IO1371 System Engineer TCWS-001

General information

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

Job description

Main job	Engineering - Nuclear Power
Title of the position	System Engineer TCWS-001
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	To be responsible for the integration of Nuclear Cooling Water systems and processes. To manage the layout, integration, Quality Control (QC) of Nuclear Cooling Water systems. The ITER Tokamak Cooling Water System (TCWS) has 3 separate primary heat transport systems supported by three additional systems, with a requirement to remove approximately 1,000 MWT of heat. The systems perform a safety function for confinement of radioactive material, confinement of high energy liquid, and decay heat removal which is generally lower in magnitude (less radioactive material, pressure, and decay heat) but of similar function to commercial fission reactors. The systems have 33 km of nuclear-grade piping, which is a comparable size to a commercial fission reactor water system. The TCWS system is complex due to specialized features such as draining and baking functions that use heaters and pressurized gas.
Main duties / Responsibilities	Is responsible for the Tokamak Cooling Water System layout and design integration in close collaboration with the users, buildings and services; Supports the Tokamak Cooling Water System design, construction and operation in close collaboration with the users, the Building and Site Infrastructure Directorate and the Safety, Quality & Security Department by managing the layout and integration of the systems and reviewing the systems requirements and interfaces; Manages the Tokamak Cooling Water System integration activities; Supports the licensing and safety requirements for the Tokamak Cooling Water System by managing and reviewing the safety analysis and the compliance with the RPrS (Rapport Preliminaire de Sûreté) and DAC (Demande d'Autorisation de Creation d'INB); Manages the integration, system engineering and construction activities with the involved Domestic Agencies; Prepares and maintains the required documentation for the licensing, commissioning and operation; Ensures flow-down of requirements, implementation of nuclear safety guidelines and quality assurance standards in all the activities performed; Supports the maintenance of the configuration management for the TCWS system; Performs other duties in support of the project schedule as described in the Detailed Work Schedule and the Strategic Management Plan; Performs other duties linked to the above purpose upon management request, as necessary; Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.
Measures of effectiveness	Reports to the Section leader of the Cooling Water System; Acts as an interface with internal and external resources to coordinate the design and construction of the Tokamak Cooling Water System; In response to requests from the Director-General and/or CEP directorate Director, or proactively, informs the DG/ CEP directorate Director 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. Manages the layout of the TCWS; Manages and coordinates the interfaces of the TCWS;

	Implement techniques for the monitoring systems interfaces and requirements; Support the implementation of project plans, milestones, change control and risk plans. Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear Engineering
Level of experience	At least 8 years
Technical experience	At least 8 years' experience in the System Engineering of complex nuclear projects; Experience in coordinating and supervising technical activities; Basic Project Management experience.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	Technical ability to design and construct a nuclear plant cooling systems and components; Knowledge of design codes and standards; Proficiency in industrial cooling water components and processes.
Languages	English (Working)
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)