

ITER 국제기구 공모 직위 직무기술서 (제186차)

○ 3개 직위

구분	분야	소속	직위	Job No.	등급
①	플랜트 엔지니어링 (PED)	Fuel Cycle Engineering Division Vacuum Section	Vacuum Mechanical Engineer	PED-015	P4
②		Fuel Cycle Engineering Division Tritium Plant Section	Tritium Plant Engineer	PED-056	P4
③		Cooling Systems Engineering Division Cryogenic System Section	Cryogenic Lines Officer	PED-059	P3

IO1819 Vacuum Mechanical Engineer - PED-015

General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Division	PED / Fuel Cycle Engineering Division
Section	PED / FCED / Vacuum Section

Job description

Main job	Engineering - Vacuum technologies
Title of the position	Vacuum Mechanical Engineer - PED-015
Job family	Coordinating Engineer
Grade	P4
Direct employment	Not required
Purpose	<p>-To be responsible for the mechanical design of vacuum system components from their preliminary design phase through to installation and commissioning.</p> <p>-To ensure their validations and that code, safety, and performance requirements are satisfied through their life cycle.</p> <p>-To be specifically responsible as Technical Responsible Officer for the Tokamak dust filtering system from after the approval of its conceptual design through to operations.</p> <p>-To act as part of the vacuum team providing support to ensure ITER is built to the necessary vacuum standards and to schedule.</p>
Main duties / Responsibilities	<p>-Develops and manages the Procurement Arrangement for the vacuum tokamak dust filtering system and then follows this procurement through the preliminary and finals design phases to component delivery;</p> <p>-Manages the validation program for the dust filtering system, performed either within the US Domestic Agency or by ITER Organization Central-Team direct contracts, to ensure that the nuclear safety functions performed by the system will be validated and accepted by the nuclear regulator;</p> <p>-Maintains and coordinates the interface to the dust filtering system including remote handling to ensure integration through its life cycle;</p> <p>-Identifies and surveys critical activities in manufacturing;</p> <p>-Prepares schemes and procedures for installation;</p> <p>-Prepares the commissioning procedures, operational schemes, and maintenance to ensure the filtering system will perform its safety functions;</p> <p>-Performs and co-ordinates nuclear safety analysis;</p> <p>-Prepares and performs commissioning of ITER's vacuum system mechanical components;</p> <p>-Provides effective leadership for support teams of vacuum technicians and leak test personnel during vacuum related machine assembly as required;</p> <p>-Performs other duties in support of the project schedule;</p> <p>-May be requested to be part of any of the project/construction teams and to perform other duties;</p> <p>-Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p> <p>Special notice: May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Full training and support will be provided by the ITER Organization.</p> <p>-Reports to Vacuum Section Leader;</p> <p>-Acts as an interface between Vacuum and other technical Section in the ITER Organization (IO) and with Domestic Agencies (DAs) and contractors;</p> <p>-In response to requests from the Director-General and/or Plant Engineering Department (PED) Head , or proactively, informs the DG/Director of Head of PED 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>

Measures of effectiveness	<ul style="list-style-type: none"> -Progresses systems analysis according to DWS and SMP; -Achieves components and systems design, installation and testing within the defined cost and schedule; -Controls and monitors efficiently interfaces and integrates vacuum components and systems with other pertinent ITER systems; -Coordinates and directs efficient efforts of the IO and the DA's in respect to vacuum design analysis; -Communicates effectively with other Section in ITER on vacuum related issues. <p>Project Construction Phase ID SAP 50000657</p>
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Applicant criteria

Level of study	Master or equivalent degree
Diploma	Mechanical, Nuclear Eng. or other relevant field
Level of experience	At least 10 years
Technical experience/knowledge	<ul style="list-style-type: none"> -Excellent knowledge in vacuum, gas dynamics and dust transportation; -Knowledge in the design of nuclear shielding and confinement systems; -Knowledge of ventilation systems and HVAC would be an advantage; -Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains are properly evaluated as additional value. -At least 10 years' experience in vacuum component and systems design, and in weld design and techniques; -Experience in gas dynamics and stress analysis; -Experience of working with pressure equipment directives and standards; -Experience in engineering in harsh and nuclear environments; -Experience in nuclear engineering. -Experience in managing contracts for vacuum components and systems; -Project Management experience is required.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	<ul style="list-style-type: none"> -Good command of MS Office, -High level experience of using CAD tools in 2D and 3D (AVEVA and CATIA) -Experience in using data bases would be an advantage.
Languages	English (Fluent)
Specific skills	CATIA, Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)

IO1822 Tritium Plant Engineer - PED-056

General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Division	PED / Fuel Cycle Engineering Division
Section	PED / FCED / Tritium Plant Section

Job description

Main job	Engineering - Nuclear Power
Title of the position	Tritium Plant Engineer - PED-056
Job family	Coordinating Engineer
Grade	P4
Direct employment	Not required
Purpose	<p>-To perform and oversee the design and manufacturing of selected Tritium Plant sub-systems of ITER and the planning of integrated plant wide lifecycle aspect (i.e. testing, commissioning, operation, maintenance and decommissioning).</p> <p>-The work involves identifying requirements and implementation, technical trade studies, system design, value engineering, interface management, control systems, document preparation, contract management and coordinating plant wide lifecycle planning.</p> <p>-This is followed by fabrication and procurement of the designed system. Work is performed in a formal, quality assured environment consistent with a nuclear facility.</p>
Main duties / Responsibilities	<p>-Is responsible for functional analysis and optimization of the sub-system requirements and design solutions considering safety, risks, costs, and other constraints;</p> <p>-Is responsible for coordinating and planning consistent plant wide approaches for the full plant lifecycle including testing, commissioning, operation, maintenance and decommissioning;</p> <p>-Is responsible for compiling and maintaining design basis documentation and supporting documents using formal review procedures;</p> <p>-Manages functional and physical interfaces insuring systems consistency and that the design results in harmonized, practical operation;</p> <p>-Develops operational and maintenance tactical plans following established strategies;</p> <p>-Develops and establishes installation, testing, and commissioning plans within agreed framework</p> <p>-Provides support for safety basis development and documentation;</p> <p>-As much of the design/build work is performed by contractors, duties include procurement input, and contract administration;</p> <p>-Performs other duties in support of the project schedule;</p> <p>-May be requested to be part of any of the project/construction teams and to perform other duties;</p> <p>-Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p> <p>Special notice: May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Full training and support will be provided by the ITER Organization;</p> <p>-Reports to the Tritium Plant Section Leader;</p> <p>-Manages the System interfaces together with responsible officers for interfacing systems;</p> <p>-Interfaces with DAs and contractors.</p> <p>-In response to requests from the Director-General and/or Head of the Plant Engineering Department (PED), or proactively, informs the DG/Head of PED 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>
Measures of effectiveness	<p>-Elaborates clear and thorough documents;</p> <p>-Produces quality and timeless works;</p>

- Finds practical, cost-effective, manageable and efficient solutions to issues;
- Communicates with personnel associated with interfacing systems and management;
- Performs work safely and with regard for safety in designs

Project Construction Phase
SAP ID: 50000953

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear, Chemical or Mechanical Engineering
Level of experience	At least 10 years
Technical experience/knowledge	<ul style="list-style-type: none"> -Excellent understanding of integrating gas processing plant in a nuclear environment -Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree. -At least 10 years' experience relevant to industrial design, integration, commissioning and operation of gas treatment system of a nuclear facility; -Proven experience in large design/build projects through all phases, i.e. conceptual, preliminary and final design, followed by manufacturing, installation and commissioning; -Experience with tritium handling equipment and practices is advantageous; -Knowledge and practical experience with cryogenics, high vacuum and pumping technologies; -Experience in a systematic and controlled design process; -Ability to write clear, well-organized technical documents in English. -Good Project Management experience is required.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	<ul style="list-style-type: none"> -Ability to provide line management with verbal and written reports -Ability to communicate and negotiate within a team environment
Languages	English (Fluent)
Specific skills	CATIA, Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)
Others	<ul style="list-style-type: none"> - Ability to perform computer modeling of distillation and process control systems. -It is essential and high level appreciated CAD extensive knowledge in 2d / 3D with Tools as CATIA and AVEVA / PDMS.

IO1823 Cryogenic Lines Officer - PED-059

General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Division	PED / Cooling Systems Engineering Division
Section	PED / CSED / Cryogenic System Section

Job description

Main job	Engineering - Cryogenics
Title of the position	Cryogenic Lines Officer - PED-059
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	<p>-To lead in close collaboration with the Indian Domestic Agency, the cryolines project execution from its design phase to the commission phase.</p> <p>It covers the design, the procurement, the installation and testing of the cryoline system for the ITER tokamak;</p> <p>-This includes all sets of cryogenic transfer lines to connect with the magnets, the 80 K tokamak thermal shields and the cryo-vacuum pumps, including transfer lines for the cryoplant cold box building.</p> <p>-Ensures that the project execution is aligned with the safety, technical and schedule requirements of the ITER project;</p> <p>-Organizes and coordinates supported by other Responsible officers, the various design reviews and actions follow up, recorded all along the project execution;</p> <p>-Develops the technical specifications and revision of the Project Integration documents related to the cryolines;</p> <p>-Revises and improves, or ensures it is done by corresponding experts, that the process diagrams and design interfaces of the cryolines with the cryoplant process boxes and all ITER cryogenic users, namely the magnets, the cryo-vacuum pumps and the 80 K thermal shields for the Tokamak;</p> <p>-Develops the detailed layout, internal design and routing of the cryolines inside both the tokamak and Cryoplant Cold Box buildings and between these two buildings;</p> <p>-Develops the programs and schedules (assembly sequence) to build, test and commission the cryoline system;</p>
Main duties / Responsibilities	<p>-Develops the technical specification related to the cryolines installation in the tokamak complex</p> <p>-May be required to work outside normal working hours, including nights, weekends and public holidays;</p> <p>-Performs other duties in support of the project schedule;</p> <p>-May be requested to be part of any of the project/construction team and perform other duties;</p> <p>Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.</p> <p>-Reports to Cryogenic System Section Leader;</p> <p>-Acts as an interface between magnets, thermal shields, the cryopumps and the cryoplant;</p> <p>-In response to requests from the Director-General and/or Head of the Plant Engineering Department (PED), or proactively, informs the DG/Head of PED 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>-Defines and implements the concept of the cryolines and cryodistribution system within the defined cost and schedule;</p> <p>-Manages efficiently interfaces between the cryogenic system and cryogenic users;</p> <p>-Manages plans for installation, tests commissioning and operation within the defined cost and schedule;</p>
Measures of effectiveness	<p>-Maintains an effective communication with all parties delivering the subsystem.</p>

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Mechanical Eng, Cryogenics, or other discipline
Level of experience	At least 8 years -Proficiency in the design codes and standards; -Excellent knowledge of fabrication, welding and leak testing techniques; -Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.
Technical experience/knowledge	-At least 8 years' experience in the development, design, procurement and commissioning of a large cryogenic system with fusion, accelerator, scientific or industrial applications; -Good experience of industrially proven cryogenic equipment, instrumentation and controls in world markets and associated research and development for specific applications; -Good knowledge of thermal-hydraulic and thermo-mechanical analysis tools; -Good experience of assembly, factory acceptance tests and commissioning of complex cryogenic equipment; -Good Project Management experience is required.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
Languages	English (Fluent)
Specific skills	Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook)
Others	-Excellent knowledge in CAD Tools (AVEVA / PDMS and CATIA) to generate 2D Drawings and 3D Models is highly appreciated..