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Ref. IO1729 - 6/24/2016

Control Systems Eng. (Invest. Protection) SCOD-017

Main job	Electronics
Department	SCOD / Science & Operations Department
Division	SCOD / Control System Division
Section	SCOD / CSD / Plant Control & Instrumentation Section
Job Family	Engineer - 2
Application Deadline (MM/DD/YYYY)	07/24/2016
Grade	P3
Direct employment	Not required
Purpose	-To be responsible for supporting the Interlocks team in

 -To be responsible for supporting the Interlocks team in configuring, testing and validating the Siemens
Programmable Logic Controllers (PLCs) for the Central Interlock System.

-To prepare, plan, coordinate and verify the test processes and procedures for the Central Interlock System functions, participate in and support the test and validation of interlock functions in the field, to support the integration of Siemens PLCs with ITER SCADA systems including CODAC (Control, Data Access and Communication) and WinCC-OA, as well as support the design of Siemens Programmable Logic Controls for the Central Safety System and Conventional Industrial Controls systems.

-To also provide expert support to the ITER Domestic Agencies and Contractors developing Instrumentation and Control which implement Programmable Logic for the Plant Interlock Systems.

Background information:

-The Investment Protection System is designed to prevent damage to the ITER Tokamak and support systems due to off normal conditions and/or failures. The Central Interlock System (CIS) is designed to marshal interlocks between the various Plant Systems where inter-system communication is required.

-Local Plant Interlock systems (PIS) are being developed by the various Domestic Agencies and suppliers, and once they arrive at the ITER site these systems will be integrated with the CIS to provide an overall protection system for the ITER facility.

Main duties / Responsibilities

-Solves complex issues with Siemens Programmable Logic Controllers and the interfaces to Plant Systems;

 -Develops standards and templates for use by developers of plant system instrumentation and control where PLCs are implemented;

-Resolves issues with interfaces to plant sensors and actuators as well as with the SCADA systems (CODAC and WinCC-OA);

 -Proposes design solutions to I&C developers, Plant System Responsible Officers and Controls Division staff;
-Participates in factory and site acceptance testing of Plant systems with local Interlock controls as well as central interlock functions;

-Interfaces with the interlocks team Technical Responsible Officer (TRO), Safety Systems team RO and Integration team ROs.

-Works in close collaboration with IO-Domestic Agencies and sub-contractors to ensure compliance to the Plant Control Design Handbook (PCDH) and to propose solutions to enable this;

-Performs other duties in support of the project schedule as described in the Detailed Work Schedule and the Strategic Management Plan;

 -May be requested to be part of any of the project team and perform other duties upon management request;
-Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.

- -Reports to the Plant Control and Instrumentation Section Leader;
- -Interacts frequently with the CIS RO and TRO.
- -Works to effectively support the requirements of the DAs and contractors developing interlocks.
- -In response to requests from the Director-General and/or Head of SCOD Department, or proactively, informs the DG/Department 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.

Measures of effectiveness

- -Maintains effective communication with Programmable Logic Controllers developers, resolving issues as they
- -Makes effective proposals for long term solutions to issues raised by developers and integrates these solutions into the CSD roadmap;
- -Maintains efficiently the documentation in support of plant system integration of Programmable Logic Controllers for the division.

ID SAP: 50001173 Project Construction Phase

Level of study At least Bachelor's degree or equivalent

Diploma Electronic/Computer Engineering or othe

Level of experience At least 8 years

Technical experience/knowledge

- -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 8 years of professional experience in the development of Siemens Programmable Logic Controllers, preferably implementing interlocks in a scientific or industrial environment.
- -Knowledge of various sensors and actuators used in harsh environments.
- -Experience with the development of EPICS device support for Siemens PLCs is highly desirable
- -Experience in the development of Industrial SCADA is required.
- -Demonstrated experience delivering quality results on a tight schedule

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

Specific skills MS Office standard (Word, Excel, PowerPoint, Outlook)

Languages English (Fluent)



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