ITER 국제기구 공모 직위 직무기술서 (제226차)

❍ 1개 직위

구분	분야	소속	직위	Job No.	등급
①	토카막 엔지니어링 (TED)	Heating & Current Drive Division Electron Cyclotron Section	Control Systems Engineer	TED-153	P3

IO1930 Control Systems Engineer - TED-153

General information

Job category	Standard
Status	Published
Department	TED / Tokamak Engineering Department
Division	TED / Heating & Current Drive Division
Section	TED / HCD / Electron Cyclotron Section

Job description

Main job	Engineering - Control system
Title of the position	Control Systems Engineer - TED-153
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	To be technical responsible officer (TRO) for the Electron Cyclotron (EC) Instrumentation and Control System (EC-I&C), which is the integrated main and sub-system control units that interface between the ITER control system and the hardware of the EC plant. This task includes the coordination of the I&C system design finalization, coordination of technical specifications definitions, I&C system requirements, oversight of the PA activities leading to installation, commissioning and operation of the EC-I&C. The I&C-TRO will also be responsible for Quality Assurance (QA) support, design and Safety and manufacturing follow-up; development of installation, operation and maintenance plans.
Main duties / Responsibilities	-Performs the duties of the technical responsible officer for the Electron Cyclotron Instrumentation and Control System (EC-I&C) procurement, which includes design finalization, manufacturing oversight, installation, commissioning and operations phases; -Co-ordinates the development of the I&C main and sub-system control units (SCU) final design in collaboration with IO-CT (ITER Central Team) and IO-EC Domestic Agencies (DAs: European, India, Japan, Russia and US); -Provides the primary point of contact with the DAs in all technical aspects of the I&C systems and the interface requirements between the main controller, sub-system control units (SCU), the hardware and CODAC; -Ensures DA compliance with the instrumentation and control systems and collaborates with the DAs in the contact with third parties and industries involved in the development of the different I&C components; -Contributes to all work related to definition of the interfaces of the control and data acquisition system with the auxiliary systems like the gas, water and electrical systems; -Takes a leading role to define the interfaces between the mechanical components of the EC system and the instrumentation; -Coordinates the design, procurement, installation and commissioning of the EC system local Control zone that facilitates the local control of the EC components in the RF Building (Power Supplies, Gyrotrons and Transmission Lines); -Manages the specifications, procurement and commissioning of the EC test equipment and instrumentation used during the EC plant installation and maintenance, which includes microwave, high voltage and low voltage equipment; -Ensures design compliance with ITER project requirements and with other ITER systems interfacing with the EC-I&C; -Monitors the final design development and prototype tests of the EC-I&C; -Co-ordinates the development of the draft qualification and test program of the EC-I&C leading to a final qualification program associated with the manufacturing, assembly, installation and commissioning of the related SCU and Main control units; -Assists in the monitoring of Quality Programs associated with the sub-system procurements; -Provides assistance in the above activities for the overall EC system development; -Performs the associated measurements (in collaboration with the other EC TROs) of the installed EC equipment to ensure compliance for operation; -Performs calibration of the EC-I&C system and defines the periodic inspection plans;

Measures of effectiveness	-Maintains the requirement compliance matrix associated with the EC-I&C based on the above measurements; -May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays; -Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain; -May be requested to be part of any of the project/construction teams and to perform other duties in support of the project schedule; -Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics. -Reports to the Electron Cyclotron Section Leader; -Acts as an interface between the ITER Organization and the Domestic Agencies in developing/monitoring/evaluating contracts, task agreements and system development management; -In response to requests from the Director-General and/or Tokamak Engineering Department (TED) Head, 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 objectives. -Achieves the development of the EC-I&C final design progressing toward procurement as measured by the annual work plan and project master schedule milestones; -Improves and updates documentation management, quality compliance, system integration associated with the EC-I&C; -Develops within the defined schedule the technical specifications and procedures to ensure the EC-I&C is compliant with IO requirements and Safety regulations; -Prepares the test program and test equipment requirements documents within the defined cost and schedule. Project Construction Phase

Applicant criteria

Level of study	Master or equivalent degree
Diploma	Control or Electrical Engineering field or other
Level of experience	At least 8 years
Technical experience/knowledge	-At least 8 years' experience working with the design, installation and operation of I&C systems; -At least 3 years' experience in the design and development of I&C control systems for EC plants or equivalent; -A clear understanding of the problems related to the control of an EC plant including experience in interfacing between I&C and microwave transmission lines, gyrotrons, and power supplies; --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.
Social skills	Ability to communicate effectively, Ability to effectively multi-task
General skills	-Ability to facilitate dialogue and negotiate with a wide variety of contributors and stakeholders; -Ability to listen and adjust communication content and style to deliver messages; -Ability to work in a team and to promote team work; -Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.
Languages	English (Fluent)
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)
Others	-Ability to use all Microsoft Office products; -Experience with MDS+ and/or Labview is an advantage.