

<b>TITLE:</b> Plant Design Coordinator – Cryo-System		CEP-098
<b>REPORTS TO LINE MANAGER:</b> Leader of Plant Design Section, Design Office, Department for Central Engineering and Plant Support		
<b>DIRECT EMPLOYMENT:</b> REQUIRED		<b>GRADE RANGE:</b> G4-G5
<b>Date Written:</b> July 2008	<b>Date Revised:</b>	<b>Date Revised:</b>

**Purpose:**

To carry out the Computer-Aided Design (CAD) plant and process design and maintain associated CAD data of the ITER Cryo-System over the entire life-cycle (from design to machine operation) under the instruction of the relevant Responsible Officer. To supervise the CAD design activities performed by Designers at the ITER Organization and by outside Contributors.

**Major Duties/Responsibilities:**

- Be responsible for the quality of the CAD data of the Cryo-System
- Performs design tasks under the guidance of the relevant Responsible Officer:
  - Researches solutions;
  - Develops Process Flow Diagram and multi-discipline Process & Instrumented Diagrams;
  - Designs and develops solid modelling (general arrangement, schematic-driven circuit layout, space reservation, equipment, building interfaces, support systems, penetrations, assembly tools);
  - Prepares assembly drawings, drawings and bill-of-materials;
  - Extracts pipe isometric from CATIA V5 (most likely ISO-GEN);
  - Completes design integration tasks (interfaces, digital mock-ups, fitting simulation, clash detection reports);
  - Develops 2D and 3D catalogue items and associated links;
  - Interfaces with electrical and instrumentation processes (and software);
- Performs coordination and development tasks as Design Coordinator under the guidance of the relevant Responsible Officer(s):
  - Prepares the draft Design Work Orders ;
  - Follows up the process and layout design (coordination of several Designers; interface analysis and management; data structure and metadata checking into the database; CAD data-change management and tracking; 2D-3D coherence; Product-Breakdown-Structure implementation);
  - Supports the Responsible Officer in the interactions with External Contributors regarding CAD activities;
  - Reporting
- Performs coordination and development tasks as Design Coordinator under the instructions of the Plant Design Section Leader:
  - Actively contributes to: the checking of the CAD data (Cursory and Approved); preparation of the Design Integration – Design Office meetings; remote design collaboration schemes and the exchanges of CAD data with ITER Partners

- (export, import, checking, interactions with the ITER Partners, Suppliers, supporting engineering companies / sub-contractors); monitoring the resources and schedules; the Design Office QA, implementation (CAD Work and CAD Data Procedures, CAD Manual, processes and procedure); the highlighting of miss-functioning; the DO library and auxiliary DO-related activities;
- Actively contributes to: pilot activities to assess, develop and deploy new software and migration; training; coaching; participation in the development of methodologies; guides and CAD Manual sections and various DO-related tasks.
- Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.

#### **Qualifications and Experience:**

- **Education:** Technical College Diploma or equivalent in Mechanical/Process Engineering and/or Computer-Aided Design or equivalent with further studies in thermal, process and cryogenic Engineering;
- **Experience:** A minimum of 7 years' experience (including experience as Leading Designer) in a Process Design Office in a multi-disciplinary project, preferably performed in a remote design collaboration manner;
- A minimum of 3 years' experience in the implementation of engineering activities: requirement definition; conceptual, pre-detailed and detailed studies; definition of complex interface systems; preliminary sizing; contribution to the development of manufacturing specifications; contract monitoring;
- At least 5 years' experience in the design of complex cryogenic components (cryo-distribution boxes, cryogenic transfer lines, cryogenic components integration);
- At least 5 years' experience in layout studies of large cryogenic installations;
- Good knowledge of thermal, mechanical and hydraulic calculation tools;
- A minimum of 7 years' experience in design work involving an advanced CAD system, including 3 years with preferably CATIA 5 for 3D and drawing design and IGE-XAO (or equivalent, such as Visio) for multi-discipline process description. The experience with ENOVIA LCA - VPM5 is not essential, though experience with previous versions of VPM, or with other integrated database systems, would be advantageous;
- Demonstrated ability to produce high quality results which have stood the test of being manufactured, tested, installed and commissioned successfully;
- Skills: Excellent ability to organize and monitor design activities, good communication skills and ability to work towards predefined goals with a high level of autonomy while sustaining a high working pressure;
- **Language requirements:** High level of written and spoken English.

#### **Work Direction and Interfaces:**

- Reports to the Plant Design Section Leader of the ITER Design Office;

- Interacts on a daily basis with the relevant ITER Component Responsible Officers (in charge of the technical solutions), the Integration Responsible Officers (in charge of the configuration control), Design Office Management and Support Team and Design Coordinators and Designers, aiming at the required level of quality and at an efficient development of the design.

**Authority/Approval Levels:**

Has authority and approval levels generally defined by the Design Office Head for his/her scope of work.

**Measures of Effectiveness:**

- Successfully provides an efficient and high quality service to the ITER Design Office;
- Successfully contributes to an effective development of the plant and process design;
- Successfully develops further technical capabilities, flexibility, CAD tool control and team spirit;
- Successfully supports the objectives and interests of the ITER Project;
- Successfully establishes a good collaborative relationship with all involved internal and external organizations.