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# JOB DETAIL

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# Ref. IO1711 - 6/24/2016

### Cryogenic and System Engineer PED-049

Main job	Cryogenics
Department	PED / Plant Engineering Department
Division	PED / Cooling Systems Engineering Division
Section	PED / CSED / Cryogenic System Section
Job Family	Engineer - 1
Application Deadline (MM/DD/YYYY)	07/24/2016
Grade	P2
Direct employment	Not required

Purpose To support the definition, integration, procurement and commissioning of low temperature specific instrumentation for the ITER cryogenic system;

To participate in the functional analysis and process control of cryoplants, cryolines and cryogenic distribution boxes installed inside the Tokamak building for the forced flow cooling of magnets and cryopumps;

To define dedicated hardwired interlocks for the ITER cryogenic system safe operation, in support to the section leader

To contribute to the definition of the requirements and interfaces of the ITER wide cryogenic process, instrumentation and controls, including the system engineering of all cryogenic system transversal activities, in support to the section leader.

#### Main duties / Responsibilities

- Contributes to and reviews the preparation of technical specifications for the cryoplant, cryolines and cryodistribution systems;
- Contributes to and reviews the process and design interfaces of the cryogenic components and subsystems;
- Contributes to the functional analysis, instrumentation and process control for the liquid helium, liquid nitrogen and cryogenic distribution systems;
- Contributes to the definition of the instrumentation and controls for the liquid helium, liquid nitrogen and cryogenics distribution system;
- Develops the required testing, commissioning and operation program for the cryogenic systems, including the instrumentation and process control system;
- Contributes to the Establishment of the operation and maintenance procedures as well as spare requirements;
- Prepares programs and schedules to build, test and commission the cryogenic system;
- Coordinates the interfaces between users and cryogenic systems as well as internal interfaces;
- Coordinates the system engineering activity for the cryogenic system;
- 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
- Reports to the Cryogenic Systems Section Leader, In response to requests from the Director-General and/or Head of Plant Engineering Department (PED), or proactively, informs the DG/Head of PED Department 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

- Successfully proposes, defines and implements the design and the instrumentation and control concepts of the cryodistribution system;
- Ensures a smooth coordination of interfaces between the cryogenic system and cryogenic users;
- Successfully proposes plans for installation, testing and commissioning

- Successfully maintains effective communication with all parties delivering subsystems.

Project Construction Phase SAP Id: 50000212

Level of study Master or equivalent degree

Diploma Cryogenic or mechanical engineering field or other

Level of experience At least 5 years

Technical – Extensive experience in similar jobs (involving similar experience/knowledge work responsibilities) or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.

- At least 5 years' experience in the development, design, procurement and commissioning of large cryoplant and cryodistribution systems with fusion or accelerator applications;
- Good knowledge of industrially proven cryogenic equipment is apreciated;
- knowledge of the design, procurement, installation and testing of complex cryogenic systems;
- Good knowledge in cryogenic process cycles, distribution boxes, cryolines and helium refrigerator systems;
- Knowledge and experience in thermo hydraulic analysis;
- Knowledge of design codes and standards;
- Working knowledge of process engineering and analysis of operating modes for large cryogenic systems;
- Working experience in factory acceptance tests and commissioning of complex equipment is also appreciated;

Project experience 1 to 2 years

Social skills Ability to work effectively in a multi-cultural environment Ability to work in a team and to promote team spirit

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

Languages English (Fluent)

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