

# IO1626 Common port plug components Engineer - TED-045

## General information

Job category	Standard
Status	Published
Department	TED / Tokamak Engineering Department
Division	TED / Port Plugs & Diagnostics Integration Division
Section	TED / PPD / Common Port Plug Engineering Sub-Section

## Job description

Main job	Engineering - Mechanics
Title of the position	Common port plug components Engineer - TED-045
Job family	Coordinating Engineer
Grade	P4
Direct employment	Required
Purpose	<p>To develop the design of diagnostic port plug structures and related interfaces with the main tokamak components, particularly with the vacuum vessel and remote handling.</p> <p>To follow up the procurement of diagnostic port plug structures. To identify requirements and perform engineering design of diagnostic shield modules of ITER-owned ports.</p> <p>To manage specified procurement packages respecting the schedule and managing cost of diagnostic systems and supporting hardware.</p> <p>To substitute and/or support the Sub-Section Leader/Division Head in all matters relating to the implementation of ITER diagnostics.</p>
Main duties / Responsibilities	<p>Develops the design of diagnostic port plug structures and follows-up their procurement with industry;</p> <p>Develops the design of diagnostic port plug interfaces with main tokamak interfaces (vacuum vessel, cooling, buildings);</p> <p>Develops engineering designs for the port based diagnostic components located in the harsh ITER environment (such as Diagnostic Shield Modules, Diagnostic First Walls and supports of components inside);</p> <p>Leads analysis of mechanical and thermal stresses, stresses due to electro-magnetic forces, dynamic analysis, neutronics assessment, and provision for mitigation of environmental factors of port-based diagnostic equipment;</p> <p>Prepares technical specifications and documents as required;</p> <p>Supports procurement of diagnostics through procurement packages and interacts with the teams working in the Domestic Agencies (DAs) of the ITER Partners as necessary;</p> <p>Specifies and supports on-going diagnostic design and port integration activities and updates and helps to integrate these designs;</p> <p>Develops and uses project engineering tools for the procurement of diagnostic systems;</p> <p>Prepares for the installation of the diagnostic systems on ITER;</p> <p>Reports variances on all technical, cost and schedule aspects and make proposal for recovery actions;</p> <p>Supports the risk identification and management;</p> <p>Monitors the change control process for his/her scope of work and communicates changes to guarantee the integration with other technical interfaces;</p> <p>Supports ITER Organization and DA diagnostic engineering designs and specifications;</p> <p>Supports and leads the Design Review processes as appropriate;</p> <p>Maintains related documentation at all times on the ITER Document System and ensure it is updated and in the correct formats;</p> <p>Performs other duties in support of the project schedule as described in the Detailed Work and the Strategic Management Plan;</p> <p>May be request to be part of any of the project team dealing with the above activities and perform other duties upon management request;</p> <p>Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p>

Measures of effectiveness	Under the supervision of the Common Port Plug Engineering Sub-Section Leader, reports to Port Plug & Diagnostics Integration Division Head, Interfaces with other ITER Technical Department, as required; Ensures integration with other technical interfaces;
	In response to requests from the Director-General and/or Tokamak Engineering Department Head, or proactively, informs the DG/ Tokamak Engineering Department Head of any important and urgent issues that cannot be handled by the concerned line management and may jeopardize the achievement of the Project's objectives.
	Works packages completed to agreed deadlines and costs; Develops and approves interface documentation, schematics plans and databases; Develops and approves technical documentation for procurement; Develops and approves installation plans; Collaborates effectively with technical partners in Domestic Agencies and other Departments at ITER Organization; Works efficiently at all times with other Diagnostics team members.
Project Construction Phase	

## Applicant criteria

Level of study	PhD or equivalent degree
Diploma	Mechanical Engineering
Level of experience	At least 10 years
Technical experience/knowledge	At least 10 years' experience in mechanical engineering (including at least 3 years in project engineering), preferably in a high technology field such nuclear engineering or high energy particle engineering; Experience in mechanical engineering design for tokamak diagnostic systems, such as water cooling, vacuum vessel and mechanical handling schemes, including electromagnetic aspects. Experience in application of recognized Nuclear engineering codes and standards, experience in manufacturing; Experience in specification and application of welding procedures; Experience in specification of Non-Destructive Testing procedures.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
Languages	English (Fluent)  Proven presentation writing skills;
Others	Coding experience (ANSYS or similar); Experience with the technical follow-up of CAD activity: ?- Familiarity with CATIA and CAD oversight, incl. manufacturing drawings ?- Familiarity with P&ID diagrams MS Office standard (Word, Excel, PowerPoint, Outlook).