ITER 국제기구 공모 직위 직무기술서 (제97차)

❍ 5개 직위

구분	분야	소속	직위	Job No.	등급
①	플랜트 시스템 엔지니어링 (PSE)	Plant Engineering Division Cooling Water System Section	Process and System Engineer	TCWS-009	P2
②				TCWS-011	
③			Thermal Hydraulic System Engineer	TCWS-007	P1
④				TCWS-024	
⑤			Instrumentation & Control Engineer	TCWS-019	P1

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.

IO1434 Thermal Hydraulic System Engineer TCWS-007+024

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 - Nuclear Power
Title of the position	Thermal Hydraulic System Engineer TCWS-007+024
Job family	Engineer - EC
Grade	P1
Direct employment	Not required
Purpose	This post includes a total of 2 vacancies: TCWS-007 + TCWS-024. To perform the thermal hydraulic design and/or analyses of the Primary Heat Transfer Systems (PHTSs) of ITER Tokamak Cooling Water Systems (TCWS), for his/her scope of responsibility; To support the Cooling Water System (CWS) Section for the preparation of the Safety Report for the TCWS. To contribute to the preparation of the Technical Specification for the procurement, the fabrication and testing of the TCWS equipment. Background information: These PHTSs are designed to remove approximately 1,000 MW of heat from the Vacuum Vessel and the In-Vessel Plasma facing components. The relevant hydraulic circuits have a very complex piping distribution that imposes a detailed design of the flow balance of the parallel cooling lines as well as the inlet pressure to the In-Vessel components.
Main duties / Responsibilities	TCWS-007 Vacancy: Participates in the steady state thermal hydraulic design of the PHTSs of ITER TCWS by using Fathom software; Provides solutions to balance the parallel flows of cooling lines for all the clients of the PHTSs by using Fathom software; Participates in the preparation of the datasheet for the selection of the valves, orifices, pumps & other components for the PHTSs; Provides solutions for the pressure & flow control for Plant Control Systems by using valves, by-pass & pumps by Variable Frequency Drives; TCWS-024 Vacancy: Performs thermal-hydraulic analyses to assess the operational transients of the PHTSs by using RELAP software; Performs thermal-hydraulic analyses to assess the incidental & accidental scenarios (LOCA, LOFA, LOSP, etc.) of the PHTSs by using RELAP software; Collaborates with the Nuclear Safety, Licensing & Environmental Protection Division and the other System Engineers in the CWS Section to assess the incidental & accidental scenarios, the possible consequences & the impact on the TCWS design & for the preparation of the relevant Safety Report; Participates in the systems design, of TCWS ensuring a proper implementation of the prescriptions of the French Nuclear Regulator - Autorité de Sûreté Nucléaire (ASN) and also following the indications of the concerned Agreed Notified Body (ANB); Both Vacancies: Supports the CWS Section for the design, procurement, assembly and/or installation & operation of the TCWS piping & components in close collaboration with Domestic Agencies and 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 and external resources for the thermal hydraulic design & analyses of the PHTS's; 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.
Measures of effectiveness	Manages the thermal hydraulic design/analyses of the PHTSs in a timely manner; Ensures satisfaction of safety and functional thermal hydraulic requirements flow down; Manages the thermal-hydraulic transient analyses of the TCWS in a timely manner; Performs the safety analyses of the TCWS in a timely manner; Produces reports on time and with a high quality standard.
	Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear Engineering or equivalent.
Level of experience	At least 2 years
Technical experience	At least 2 years' experience in the System Engineering of complex nuclear projects; Basic experience in the Thermal Hydraulic Engineering of complex systems and projects; 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 (e.g. CATIA, SSD etc.); - Specific software for Thermal-Hydraulic circuits calculations (e.g. Fathom and RELAP); - Specific software for Thermal-Hydraulic FEM calculations (e.g. ANSYS) or CFD is an advantage; - MELCORE software is an advantage.

IO1432 Instrumentation & Control Engineer TCWS-019

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 - Control system
Title of the position	Instrumentation & Control Engineer TCWS-019
Job family	Engineer - EC
Grade	P1
Direct employment	Not required
Purpose	To contribute to the design, procurement and integration of the Tokamak Cooling Water System (TCWS) in the area of Instrumentation & Control (I&C); To support the activities of the Section in all matters relating to the Cooling Water System (CWS) process instrumentation; To define and select the instrumentations following the functional analysis for TCWS and the clients/supplier interfaces; To perform and implement the global and local control logic system properly supported by local instrumentation and Central Systems;
Main duties / Responsibilities	Develops and participates in the design and procurement of the TCWS Plant System I&C; Participates in the design and conformity assessment of the TCWS according to the French regulations for pressured equipment and following required design codes and standards as per Licensing Design Basis; Participates in the systems design and fabrication of CWS according to the prescriptions of the French Nuclear Regulator - Autorité de Sûreté Nucléaire (ASN) and also ensures proper implementation of the indications of the concerned Agreed Notified Body (ANB); Supports the Cooling Water Section for the design, procurement, assembly and/or installation and operation of the TCWS Plant System I&C in close collaboration with Domestic Agencies and other ITER IO Directorates; Participates in the manufacturing of TCWS Plant System I&C; Ensures fruitful and continuous integration in cold sinks systems commissioning, issuing and supporting issues of commissioning technical specifications and procedures; 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. Reports to the Cooling Water System Section leader; Acts as an interface with other internal and external resources for the TCWS Plant System I&C; 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 and urgent issues that cannot be handled by the concerned line management and may jeopardize the achievement of the Project's objectives.
Measures of effectiveness	Produces reports and data sheets for the design of the TCWS Plant System I&C in a timely manner; Ensures satisfaction of safety and functional requirements flow down; Manages the process control analyses of the TCWS in a timely manner; Produces reports on time and with a high quality standard. Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Electronic ,Electric Eng., I&C or Process Control
Level of experience	At least 2 years
Technical experience	At least 2 years' experience required in large plant control system design, development and implementation; Basic experience required in data acquisition and control loop; Experience in large experimental device commissioning and operation would be an advantage.
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	MS Office standard (Word, Excel, PowerPoint, Outlook)