My space

See jobs

My job alert

JOB DETAIL

Ref. IO1942 - 1/22/2018

Control Systems Integration Engineer SCOD-044&053

Main job	Control system
Department	SCOD / Science & Operations Department
Section	SCOD / CSD / Plant Control & Instrumentation Section
Job Family	Engineer - 2
Application Deadline (MM/DD/YYYY)	03/04/2018
Grade	P3
Direct employment	Required
Purpose	Two openings To plan, organize and execute the integration and commissioning of some ITER Plant Systems in the central control system composing conventional control (CODAC), Central Interlock System and Central Safety Systems. To take ownership and be responsible for the Instrumentation and Control (I&C) of a set of ITER Plant Systems delivered by ITER Members. To develop detailed I&C integration procedures, execute them and generate the associated test reports. To diagnose errors and implement solutions related to I&C integration. To review and maintain up-to-date the functional and physical interfaces between central control system and ITER Plant Systems. To propose, develop and carry-out solutions in order to allow, ease, improve, support and maintain the Programmable Logic Controllers (PLC) for the ITER Plant Systems in order to ensure their proper integration with the central control system.
Main duties / Responsibilities	Background information: The Control System Division is responsible for integrating ~170 plant systems, provided by the ITER members, in the Central Control Systems composed of CODAC, the Central Interlock Systems and the Central Safety Systems. I&C standards have been established and software frameworks developed. These are based on Siemens S7 series of PLC, PCIe based fast controllers, Ethernet TCP/IP communication and open source software (Linux, Experimental Physics and Industrial Control System – EPICS, Control System Studio, etc.). Integration will start in 2018 and continue up to first plasma. -Interacts with Plant Systems I&C Responsible Officer and suppliers by supporting their design and acceptances, ensuring compliance to standards developed by Control System Division; -Ensures that physical and functional interfaces between Plant Systems I&C and central control system are maintained up-to-date; -Leads the development of I&C integration plans and procedures for defined Plant Systems I&C; -Ensures that I&C integration procedures are correctly executed, errors are diagnosed, solutions proposed and implemented and test reports generated; -Supports the commissioning and operation of Plant Systems I&C and implements required changes to I&C; -Proposes and implements improvements to Programmable Logic Controller (PLC) used in Plant System I&C; -Maintains up-to-date the Plant Control Design Handbook documentation, especially the PLC Software Engineering Handbook; -May be required to work outside normal working hours, including nights, weekends and public holidays; -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.
Measures of effectiveness	-Reports to the Plant Control and Instrumentation Section Leader; -Interacts frequently with plant system responsible officers within the ITER Organization Central Teams (IO-CT) as well as in the Domestic Agencies (IO-DA), for Plant System Instrumentation and Control matters; -In response to requests from the Director-General and/or Control System Division Head, or proactively, informs the DG/Control System Division 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. -Integrates Plant System I&C in central control system in a successful and timely manner; -Proposes and implements solutions for problems encountered in a timely manner in order to achieve the integration of the ITER plant systems; -Supports the commissioning, operation and maintenance of integrated ITER Plant System I&C; -Maintains up-to-date the documentation related to plant system I&C interface with central control system; Project Construction Phase ID SAP: 50000286
Level of study	Master or equivalent degree
Diploma	Electronics / Computer Science or equivalent
Level of experience	At least 8 years
Technical experience/knowledge	-At least 8 years' experience in designing, installing and commissioning of scientific control systems or large scale industrial plant I&C systems; -Extensive practical experience in integration and commissioning of heterogeneous I&C systems, including issues identification and resolution; -5 years of practical experience in the development of Siemens S7 PLC industrial software for conventional and/or safety I&C application, including troubleshooting is considered as an advantage; -Practical experience in instrumentation (sensors, actuators, …) is considered as an advantage; -Experience of 'working/maintaining' facilities or large scale industrial plant systems; -Experience in mounting, wiring and testing electrical enclosures; -Practical experience with common laboratory tools like oscilloscopes, multi-meters and signal generators.
Social skills	Ability to work effectively in a multi-cultural environment Ability to work in a team and to promote team spirit
Specific skills	MS Office professional (Access, Project, Publisher, Visio) MS Office standard (Word, Excel, PowerPoint, Outlook) Sharepoint
General skills	-Excellent capacity to organize and prioritize activities; -Ability to coordinate technical team, listening and adjusting communication content and style to deliver messages; -Ability to work under pressure and deliver in due time; -Ability to implement high standards of trust, excellence, loyalty and integrity.
Others	-Extensive Practical experience in Siemens Step 7 and TIA portal environments; -Experience in the development with Siemens S7-300, S7-400 and S7-1500 PLCs; -Experience in in the development of TCP/IP communications; -Practical experience in developing PLC software based on CFC, F-System and distributed safety libraries; -Relevant experience in EPICS and/or industrial SCADA systems; -Some experience in Linux, virtualization environments and real-time operating systems; -Excellent computer and IT skills with Microsoft Office Tools (Outlook, Word, Excel, Visio, SharePoint) is mandatory.
Languages	English (Fluent)