

IO1628 Flow Dynamics & Safety Analysis Engineer - CIO-042

General information

Job category	Standard
Status	Published
Department	CIO/ Central Integration Office
Division	CIO / Analysis Section/Division

Job description

Main job	Engineering - Mechanics
Title of the position	Flow Dynamics & Safety Analysis Engineer - CIO-042
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	<p>To be responsible for performing and verifying Computational Flow Dynamics (CFD) analyses and thermal-hydraulic analyses in support of the ITER Organization (IO) Central Team (CT) and Domestic Agencies (DAs) Engineering and Safety activities during design, construction, commissioning and operational phases of the ITER project.</p> <p>Controls the use and definition of accepted CFD computer code and thermal-hydraulic analysis code;</p> <p>Develops CFD/thermal-hydraulic analysis models or tools for common use by different engineering IO Departments and DAs and follows-up usage and adequacy following project evolution during different phases (design, constructions, commissioning and operations);</p> <p>Ensures that CFD/thermal-hydraulic analysis models have been properly archived in the ITER analysis model database;</p> <p>Defines and develops methodologies and procedures for CFD/thermal-hydraulic analyses providing proper training of the processes to the staff and controlling their proper implementation in IO, DAs and suppliers.</p> <p>Coordinates, performs, and/or controls CFD/thermal-hydraulic analyses in support to the justification of the design load specifications at plant and system levels and ensure the adequacy during different project phases (design, construction, commissioning and operation);</p> <p>Verifies consistency of load data for and between different systems and components;</p> <p>Proposes solutions to maximize the quality and reliability of CFD/thermal-hydraulic analysis calculations and reports provided by IO, DAs and their suppliers;</p> <p>Performs specific analyses in support of the Engineering and Safety Departments following project schedule needs and request from French Regulator in collaboration with the IO Safety Department;</p> <p>Identifies issues in advance and addresses them with emphasis on interfaces and design integration aspects of the plant in collaboration with the DAs;</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 be part of any of the project team dealing with the above activities and perform 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>
Main duties / Responsibilities	<p>Reports to the Analysis Section / Division Head;</p> <p>Acts as an interface with all other ITER Departments;</p> <p>In response to requests from the Director-General and/or Head of Central Integration Office (CIO), Head of CIO or proactively, informs the DG or CIO 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>Effectively controls that planned deliverables are provided on schedule and with the required quality;</p> <p>Ensures that project requirements on CFD analysis, guidelines, and procedures are properly defined, communicated and implemented in the project;</p>

Measures of effectiveness	<p>Contributes to cost saving and improvement of work efficiency;</p> <p>Generates and maintains trustworthy, up to date information related to the machine technical scope.</p>
	Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Mechanical Engineering
Level of experience	At least 8 years
Technical experience/knowledge	<p>Good knowledge of analysis methodologies and procedures for the CFD and thermal-hydraulic analyses;</p> <p>Knowledge of Finite Element method and its applications;</p> <p>At least 8 years of experience in CFD calculations and related activities;</p> <p>Experience on thermal-hydraulic analyses for nuclear power plants;</p> <p>Experience on tokamak or fusion devises is advantageous;</p> <p>Knowledge of nuclear safety and regulatory requirements.</p>
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit, Ability to organize and monitor activities
General skills	<p>Excellent capability to interact with experts from different disciplines;</p> <p>Flexible and proactive approach oriented on problem solving.</p>
Languages	English (Fluent)
Others	<p>Good skill in computer usage (super computer, cluster machines, stand-alone work station);</p> <p>Sufficient experience in CFD codes, such as ANSYS FLUENT;</p> <p>Experience working with Microsoft Office suite of programs.</p>