IO1433 Process and System Engineer TCWS-009 + 011

General information

Job category	Standard
Status	Published
Department	DIP/Directorate for Plant System Engineering
Division	PSE/Plant Engineering Division
Section	PSE/ PED/ Cooling Water System Section

Job description

Main job	Engineering - Mechanics
Title of the position	Process and System Engineer TCWS-009 + 011
Job family	Engineer - 1
Grade	P2
Direct employment	Not required
Purpose	This post includes a total of 2 vacancies: TCWS-009 + TCWS 011. For his/her scope of responsibility: 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; To support the Cooling Water System (CWS) Section in the preparation of the Safety Report for the TCWS; To prepare data sheets for the procurement of the TCWS equipment; To contribute to the preparation of the Technical Specification for the procurement, and the fabrication and testing of the TCWS equipment; To produce the valid documentation for the commissioning of TCWS (Commissioning Technical specifications and Commissioning Procedures).
Main duties / Responsibilities	Develops & finalizes the process engineering of TCWS namely for the PHTSs, the Chemical and Volume Control Systems (CVCS's), the Draining & Refilling System (DRS) & Drying System (DYS); Develops & finalizes the functional analysis, control logic design studies & operational guidelines for all the TCWS; Performs specific sizing calculations for TCWS equipment (e.g. pumps, heat exchangers, filters, demineralizers, etc.); Develops the overpressure protection system for TCWS; Participates in the design & conformity assessment of the TCWS equipment according to the French regulations (ESP/ESPN) & following required design codes & standards as per Licensing Design Basis; Collaborates in the fabrication of TCWS equipment according to the prescriptions of the French Nuclear Regulator (ASN) & also following the indications of the concerned Agreed Notified Body (ANB); Collaborates with the Instrumentation & Control (I&C) Engineers in the CWS Section to develop the control logic design studies & their integration in the TCWS system; Collaborates with the Nuclear Safety Engineer in the CWS Section to assess the accidental scenarios involving TCWS, the possible consequences, and the impact on the TCWS design; Supports the CWS Section for the design, procurement, assembly and/or installation & operation of the TCWS piping & components in close collaboration with Domestic Agencies & other ITER IO Directorates; Performs other duties in support of the project schedule as described in the Detailed Work Schedule & the Strategic Management Plan; Performs other duties linked to the above purpose upon management request, as necessary; Maintains a strong commitment to the implementation & perpetuation of the ITER Safety Program, values & ethics. Reports to the Cooling Water System Section Leader; Acts as an interface with other internal & external resources for the TCWS system;

Measures of effectiveness	In response to requests from the Director-General and/or Plant System Engineering (PSE) Directorate Director, or proactively, informs the DG & PSE Directorate Director of any important & urgent issues that cannot be handled by the concerned line management & may jeopardize the achievement of the Project's objectives. Ensures the satisfaction of safety and functional thermal hydraulic requirements flow down; Produces reports for TCWS equipment sizing in a timely manner; Produces datasheets for the procurement of the TCWS equipment in a timely manner; Contributes to the preparation of the Technical Specifications for the TCWS equipment procurement in a timely manner. Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear or Mechanical Engineering
Level of experience	At least 5 years
Technical experience	At least 5 years' experience in the System Engineering of complex nuclear projects; Basic experience in the Thermal-Hydraulic and Thermal-Mechanics Engineering of complex systems; Basic experience in sizing calculations for Cooling circuits' equipment; Basic experience in the Control Processes of Cooling Systems for Nuclear Power Plants or nuclear facilities.
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	Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)
Others	Knowledge required: - 2D-3D CAD software; - Specific software for sizing equipment (e.g. HTRI, ASPEN, HONEYWELL etc.) is an advantage; - Specific software for Thermal-Hydraulic circuits calculations (e.g. Fathom) is an advantage; - Specific software for Thermal-Hydraulic and Thermal-Mechanics calculations (e.g. ANSYS) is an advantage.