| TITLE: Vacuum Technical Engineer | | CEP-051 |
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| REPORTS TO LINE MANAGER: Leader of Vacuum Section; Department of Central Engineering and Plant Support | | |
| GRADE: G4-G5 | | |
| Date Written: July 2007 | 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 specify equipment requirements for the ITER vacuum laboratory. To develop and witness field and delivery vacuum leaking procedures for vacuum related procurement packages.

Major Duties/Responsibilities:

- During the initial period of assignment, the successful candidate shall have the necessary expertise and skills to take several responsibilities among those listed below. When new staff will be assigned to the Vacuum Group duties and responsibility will be reviewed:
- Provide practical input to many design and specification activities within the ITER Vacuum Group particularly with relation to vacuum fittings and assembly techniques.
- Design and specify the leak detection and localization facilities housed in the ITER vacuum laboratory.
- Specify cleaning, baking, and other support facilities and equipment of the ITER Vacuum Laboratory.
- Compile resourced assembly leak test procedures for all requisite systems and components as input data to the Integrated Project Schedule and during assembly to implement the leak tests in concert with the Schedule.
- Aid Participant Teams in meeting the ITER requirements for component leak tests including witnessing of factory acceptance leak testing at suppliers sites.
- Implementation of vacuum leak testing of all requisite components delivered to the ITER site in the Vacuum Laboratory, approving the leak remedial plans and processing of associated MQP documentation.
- Pre and post-assembly testing of the components of the ITER leak detection systems of the torus, cryostat, neutral beam, other H&CD.

Qualifications/ Experience Required:

- Minimum of a recognized engineering apprenticeship and higher educational studies or equivalent.
- At least 15 years practical engineering experience including working in a complex high vacuum environment.

- At least 5 years dealing with construction of new UHV equipment.
- Good practical knowledge of leak testing, vacuum and gas distribution systems.
- Experience of working with demanding QA standard 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.
- 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:

Report to the leader of vacuum section. Close co-operation with and good understanding of the requirements and design of the ITER Plant.

Authority/Approval Levels:

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

Measures of Effectiveness:

-Successfully support ITER Vacuum Pumping Systems design from the standpoint of commercially available vacuum components and fittings and their integration into vacuum pumping systems.

-Establish the leak detection and localisation facilities needed at the ITER site -Successfully establish the cleaning, baking and related facilities needed at the Vacuum Laboratory at the ITER site.

-Successfully compile resourced assembly leak test procedures for all requisite systems and components consistent with the Integrated Project Schedule.

-Assist Participant Teams in successfully meeting the ITER requirements for component leak tests including witnessing of factory acceptance leak testing at suppliers sites.

-Implementation of vacuum leak testing of all requisite components delivered to the ITER site in the Vacuum Laboratory, approving the leak remedial plans and processing of associated MQP documentation.

-Pre and post-assembly testing of the components of the ITER leak detection systems of the torus, cryostat, neutral beam, other H&CD.