

Cryogenic Process and Integration Technical Engineer

CEP-115

Reports to Line Manager:	Cryogenic System Section Leader, Plant Engineering Division, Central Engineering and Plant Support Department	Job Code:	CEP-115
Direct Employment:	Required	Grade:	G4

Purpose

To participate in the design, layout, procurement, installation and testing of the cryogenic system components for the ITER Tokamak; this includes the cryoplants and cryogenic distribution boxes for forced flow cooling of ITER magnets and cryopumps.

To provide technical support for the study of interfaces and the preparation of assembly, integration and test procedures for the commissioning and validation program.

china

eu

india

japan

korea

ruussia

usa

Major Duties/Responsibilities

- Revises and improves the cryogenic system process diagrams and design interfaces;
- Develops the detailed layout, conceptual design and integration studies for the cryogenic distribution boxes;
- Develops the detailed layout, conceptual design and integration studies for the cryoplants;
- Carries out the layout, routing and integration studies for the cryogenic transfer lines;
- Defines the technical specifications and revises the Project Integration documents related to the cryogenic system;
- Creates the interface documents for cryogenic components and end users (magnets, thermal shields, cryopumps, etc.);
- Elaborates the programs and schedules to build, test and commission the cryogenic system;
- Monitors the procurement of cryogenic components;
- 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 3-4 years of study after the High School Diploma (ex. Bachelor of Science or High Technical Degree), in cryogenics, Mechanical Engineering or other relevant discipline.

- **Technical Experience:**
 - At least 10 years' experience in the development, design, procurement and commissioning of cryogenic components and installations for a large cryogenic system for fusion or accelerator applications;
 - Working knowledge in world market and associated R&D for specific applications of industrially proven cryogenic equipment, instrumentation and controls;
 - Working knowledge of design codes and standards;
 - Excellent knowledge of process engineering and operating mode analysis for large cryogenic distribution systems;
 - Significant practical knowledge of factory acceptance tests and commissioning of complex cryogenic equipment;
 - Good working knowledge of fabrication, welding and leak testing techniques.
- **Social Skills:**
 - Ability to develop and maintain effective international relations so as to efficiently perform tasks in a multicultural environment, covering the international project;
 - 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 the Cryogenic System Section Leader;
- Interfaces with designers for magnets, the Tokamak 80 K thermal shields, the cryo-vacuum pumps, the cryoplant and the buildings to support integration.

Authority / Approval Levels

This position has authority and approval defined by the Section Leader for his/her work.

Measures of Effectiveness

- Successfully defines and implements the cryoplant, cryolines and cryodistribution systems' conceptual design;
- Successfully participates in the management of interfaces between the cryogenic system and cryogenic users;
- Successfully contributes to managing the plans for installation, testing and commissioning;
- Successfully maintains effective communication with all parties delivering subsystems.