

IO2069 Process Engineer TCWS-028

General information

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| Job category | Standard |
| Status | Published |
| Department | PED / Plant Engineering Department |
| Division | PED / Tokamak Cooling Water System Division |
| Section | PED / TCWS / Tokamak Cooling Water System Design Section |

Job description

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| Main job | Engineering - Mechanics |
| Title of the position | Process 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 prepare Technical Specification for the procurement, and the fabrication and testing of the TCWS piping and equipment;</p> <p>To produce the valid documentation for the commissioning of TCWS (Commissioning Technical specifications and Commissioning Procedures);</p> <p>To work closely with other Divisions within the ITER Organization, including Safety, on Department.</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>Interfaces with US-Domestic Agency (DA) and US Department Of Energy officials on process engineering matters, including writing reports, and making presentations on work progress;</p> <p>Develops and finalizes 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. valves, pumps, heat exchangers, filters, demineralizers, etc.), selects equipment and produces data sheet;</p> <p>Finalizes equipment procurement specifications and follows up on their manufacturing, Factory Acceptance Tests, and delivery to the IO site;</p> <p>Manages the interfaces and Quality Assurance (QA) procedures related to PHTS Develops and finalizes commissioning procedures, implementing the necessary features in the design;</p> <p>Collaborates with the Instrumentation & Control Engineers to develop the control logic design studies and their integration in the TCWS system;</p> <p>Supports the TCWS Design Section for the design, procurement, assembly and/or installation and operation of the TCWS piping and components in close collaboration with the US DA and other ITER IO Departments;</p> <p>May be required to work shifts during the ITER assembly and commissioning phase;</p> <p>May be requested to be part of any of the project/construction teams and to perform other duties in support of the project schedule;</p> <p>Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mind set; Diversity and Inclusiveness) and Code of Conduct.</p> |
| Measures of effectiveness | <p>Reports to the TCWS Design Section Leader;</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> <p>Finalizes efficiently the Technical Specifications for the TCWS equipment procurement in a timely manner.</p> |

Applicant criteria

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| Level of study | Master or equivalent degree |
| Diploma | Mechanical, Civil or 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), Process and Instrumentation Diagram development, 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> |
| General skills | <p>Collaborate: Ability to dialogue with a wide variety of contributors and stakeholders;</p> <p>Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;</p> <p>Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;</p> <p>Manage Complexity: Ability to gather multiple and diverse sources of information to define problems accurately before moving to proposals;</p> <p>Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.</p> |
| Languages | <p>English (Fluent)</p> <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> |
| Others | <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> |