

JOB DETAIL

Ref. IO1683 - 4/14/2016

Thermal Hydraulic Engineer PED-032

Main job	Hydraulics
Department	PED / Plant Engineering Department
Division	PED / Cooling Systems Engineering Division
Section	PED / CSED / Cooling Water System Section
Job Family	Engineer - EC
Application Deadline (MM/DD/YYYY)	05/15/2016
Grade	P1
Direct employment	Not required
Purpose	<div>-To perform the thermal hydraulic design and transient analyses of the Cooling Water Systems (CWS). -To support the Cooling Water System (CWS) Section for the preparation of the thermal-hydraulics transient analyses requested to assess operational transients, incidents and accidents relevant for the CWS. -To contribute to the preparation of the Technical Specification for the procurement, the fabrication and testing of the CWS equipment. - Performs thermal-hydraulic analyses to assess the operational transients of the Cooling Water Systems (CWS); - Performs thermal-hydraulic analyses to assess the incidental and accidental scenarios (Loss of Coolant Accident (LOCA), Loss of Flow Accident (LOFA), Loss of Offsite Power (LOOP), etc.) relevant for CWS, proposes and implements design modifications to improve CWS response to incidents/accidents, as well as to operational transients;</div>
Main duties / Responsibilities	<div>- Participates to the finalization of the CWS functional analyses, considering the thermal hydraulic transients of all the CWS sub-systems; - Collaborates with the other Engineers in the CWS Section to finalize the process and thermal-hydraulic design of CWS and namely the Tokamak Cooling water System (TCWS); - Collaborates with the Instrumentation & Control (I&C) Engineers in the CWS Section to develop the control logic design studies and their integration in the CWS systems; - Collaborates with the Nuclear Safety Engineer to assess the incidental and accidental scenarios, the possible consequences and the impact on the CWS design; - Supports the CWS Section for the design, procurement, assembly and/or installation, commissioning and operation of the CWS piping and components in close collaboration with Domestic Agencies and other ITER Organization Departments; - Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics; - Performs other duties in support of the project schedule as described in the Detailed Work Schedule and the Strategic Management Plan; - May be requested to be part of any of the project team and performs other duties upon management request. - Reports to the Cooling Water System Section Leader; - Acts as an interface with other internal and external resources for the thermal hydraulic design and analyses of the Cooling Water Systems (CWS); - In response to requests from the Director-General and/or Plant Engineering Department (PED) Director, or proactively, informs the DG/ PED 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.</div>
Measures of effectiveness	<div>- Performs the thermal hydraulic design/analyses of the Cooling Water Systems (CWS) in a timely manner; - Provides the accurate thermal-hydraulic transient</div>

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analyses of the CWS in a timely manner;
- Ensures satisfaction of functional thermal hydraulic requirements flow down;
- Ensures the satisfaction of safety and functional thermal hydraulic requirements of the CWS.

Project construction phase

Level of study	Master or equivalent degree
Diploma	Mechanical or Nuclear Engineering or equivalent
Level of experience	At least 2 years
Technical experience/knowledge	<div>- At least 2 years' experience in performing thermal-hydraulic analyses of nuclear cooling systems; - Sufficient experience in sizing calculations of nuclear cooling systems; - Basic experience in the Control Processes of Cooling Systems for Nuclear Power Plants or nuclear facilities is considered an advantage. - Basic Project Management experience is appreciated.</div>
Social skills	<div>Ability to work effectively in a multi-cultural environment Ability to work in a team and to promote team spirit</div>
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)
Others	<div>- Knowledge of MS Office standard (Word, Excel, PowerPoint, Outlook) is required; - Very good knowledge of RELAP5 system code is required; - Basic knowledge of software for thermal-hydraulics steady state analyses (e.g. AFT Fathom) is required; - Basic knowledge of MELCORE software is also required; - Specific knowledge of software for Computational Fluid Dynamics (CFD) calculations would be an advantage; - Knowledge of 2D-3D CAD software (AVEVA PDMS or Catia and See-Visio) is appreciated.</div>
Languages	English (Fluent)

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