

# IO1376 Vacuum Engineer CEP-102

## General information

Job category	Standard
Status	Published
Department	DIP/Directorate for Plant System Engineering
Division	PSE/Fuel Cycle Engineering Division
Section	PSE/ FCED/ Vacuum Section

## Job description

Main job	Engineering - Mechanics
Title of the position	Vacuum Engineer CEP-102
Job family	Engineer - 1
Grade	G6
Direct employment	Required
	<p>To support activities under the responsibility of the ITER Vacuum Section with practical high vacuum expertise;</p> <p>To manage construction and interfaces of the Service Vacuum System;</p> <p>To assist in setting up facilities to support the vacuum procurement, assembly and testing;</p> <p>To support the team being set up to meet the ITER vacuum leak testing requirements for construction and equipment acceptance.</p>
Purpose	<p>The key facts and figures of the Vacuum Systems are:</p> <ul style="list-style-type: none"><li>- ITER will be the largest, complex vacuum system yet to be built. Large system volumes such as the Cryostat (8500 m3), the Vacuum Vessel (1400 m3) or the Neutral Beam injectors (860 m3) need to be evacuated and kept under high vacuum conditions;</li><li>- Custom made cryo pumps are employed to allow high speed pumping in a harsh environment (radiation, magnetic fields);</li><li>- A wide-range of different vacuum systems, service heating and diagnostic systems distributed widely over the machine.</li></ul>
Main duties / Responsibilities	<p>Coordinates the development of mechanical design of the Service Vacuum System (SVS) which is a system which serves thousands of clients throughout ITER Tokamak buildings;</p> <p>Defines routing scheme for the SVS module to client connections;</p> <p>Plans SVS installations required for the ITER first plasma configuration;</p> <p>Produces assembly and test schemes for large quantities of vacuum- related equipment;</p> <p>Provides practical input to many design and specification activities within the ITER Vacuum Section, particularly with relation to vacuum assembly techniques;</p> <p>Participates in validation programs for equipment required to perform safety functions;</p> <p>Aids Domestic Agencies (DAs) in understanding and meeting the ITER requirements for component leak tests, including witnessing of factory acceptance leak testing at suppliers' sites;</p> <p>Participates in the pre and post-assembly testing of the components of the ITER leak detection systems of the torus, cryostat, neutral beam, and auxiliary systems;</p> <p>Performs other duties in support of the project schedule as described in the Detailed Work Schedule and the Strategic Management Plan;</p> <p>Performs other duties linked to the above purpose upon management request, as necessary;</p> <p>Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p>
Measures of effectiveness	<p>Reports to the Vacuum Section Leader;</p> <p>Interfaces between ITER divisions and Domestic Agencies;</p> <p>In response to requests from the Director-General and/or Director of Plant System Engineering (PSE) Directorate, or proactively, informs the DG/Director of PSE Directorate of any important and urgent issues that cannot be handled by the concerned line management and that may jeopardize the achievement of the Project's objectives.</p>
	<p>Successfully contributes to the completion of the Vacuum System Design;</p> <p>Interfaces successfully and communicates efficiently with other ITER Directorates, Domestic Agencies, maintaining good relationships;</p>

Successfully provides engineering and construction support for the project;  
 Contributes effectively to successful value engineering solution for the vacuum systems;  
 Achieves and contributes to the achievement of the project schedules and milestones;  
 Supports procurement activities in a timely manner and within the defined costs.

ID SAP: 50000794  
 Project Construction Phase

## Applicant criteria

Level of study	Bachelor or equivalent degree
Diploma	Mechanical Engineering or equivalent discipline
Level of experience	At least 7 years
Technical experience	At least 7 years' practical engineering experience, including working in a complex high vacuum environment; Experience with construction of ultra high vacuum equipment; Good practical knowledge of leak testing, vacuum and gas distribution systems; Experience of working with demanding Quality Assurance (QA) standards for materials and welding, including standards covering pressure equipment directives; Experience of working with tritium or in a nuclear environment would be an advantage; Good knowledge of fabrication and welding techniques.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	Experience of working to and developing schedules; Basic contract and project management experience.
Languages	English (Working)
Specific skills	Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)