

ITER 국제기구 공모 직위 직무기술서 (제198차)

○ 2개 직위

구분	분야	소속	직위	Job No.	등급
①	과학·운전 (SCOD)	Science & Operations Department	Instrumentation & Control Engineer	SCOD-078	P3
②	토카막 엔지니어링 (TED)	Port Plugs & Diagnostics Integration Division In-Vessel Diagnostics Section	Optical Diagnostics Engineer	TED-115	P3

IO1839 Instrumentation & Control Engineer - SCOD-078

General information

Job category	Standard
Status	Published
Department	SCOD / Science & Operations Department

Job description

Main job	Engineering - Control system
Title of the position	Instrumentation & Control Engineer - SCOD-078
Job family	Engineer - 2
Grade	P3
Direct employment	Required
Purpose	<p>In collaboration with the Access Control and Security Responsible Officer, to perform and monitor activities linked to the design and delivery of the Access Control and Security systems, the qualification as well as the procurement, installation, integration and commissioning of the system.</p> <p>To ensure the interface management with other systems such as buildings, electrical, safety, control system and IT.</p> <p>To prepare and provide required engineering input data to supply and construction Contractors.</p> <p>To provide technical support by reviewing and accepting Contractors deliverables.</p> <p>To contribute to the effective integration and site acceptance testing of the Access Control and Security systems.</p>
Main duties / Responsibilities	<p>Background information:</p> <p>The Access Control and Security system is composed by the security subsystems, the public address subsystem, the emergency buttons subsystem, the sirens and stroboscopic lights alarm subsystem, and the emergency phone subsystem.</p> <p>Some of the subsystems are subject to licensing by the French nuclear safety authority (ASN) and shall comply with the international nuclear standards (IEC61513 and associated standards). The security subsystems are subject to French Order of 10 June 2011 on the physical protection of facilities housing nuclear materials for which possession requires authorization</p> <ul style="list-style-type: none">-Keeps up-to-date the Master File of Access Control and Security components, which is used for releasing the data needed by the Contractors in charge of the design, acceptance and installation of the Access Control and Security system;-Delivers Cost Estimations for their scope of work;-Delivers Bills of Materials and Bills of Quantities, with different granularity levels;-Delivers Fire Loads estimations, Key plans specifications and provides input for Technical Specifications;-Delivers the documents for creating the 2D and 3D diagrams required for Construction;-Delivers the documentation needed for field deployment of Access Control and Security equipment;-Keeps the interface documents updated and recorded according to the Management Quality Program;-Takes parts in Design Reviews and Integration meetings reviewing deliverables, alerting on technical issues and proposing solutions;-Takes part in definition and execution of site acceptance tests, reviewing deliverables, performing surveillance tasks, alerting on technical issues and managing deviations;-Supports proper monitoring of procurement and follow-up of contracts, issuing and maintaining regular reports, preventing claims and solving issues;-Creates, reviews and/or updates proposals of defense schemes for buildings, which are submitted to the IO Security Officer for approval;-May be required to work outside normal working hours, including nights, weekends and public holidays;-Performs other duties in support of the project schedule;-May be requested to be part of any of the project/construction teams and to perform other duties upon management request;-Maintains a strong commitment to the implementation and perpetuation of the ITER Safety

Measures of effectiveness	<p>Program, ITER Security culture, ITER values and ethics;</p> <ul style="list-style-type: none"> -Reports to the Plant Control and Instrumentation Section Leader; -Collaborates with the ITER Safety Department in order to ensure that the security and safety requirements are correctly implemented; -Interacts frequently with the Building Infrastructure and Power Supply Project Team, Safety Department and Construction Department; , -In response to requests from the Director-General and/or Director of Science and Operations, or proactively, informs the DG/ Director of Science and Operations 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; -Conducts properly the design of the initial cabling to be instructed to Construction Department, respecting ITER IO design rules, and in compliance with safety related I&C standards within the defined schedule; -Develops efficiently the interfaces between the Access Control and Security system and buildings, electrical, safety, control system and IT; -Establish efficient working relations with the ITER Security Officer; -Contributes effectively to the achievement of Access Control and Security objectives, meeting project requirements within the defined schedule; -Supports supervision of Contractors deliveries and anticipates problems; -Keeps the relevant documentation up-to-date.
	<p>Project Construction Phase SAP Id: 50000791</p>

Applicant criteria

Technical experience/knowledge	Level of study	Master or equivalent degree
	Diploma	Engineering, security, control systems, electronic
	Level of experience	At least 8 years
		<ul style="list-style-type: none"> -At least 8 years of practical experience in electronic engineering including: cabling design, cabling implementation, testing and commissioning; writing specifications; the use of 2D and 3D diagrams; electronics integration to electro-mechanic machines; -Relevant experience in the design of Security countermeasures; -Practical experience in conducting integration, acceptance and commissioning of fields sensors/actuators, security and Instrumentation & Control systems.
		-Extensive practical experience in similar jobs (involving similar work responsibilities). Academic experience or training may be considered a reasonable substitute for the required educational degree but will not be automatically taken as equivalent of practical experience.
	Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit, Ability to communicate effectively
	Languages	English (Fluent)
	Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)
	Others	-Excellent computer and IT skills are mandatory.

IO1841 Optical Diagnostics Engineer - TED-115

General information

Job category	Standard
Status	Published
Department	TED / Tokamak Engineering Department
Division	TED / Port Plugs & Diagnostics Integration Division
Section	TED / PPD / In-Vessel Diagnostics Section

Job description

Main job	Engineering - Diagnostics
Title of the position	Optical Diagnostics Engineer - TED-115
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	<p>To manage certain laser-based diagnostics in the Thomson Scattering, Erosion/Speckle, Fiber Endoscopy and similar areas. To ensure integration and maintain interfaces for these systems and plan all related assembly and commissioning activities. To lead the detailed design, organize and verify all supporting work, including R&D and manufacturing for two of these systems.</p>
Main duties / Responsibilities	<p>-Manages at least two laser-based diagnostic projects procured by IO-Central Team (CT) as outlined above;</p> <p>-Develops the detailed design of IO-CT procured optical diagnostic projects (as above):</p> <p>-Develops calibration strategies in the context of systems;</p> <p>-Develops the design of interfaces; Drives and contributes to relevant integration activities; Checks and ensures maintenance of relevant ITER databases.</p> <p>-Specifies and oversees the creation and updates of 2D-diagrams;</p> <p>-Updates and takes through review all relevant supporting engineering documents;</p> <p>-Leads the design review processes;</p> <p>-Prepares technical specifications for procurement with industry;</p> <p>-Ensures DA and ITER Organization (IO) schedules are compatible at all times;</p> <p>-Leads and coordinates efforts for laser-based R&D for these and other systems:</p> <p>-Provides oversight of domestic agency activities</p> <p>-Detail system requirements and evaluate conformance</p> <p>-Lead interface resolution</p> <p>-Manages commissioning preparation activities and work closely with the commissioning team.</p> <p>-Monitors service deliverable based contracts;</p> <p>-Reports variances on all technical, cost and schedule aspects;</p> <p>-Supports effective risk identification and management;</p> <p>-Manages the change control process for the work;</p> <p>-Maintains related documentation at all times on the ITER Document System and ensures it is updated and in the correct formats;</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. Training and support will be provided by the ITER Organization.</p> <p>-Reports to the In-Vessel Diagnostics Section Leader;</p> <p>-Interfaces with ITER Technical Departments as required;</p> <p>-Communicates with other organizations within the ITER fusion community. In response to requests from the Director-General and/or Head of Tokamak Engineering Department (TED), or proactively, informs the DG/ TED 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</p>

Measures of effectiveness	objectives.
	<ul style="list-style-type: none"> -Work packages completed to agreed costs, quality and deadlines; -Developed and approved interfaces documentation, schematics plans and databases; -Issuance & maintenance of accurate technical documentation for procurement; -Developed and approved installation plans; -Successful collaboration with technical partners in Domestic Agencies and other Departments at ITER Organization (IO); -Efficient team work at all times with other Diagnostics staff members.
Project Construction Phase SAP 50002527	

Applicant criteria

	Level of study	Master or equivalent degree
	Diploma	Physics or Engineering
	Level of experience	At least 8 years
	Technical experience/knowledge	<ul style="list-style-type: none"> -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 above mentioned educational degree; -Basic knowledge of nuclear effects on materials.
		<ul style="list-style-type: none"> -At least 8 years' experience in a fusion-related field; -Proven experience in the design of laser-based systems and optical engineering; -Ability to manage project costs and resources for technical projects; -Experience in fusion experimental operations or equivalent; -Experience with design defense in technical design reviews and technical follow-up of CAD activity; -Familiarity with electrical diagrams.
	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"> -Proven writing and verbal presentation skills; -Track record of first author publications in English.
	Languages	English (Fluent)
	Specific skills	CATIA, MS Office standard (Word, Excel, PowerPoint, Outlook)
	Others	-Familiarity with CATIA; Zemax or equivalent
		-Experience with requirements management software (eg DOORS);