

TITLE: Senior Vacuum Engineer		CEP 021
Reports to Line Manager: Leader of Vacuum Group, Department for Central Engineering and Plant Support		
DIRECT EMPLOYMENT: NOT REQUIRED		GRADE RANGE: P3-P4
Date Written: May 2008	Date Revised:	Date Revised:

Purpose:

- Specifies, designs and integrates mechanical components of the ITER vacuum pumping and leak detection systems which are part of one of the largest vacuum system ever to be built.
- Provides expert support assisting with the preparation of relevant procurement packages. Participates in defining and monitoring the many vacuum interfaces.

Major Duties/Responsibilities: Major Duties/Responsibilities:

During the initial period of assignment, the successful candidate will have the necessary expertise and skills to take several responsibilities among those listed below. In future and as the Vacuum Group develops duties and responsibility will be reviewed:

- Participates in the design, layout and integration of mechanical, cryogenic and other pumping systems in accordance with relevant codes and standards.
- Provides assistance to Domestic Agencies and other ITER groups, to aid with achieving vacuum and tritium compatibility requirements.
- Participates in the defining of vacuum R&D required to complete the design of vacuum systems.
- Participates in the writing of procurement specifications, for the procurement of mechanical components, vacuum pumps and compressors under the responsibility of the Vacuum Group.
- Develops designs and standards for high integrity vacuum and tritium containment components to be used across the project.
- Provides mechanical input into procurement specifications, for vacuum aspects of equipment across ITER.
- Develops the design of specific vacuum components for Remote Handling compatibility.
- Participates in the design review process of ITER systems with a vacuum interface.
- Sets up and monitors the progress of vacuum mechanical design work in the ITER Domestic Agencies.
- Maintain a strong commitment to the implementation and perpetuation of ITER safety program, values and ethics.

Qualifications Required:

- Minimum of a first University degree in mechanical engineering.(or equivalent).
- At least 10 years professional experience with at least 5 years covering large complex engineering projects.
- Good knowledge in vacuum, gas dynamics and cryogenics.

- Significant experience of working with designers to develop designs on CAD systems.
- Good knowledge of welding techniques and design.
- Experience in managing contracts for complex mechanical fabrications.
- Experience of designing in a nuclear environment or working with hydrogen isotopes would be an advantage.
- Strong analytical skills.
- Good communication skills in written and spoken English.
- Proven ability to work effectively in a team and a multi-cultural environment.

Work Direction and Interfaces:

Reports to the Vacuum Section Leader

Authority/Approval Levels:

Has authority and approval levels defined by the Vacuum Section Leader for his/her scope of work.

Measures of Effectiveness:

- Successfully implements guidelines and directions received from the Section Leader, DDG and the ITER top management.
- Successfully interfaces between ITER divisions and Domestic Agencies and maintains good communications.
- Successfully provides engineering and installation support for the project.
- Successfully completes the tasks assigned under “Main Duties / Responsibilities” above.