

TITLE: Vacuum Technical Engineer		CEP- 102
REPORTS TO LINE MANAGER: Leader of Vacuum Pumping Section, Fuel Cycle Engineering Division, Department for Central Engineering and Plant Support		
DIRECT EMPLOYMENT: REQUIRED		GRADE RANGE: G5 - G6
Date Written : July 2008	Date Revised:	Date Revised:

Purpose:

To support many of the activities under the responsibility of the ITER Vacuum Group with practical high vacuum expertise. To assist in setting up facilities to support the vacuum assembly and to test one of the largest vacuum systems ever to be built. To train and lead teams to be set up to meet the ITER vacuum leak testing requirements.

Major Duties/Responsibilities:

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

- Participates in the design of vacuum pipe routing throughout ITER Tokamak buildings;
- Contributes to the assembly and test schemes for large quantities of vacuum- related equipment;
- Contributes to the writing and review of ITER baseline documentation;
- Provides practical input to many design and specification activities within the ITER Vacuum Section, particularly with relation to vacuum fittings and assembly techniques;
- Designs and specifies leak detection and localization facilities, including developing testing gigs for complex vacuum components;
- Participates in the definition and monitoring of vacuum-related R&D contracts with industry;
- Aids Domestic Agencies in understanding and meeting the ITER requirements for component leak tests, including witnessing of factory acceptance leak testing at suppliers' sites;
- Participates in the pre and post-assembly testing of the components of the ITER leak detection systems of the torus, cryostat, neutral beam, and auxiliary systems.
- Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.

Qualifications and Experience:

- **Education:** Minimum of a recognized Engineering apprenticeship and higher educational studies or equivalent;
- **Experience:** At least 10 years' practical engineering experience, including working in a complex high vacuum environment;
- At least 5 years' dealing with construction of new ultra high vacuum equipment;
- Good practical knowledge of leak testing, vacuum and gas distribution systems;
- Experience of working with demanding QA standards for materials and welding, including standards covering pressure equipment directives;
- Experience of working with tritium or in a nuclear environment;
- Good knowledge of fabrication and welding techniques;
- Proven ability to work effectively in a team and in a multicultural environment;
- **Language requirements:** Good communication skills in written and spoken English.

Work Direction and Interfaces:

Reports to the Vacuum Section Leader.

Authority/Approval Levels:

This position has authority and approval levels generally defined by the Vacuum Pumping Section Leader for his/her scope of work.

Measures of Effectiveness:

- Successfully implements guidelines and direction received from the Leader of the Section, the DDG and the ITER top management;
- Successfully interfaces between ITER divisions and Domestic Agencies and maintains good communication;
- Successfully completes the tasks assigned under "Main Duties / Responsibilities" above.