (Installation and Assembly Tools): Tokamak-related assembly, or applications of similar scope and complexity, involving the lifting & handling of large and heavy components with precision alignment requirements;
 - Metrology approaches and technologies, as well as geometrical and dimensional tolerancing;
 - Welding and related NDE techniques, including specifically the drivers for high reliability welding processes in difficult access conditions;
 - Quality Control: Verifying the compliance of components with all applicable requirements;
 - Interface Management: identifying technical, operational, and contractual interfaces to proactively reach resolution of issues, communicates issues and solutions with stakeholders;
 - Project Management experience in a multi-disciplinary construction/engineering project/complex facility(basic level);
 - Fusion technologies and/or Ultra High Vacuum (UHV) applications and/or nuclear devices would be highly advantageous;
 - Familiarity with Computer Aided Design tools (ENOVIA/CATIA or equivalent) and/or analysis software (ANSYS or similar FE software) would be an asset.
- *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 analyze multiple and diverse sources of information to understand/define problems accurately before moving to proposals;
 - Instil 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.

