

IO1219 Power Conversion Engineer CEP-126

General information

Job category	Standard
Status	Published
Department	DIP/Directorate for Central Engineering & Plant
Division	CEP / Electrical Engineering Division
Section	CEP/ EED/ Coil Power Supply Section

Job description

Main job	Engineering - Electronics
Title of the position	Power Conversion Engineer CEP-126
Job family	System Engineer - 2
Grade	P4
Direct employment	Not required
Purpose	<p>To lead and manage the system engineering activities for design, procurement, installation and commissioning of the ITER in Vacuum Vessel Power Supply System (iVV PSS), which includes the Edge Localized Mode (ELMs) Power Supply, Vertical Stabilization Power Supply and the DC busbars system.</p> <p>The main features of this system are:</p> <ul style="list-style-type: none"> - high power, switching power converters, with very fast control performances and a total rated power of about 120 MVA; - challenging Electro-Magnetic and radiation environments; - challenging layout configuration. <p>Is the Technical Responsible Officer (TROs) for the procurement, installation, testing and commissioning of the ITER in Vacuum Vessel Power Supply System (iVV PSS) to ensure that all components of belonging this system will be designed, fabricated, tested and installed in accordance with the requirements, including the system and layout integration aspects and the interfaces with other ITER systems;</p> <p>Develops the Conceptual design of iVV PSS and prepares the technical specifications for procurement;</p> <p>Follows-up the work performed by ITER and DA Contractors for the detailed engineering, fabrication, installation and test of the iVV PSS;</p> <p>Performs the transient and steady state analysis of the electrical circuits of the system and the iVV PSS to verify the design solutions and the performances;</p> <p>Manages the interfaces of the iVV PSS, including, plasma control, PPEN, SSEN, CCWS, in Vacuum Vessel Coil, CODAC, buildings, et.al;</p> <p>Follows-up with the ITER and DA Computer Aided Design (CAD) Office involved in the work related to the iVV PSS;</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 Coil Power Supply Section Leader;</p> <p>Acts as an interface between all technical divisions, to support excellent integration of the electrical installation, the DAs and contractors;</p> <p>In response to requests from the Director-General and/or Director of Central Engineering & Plant (CEP) Directorate, or proactively, informs the DG/ Director of CEP 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>
Main duties / Responsibilities	<p>Performs the transient and steady state analysis of the electrical circuits of the system and the iVV PSS to verify the design solutions and the performances;</p> <p>Manages the interfaces of the iVV PSS, including, plasma control, PPEN, SSEN, CCWS, in Vacuum Vessel Coil, CODAC, buildings, et.al;</p> <p>Follows-up with the ITER and DA Computer Aided Design (CAD) Office involved in the work related to the iVV PSS;</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 Coil Power Supply Section Leader;</p> <p>Acts as an interface between all technical divisions, to support excellent integration of the electrical installation, the DAs and contractors;</p> <p>In response to requests from the Director-General and/or Director of Central Engineering & Plant (CEP) Directorate, or proactively, informs the DG/ Director of CEP 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>
Measures of effectiveness	<p>Manages the design integration of the iVV PSS;</p> <p>Maintains effective communication with all the interfacing teams of the ITER and the DA;</p> <p>Supports the completion of the procurement activities of iVV PSS in accordance with the defined schedule;</p>

Provides the required input data and monitors the activities of the CAD design;
Performs the analysis on the iVV PSS to verify the performance.

Project Construction Phase

Applicant criteria

Level of study	At least Master's Degree or equivalent
Diploma	In the power electronic engineering field
Level of experience	At least 8 years
Technical experience	<p>Experience in design and installation of complex electrical power conversion systems;</p> <p>Good experience in managing design, construction, installation and testing of switching power supply and thyristor based power supply system, comparable with those of the ITER iVV PSS;</p> <p>Good knowledge of the electrical circuit transient analysis;</p> <p>Good experience in the preparation of technical specifications for procurement contracts of large electrical/power electronic components/subsystems.</p> <p>Good knowledge of International electrical standards & Electrotechnical Commission standards for switching power conversion system would be an advantage.</p> <p>Experience in the design and installation of power conversion system for Tokamak would be an advantage.</p>
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
Languages	English (Working)
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)