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## JOB DETAIL

Ref. IO2119 - 5/21/2019

### Mechanical Engineer TED-109

**Main job** Mechanics

**Department** TED / Tokamak Engineering Department

**Division** TED / Vessel Division

**Section** TED/VSD/VV Procurement Section

**Job Family** Engineer - 2

**Application Deadline  
(MM/DD/YYYY)** 06/30/2019

**Grade** P3

**Direct employment** Not required

**Purpose** To be responsible for the design, analysis, assembly and activities for the procurement of the Vacuum Vessel (VV) In-Wall Shielding (IWS).  
To be responsible for IWS manufacturing and integration management.  
To support the IWS installation in the VV Sectors & Field Joints and any assembly related activities for the whole VV Torus completion in the pit.  
To be responsible for the IWS Procurement Arrangement (PA) signed with India.

#### Background:

The ITER VV is a double-wall torus structure that surrounds the plasma. The interspace between the VV inner and outer walls is filled by cooling water and 55% occupied by shielding blocks (IWS). These steel plates are made of mild ferritic steel (under TF coils) and non-ferritic for the other zones and also have a role of correction of the fluctuations in the toroidal magnetic field, reducing the decrease of the toroidal field between two TF coils creating "local mirrors" which can impact in a negative way on the performance of the plasma. These steel plates are arranged in a sandwich with dividers to allow the circulation of the water between the steel plates. Two thirds of these strategic elements, numbering around 9 000, will be installed during the manufacturing of the vacuum chamber; the rest will be delivered to the ITER site for installation during the assembly phase of the machine.

**Main duties / Responsibilities** A strong collaboration between Indian (IN), Korean (KO), European Domestic (EU) Domestic Agencies (DAs) and ITER Organization (IO) is necessary to finalize assembly sequence of IWS and all the VV sub-components received in IO site to complete the whole VV Torus assembly.

Please note that an organizational restructuring is planned in accordance with the needs of the organization and the evolution of the project phases. In this context, the unit of assignment of the present position may be updated in late 2019, early 2020.

Manages the overall IWS design, manufacturing, assembly and integration activities, identifying risks and proposing mitigation actions;  
Monitors the progress of the IWS Procurement Arrangement (PA) and solves any related issues by ensuring manufactured items are delivered in compliance with design, functional and safety requirements of the ITER machine within schedule and quality;  
Coordinates with relevant stakeholders in order to respect the PA schedule; Supervises and reviews IWS manufacturing drawings and integration by DAs;  
Solves any interface issues which may occur between the IWS and VV;  
Completes and proposes corrective actions when necessary to the IWS design as per any change/deviation requests or assembly issue according to Quality Assurance Program defined for the Project;  
Reviews additional thermal, hydraulic, electromagnetic and structural analysis as required to help finalize the IWS manufacturing design and eventual non-conformities;  
Finalizes the IWS assembly sequence and design of assembly tools in collaboration with various internal/external stakeholders;  
Supports the IWS installation in the VV Sectors & Field Joints;  
Supports any assembly related activities requested by the whole VV Torus completion in the pit;  
May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;

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**Measures of effectiveness** May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays.

Finalizes the engineering drawings for the IWS in a timely and accurate manner;  
Manages the manufacturing of the IWS and its subsequent integration;  
Guarantees the delivery of End of Manufacturing Reports (EMR) by respecting quality procedures;  
Delivers the IWS components within defined schedule;  
Supports the IWS installation for the Sectors and the Field joints in timely and quality manner;  
Generates and maintains coherent, comprehensive and understandable procurement documentation;  
Ensures effective communication across the IO and with other internal/external stakeholders.

SAP ID: 50000168

**Level of study** Master or equivalent degree

**Diploma** Mechanical Engineering or other

**Level of experience** At least 8 years

**Technical experience/knowledge** At least 8 years' experience in the design and manufacture of components for Ultra-High Vacuum (UHV) and/or nuclear devices;  
Experience in the fabrication (forming and welding) of large stainless steel structures;  
Experience working with nuclear and conventional vessel codes;  
Experience of managing procurement activities is considered advantageous;  
Strong experience in reviewing and contributing to documents and drawings as required in the manufacturing process;  
Basic Project Management experience is required.

**General skills** Collaborate: Ability to 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 model high standards of team mindset, trust, excellence, loyalty and integrity.

**Others** The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.

**Languages** English (Fluent)

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