Title: Cryo Distribution Engineer Central Engineering and Plant Support				CEP 007
Reports to Line Manager: Leader of Cryogenic System Engineering Group				
DIRECT EMPLOYMENT: NOT REQUIRED GRADE R			ANGE: P2 ~P4	
Date Written:	Date Revised:		Date Revised	1:

Overall Purpose:

The design, layout, procurement, installation and testing of one component group of the ITER cryogenic system named the "Cryo-distribution " that includes the complex of the cryogenic boxes installed inside the Tokamak building for forced flow cooling of the all different ITER cryogenic users and all sets of cryogenic transfer lines to connect with the magnets, the 80 K tokamak thermal shields and the cryo-vacuum pumps, including transfer lines for the cryoplant cold box building.

Major Duties/Responsibilities:

- Revision and improvement of process diagrams and design interfaces of the cryodistribution boxes and the cryolines with the cryoplant process boxes and all ITER cryogenic users, namely the magnets, the cryo-vacuum pumps and the 80 K thermal shields of tokamak.
- Detailed layout, internal design and routing of the cryolines inside both the Tokamak and Cryoplant Cold Box buildings and between these two buildings.
- Layout and routing of warm lines inside three buildings for the gas compressor stations, the cryoplant process boxes and the tokamak pit.
- Preparation of technical specifications and revision of the Project Integration documents related to the cryodistribution.
- Preparation of programs and schedules to build, test and commissioning of the cryodistribution system.

Qualifications Required:

- Experience in the development of large cryogenic system for superconducting magnets and cryo-vacuum pumps for fusion or accelerator applications.
- Knowledge of the industrially proven cryogenic equipment in world market, including, distribution boxes and infrastructure as cryogenic valves, sensors, helium circulating pumps and compressors and cryogenic transfer lines. Knowledge of the design code and standards of experimental cryogenic equipment.
- Knowledge of thermal-hydraulic analysis of the cryodistribution boxes and cryolines, including process interfaces for regeneration of the cryo-vacuum pumps and cooling of the magnets.
- Good communication skill, ability to develop and maintain effective international contacts to perform tasks in multicultural environment, covering the international project.

Work Direction and Interfaces

Interfaces with designers of the magnets, the tokamak 80K thermal shields, the cryo-vacuum pumps, the cryoplant and the buildings to support excellent integration.

Authority/Approval Levels:

Has authority and approval defined by the group leader for his/her work

Measures of Effectiveness

- Successfully defines and implements the concept of the cryodistribution system.
- Successfully manages interfaces between the cryogenic system and cryogenic users.
- Successfully manages plans for installation, tests and commissioning.
- Successfully maintains effective communications with all parties delivering subsystem.