

# IO2033 Power Electronic Engineer PED-131

## General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Division	PED / Electrical Engineering Division
Section	PED / EED / Coil Power Supply Section

## Job description

Main job	Engineering - Electricity
Title of the position	Power Electronic Engineer PED-131
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	<p>To manage and ensure surveillance during the installation activity and to perform the commissioning and testing activities for the ITER Reactive Power Compensation and Harmonic Filtering System (RPC&amp;HF), which includes three large Static Var Compensators (SVC), based on Thyristor Controlled Reactors (TCR) and tuned filters with a total rated power of 750 Mvar, directly connected to a 66 kV ac distribution system.</p> <p>To perform both office-based and in-field engineering activities related to system commissioning, startup, operation and maintenance of the ITER RPC&amp;HF, and large thyristor based alternating current/direct current (AC/DC) power converters that are part of the ITER Coil Power Supply System.</p>
Main duties / Responsibilities	<p>Is Responsible for the installation, testing and system commissioning of the components for the ITER RPC&amp;HF system to ensure that components and subsystems will be installed and commissioned in accordance with the requirements as specified in the Procurement Arrangement (PA);</p> <p>Proposes and implements actions required to resolve design, construction, installation, commissioning, operation and maintenance issues;</p> <p>Develops plans and procedures for installation, acceptance tests, integrated commissioning, operation and maintenance of the component/system under the responsibility of the job holder;</p> <p>Is in charge of the system integration of the RPC&amp;HF components, the Pulsed Power Electrical Network (PPEN), AC/DC power converters and ITER superconductive magnet systems;</p> <p>Performs the analysis of components and integrated system engineering and develops the procedures for the on-site acceptance tests;</p> <p>Supervises commissioning, on-site acceptance tests of RPC&amp;HF system and executes the integrated commissioning with converter systems, PPEN, central systems including any required trouble shooting;</p> <p>Joins and contributes to pre-operation &amp; maintenance activities, including on call duty operation team;</p> <p>Supports the application of Quality Assurance (QA) &amp; Quality Control (QC) requirements and standards for components and systems, in close relation with the Quality Assurance &amp; Assessment (QAA) Division;</p> <p>May be required to work outside normal working hours, including , nights, weekends and public holidays;</p> <p>May be requested to be part of any of the project/construction teams and to perform other duties, including participation to work shifts and on call duty services;</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>In response to requests from the Director-General (DG) and/or Plant Engineering Department (PED) Head , or proactively, informs the DG/PED 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.</p> <p>Maintains up to date the integrated system analyses to verify the overall performance for the</p>

Measures of effectiveness	<p>ITER RPC&amp;HF system;</p> <p>Identifies and clarifies the missing items and unresolved issues associated with installation and commissioning of the ITER RPC&amp;HF system;</p> <p>Monitors efficiently, controls and pro-actively resolves issues associated with, installation, testing, commissioning, operation and maintenance of the ITER RPC&amp;HF system, including interface with other ITER systems;</p> <p>Prepares high quality test communication procedures and writes reports following testing to a high standard on schedule;</p> <p>Performs efficiently testing in accordance with IEC Standards/French safety related standards.</p> <p>Maintains effective communication with all the interfacing teams of the ITER and the DAs.</p>
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## Applicant criteria

Level of study	Master or equivalent degree
Diploma	Electrical Engineering or equivalent
Level of experience	At least 8 years
Technical experience/knowledge	<p>Good knowledge of international electrical standards;</p> <p>Good knowledge of the design details and technical requirements of SVCs;</p> <p>At least 8 years' experience in managing design, installation, and commissioning power supply systems and writing supporting documentation;</p> <p>Good experience in installation and testing of large SVCs system and/or other relevant complex electrical systems such as High Power STATCOM Systems, High Power Thyristor Converters, or Multilevel Voltage Source Converters;</p> <p>Good experience in the execution of transient analyses of high power SVCs and Power Systems;</p> <p>First experience in monitoring/following up contracts for construction, installation and testing of large power electronic components/subsystems would be an advantage.</p> <p>Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.</p>
General skills	<p>Ability to dialogue with a wide variety of contributors and stakeholders;</p> <p>Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;</p> <p>Ability to persist in the face of challenges to meet deadlines with high standards;</p> <p>Ability to gather multiple and diverse sources of information to understand problems accurately before moving to solutions;</p> <p>Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.</p>
Languages	English (Fluent)
Others	<p>Basic knowledge of running computer codes for transient and steady-state analysis of electrical system, including power converters, SVCs and power systems;</p> <p>Good knowledge of software applications for development of 3D model and 2D schematics.</p>