

# IO1214 Cryogenic Mechanical Engineer CEP-136

## General information

Job category	Standard
Status	Published
Department	DIP/Directorate for Central Engineering & Plant
Division	CEP / Plant Engineering Division
Section	CEP / PED / Cryogenic System Section

## Job description

Main job	Engineering - Mechanics
Title of the position	Cryogenic Mechanical Engineer CEP-136
Job family	System Engineer - 1
Grade	P3
Direct employment	Not required
Purpose	<p>-To provide mechanical and thermal engineering expertise to the Cryogenic System Engineering (CSE) Section.</p> <p>-To identify and execute technical studies, establish and review baseline documentation, design, procurement, implementation, commissioning, operation and maintenance of all functions required for the correct and safe running of the ITER cryogenic system.</p> <p>-Reviews the mechanical and thermal design aspects of the cryogenic components;</p> <p>-Performs, writes and checks calculation notes in mechanical, thermal and thermo-hydraulic fields for cryogenic components;</p> <p>-Plans and oversees the R&amp;D activities performed by collaboration institutes;</p> <p>-Performs detailed layout studies, internal design and routing of the cryolines inside both the Tokamak and Cryoplant Cold Box buildings and between these two buildings;</p> <p>-Manages contracts for the mechanical and thermal engineering steady and design;</p> <p>-Performs the thermal and structural analysis as required to define and verify the design;</p> <p>-Identifies requirements for the testing phase of the cryogenic components and prototype cryoline;</p> <p>-Develops and participate to the required testing, commissioning and operation program for the cryogenic system;</p>
Main duties / Responsibilities	<p>-Monitors and review the detailed design developed by the Domestic Agencies (DAs);</p> <p>-Performs other duties in support of the project schedule as described in the Detailed Work Schedule and 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> <p>-Reports to the Cryogenic System Section Leader;</p> <p>-Acts as an interface between system analysis thermal and cryogenic section;</p> <p>-In response to requests from the Director-General and/or Central Engineering and Plant (CEP) Director of Directorate, or proactively, informs the DG/CEP Director of Directorate 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.</p> <p>-Defines and implements the concept of the cryolines and cryo distribution system;</p> <p>-Identifies and executes mechanical and thermal studies to review or validate the cryolines and cryodistribution system design;</p>
Measures of effectiveness	<p>-Manages interfaces between the cryogenic system and cryogenic users;</p> <p>Manages plans for installation, tests and commissioning;</p> <p>-Maintains effective communications with all parties delivering subsystem;</p> <p>-Project Construction Phase.</p>

## Applicant criteria

Level of study	At least Master's Degree or equivalent
Diploma	Cryogenics, mechanical engineering
Level of experience	At least 8 years
Technical experience	<ul style="list-style-type: none"> <li>-Engineering experience with at least 5 years in mechanical design and thermal engineering;</li> <li>-Excellent knowledge of industrially proven cryogenic equipment, instrumentations and controls in world market and associated R&amp;D for specific applications;</li> <li>-Excellent knowledge of the design code and standards;</li> <li>-Excellent knowledge of process engineering and analysis of operating modes for large cryogenic distribution system;</li> <li>-Excellent knowledge of thermal-hydraulic and thermo-mechanical analysis tools;</li> <li>-Good practical knowledge of factory acceptance tests and commissioning of complex equipment;</li> <li>- Good knowledge of fabrication, welding and leak testing techniques;</li> <li>-Good knowledge of factory acceptance tests and commissioning of cryogenics equipment.</li> </ul>
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	- Basic Project Management experience is required.
Languages	English (Working)
Specific skills	Ansys, Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)