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Control and Instrumentation/Software Engineer CHD-069

Reports to Line Manager:	CODAC Section Leader, CODAC & IT Division, Department for CODAC & IT, Heating & Current Drive, Diagnostics	**Job Code:**	CHD-069
Direct Employment:	Not Required	**Grade:**	P3

china
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india
japan
korea
russia
usa

Purpose

The CODAC Section is developing standards for and is responsible for the integration of the Plant Systems instrumentation and control (subsystems) provided by the seven ITER parties' Domestic Agencies (DA). The number of Plant Systems is estimated to be in the order of 150 and will be developed over a period of ten years. The CODAC Section will support the development of these Plant Systems instrumentation and control with a dedicated team.

The candidate will be a self-motivated Control & Instrumentation engineer with expertise in software based systems design. He will be a leading member of this team contributing to the specification, design, testing and integration of CODAC standards.

Major Duties/Responsibilities

- Provides authoritative design and analytical services for the ITER plant systems control and instrumentation ensuring high standards of continuous and reliable operation;
- Develops and fosters the application of standards for the Plant System instrumentation and control, based on relevant industry standards or on advanced technologies where required;
- Ensures the development of interfaces for his/her assigned plant systems;
- Supervises contracts to assist in the development of control and instrumentation systems;
- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.

Qualifications and Experience

- ***Education:***
  - Degree at least equivalent to 5 years of study after the High School Diploma in Science or Engineering.
- ***Technical experience:***
  - At least 6 years of practical experience in developing and using instrumentation and control systems;
  - At least 6 years of practical experience in a research or industrial environment with a similar scope of work;
  - Good knowledge of digital electronics for signal conditionings, embedded control, remote input/output and Programmable Logic Controllers;

  - Good knowledge of Linux and real-time operating systems;
  - Good knowledge of the integration of large systems;
  - A clear understanding of the problems linked with the control system of a large facility and the integration of heterogeneous industrial subsystems is required.
- ***Project experience:***
  - Experience in executing contracts with external partners or industry;
  - At least some experience participating in a large international project to develop a control system.
- ***Social Skills:***
  - Ability to work effectively in a multi-cultural environment;
  - Ability to work in a team and to promote team work.
- ***Language requirements:***
  - Fluent in English (written and spoken).

Direct Supervisor and Interfaces

- Reports to CODAC Section Leader;
- Acts as an interface between the relevant Responsible Officers for the local plant control system implementations.

Authority / Approval Levels

This position has authority and approval levels generally defined by the Section Leader for his scope of work.

Measures of Effectiveness

- Successfully establishes effective instrumentation and control designs for all the relevant plant systems;
- Successfully manages the contracts for instrumentation and control support;
- Prepares the documentation for the call for tender in a timely manner;
- Successfully prepares for the system installations on ITER;
- Successfully prepares and carries out the local systems' commissioning.