

IO1598 Process and System Engineer - TCWS-028

General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Section	PED / Tokamak Cooling Water System

Job description

Main job	Engineering - Mechanics
Title of the position	Process and System Engineer - TCWS-028
Job family	Engineer - 1
Grade	P2
Direct employment	Not required
Purpose	<p>To develop the process engineering and the control logic of the Primary Heat Transfer Systems (PHTS's) of ITER Tokamak Cooling Water Systems (TCWS) and ancillary systems;</p> <p>To develop Process Flow Diagrams and Process & Instrumentation Diagrams for the TCWS;</p> <p>To select preliminary size and prepare data sheets for TCWS equipment;</p> <p>To contribute to the preparation of the Technical Specification for the procurement, and the fabrication and testing of the TCWS equipment;</p> <p>To produce the valid documentation for the commissioning of TCWS (Commissioning Technical specifications and Commissioning Procedures);</p> <p>To work close to with the Cooling Water System (CWS) Section in the preparation of the Safety Report for the TCWS.</p>
Main duties / Responsibilities	<p>Develops and finalizes the process engineering of TCWS namely for the PHTSs, the Chemical and Volume Control Systems, the Draining and Refilling System and Drying System;</p> <p>Develops and finalize Process Flow & Instrumentation Diagrams for the whole TCWS;</p> <p>Develops and finalizes the functional analysis, control logic design studies and operational guidelines for all the TCWS;</p> <p>Performs specific sizing calculations for TCWS equipment (e.g. pumps, heat exchangers, filters, demineralizers, etc.), selects equipment and produces data sheet;</p> <p>Develops and finalizes commissioning procedures, implementing the necessary features in the design;</p> <p>Collaborates with the Instrumentation & Control Engineers in the CWS Section to develop the control logic design studies and their integration in the TCWS system;</p> <p>Supports the CWS Section for the design, procurement, assembly and/or installation and operation of the TCWS piping and components in close collaboration with Domestic Agencies and other ITER IO Directorates;</p> <p>May be required to work shifts during the ITER assembly and commissioning phase;</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>May be requested to belong to any project team dealing with above activities and performs 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> <p>Under the coordination of the Tokamak Cooling Water System Design Supervisor, reports to the Plant Engineering Department Head;</p> <p>Acts as an interface with other internal and external resources for the TCWS system;</p> <p>In response to requests from the Director-General or proactively, informs the DG 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>Ensures the satisfaction of safety and functional thermal hydraulic requirements flow down;</p> <p>Develops & finalizes P&IDs and equipment selection / sizing in a timely manner within the defined costs;</p> <p>Develops effectively accurate operating guidelines in a timely manner;</p> <p>Produces datasheets for the procurement of the TCWS equipment in a timely manner;</p>

Measures of effectiveness	Contributes to the preparation of the Technical Specifications for the TCWS equipment procurement in a timely manner.
	SAP Id: 50003085
	Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear Engineering
Level of experience	At least 5 years
Technical experience/knowledge	<p>At least 5 years' experience in the System Engineering of complex nuclear projects, with particular reference to process design (e. g. sizing of cooling systems), P&IDs development (Instrumentation and Control Logic), equipment selection and sizing;</p> <p>Basic experience in the Thermal-Hydraulic and Thermal-Mechanics Engineering of complex systems;</p> <p>Basic experience in the Control Processes of Cooling Systems for Nuclear Power Plants or nuclear facilities;</p> <p>Basic Project Management experience is required.</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 (Fluent)
Others	<p>Knowledge of MS Office standard (Word, Excel, PowerPoint, Outlook) is required;</p> <p>Knowledge of 2D-3D CAD software is required;</p> <p>Knowledge of specific software for sizing equipment (e.g. HTRI, ASPEN, HONEYWELL etc.) is an advantage;</p> <p>Knowledge of specific software for Thermal-Hydraulic circuits calculations (e.g. Fathom) is an advantage;</p> <p>Knowledge of specific software for Thermal-Hydraulic and Thermal-Mechanics calculations (e.g. ANSYS) is an advantage.</p>