TITLE: Cryoplant Engineer			CEP-075
REPORTS TO LINE MANAGER: Leader of Cryoplant Section, Department of Central Engineering and Plant Support			
DIRECT EMPLOYMENT: NOT REQUIRED		GRADE RANGE: P3 ~P4	
Date Written: May 2008	Date Revised:	Date Revised:	

Purpose:

To design, layout, procurement, installation and commissioning of the ITER cryogenic system and in particular the liquid helium and liquid nitrogen cryoplants, the 80 K helium loop and the cryogenic fluids storage system.

Major Duties/Responsibilities:

- Study, analysis and conceptual design of the cryogenic cold boxes and compressor stations for the liquid helium and liquid nitrogen cryoplants, the 80 K helium loop and the helium and nitrogen storage system;
- Designs and revision of process and flow diagrams;
- Detailed layout of equipment and space allocation in the cryogenic buildings;
- Revision and improvement of process /design interfaces of the cryoplant process boxes and utilities requirements;
- Preparation of technical specifications to procure the cryoplants and storage system;
- Industrial collaboration and follow-up for the design and manufacture of the cryoplants;
- Revision of the Project Requirement and Interface documents related to the cryoplants;
- Preparation of programs and schedules to build, test and commission the cryoplants;
- Analysis and specification of spare parts and maintenance requirements for cryoplants.
- Maintains a strong commitment to the implementation and perpetuation of ITER safety program, values and ethics.

Qualifications Required:

- University degree in engineering;
- Experience in the design, commissioning and operation of large cryogenic system for fusion or accelerator applications;
- Proven experience in the specification, installation and commissioning of large cryoplants (liquid helium and liquid nitrogen);

- Knowledge of industrially proven cryogenic equipment in the world market, including liquid helium and nitrogen plants, purification /dryer systems, gas and liquid storage and compressors;
- Knowledge of the design codes and standards of experimental cryogenic equipment;
- Knowledge of process engineering and analysis of operating modes for cryoplants and large cryogenic distribution system;
- 5 years in working experience in related field;
- Good communication skills, ability to develop and maintain effective international contacts to perform tasks in the multicultural environment, covering the international project.
- Good communication skills in written and spoken English.

Work Direction and Interfaces:

- Interfaces with cryoplant manufacturer;
- Intefaces with building and utitlities required for the cryoplant operation;
- Interaces with Tokamak operation;
- Interfaces with other system for the definition of the functional analysis and operating modes of the cryoplants.

Authority/Approval Levels:

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

Measures of Effectiveness:

- Successfully defines and implements the layout and specification of the cryoplants;
- Successfully defines and implements the layout and specification of the 80 K helium loop;
- Successfully manages interfaces between the cryogenic system, the cryogenic users and the required utilities;
- Successfully manages plans for installation, test and commissioning;
- Successfully maintains effective communications with all parties delivering subsystems.