

Beneficiaries staff to be seconded to the NBTF project team in Padova

Vacancy 2-NBTF (1 position): Engineer for the NBTF Cryogenic System

Job Description

As a member of the Neutral Beam Test Facility (NBTF) team, under the authority of the NBTF Project Manager, the job holder will contribute to the management of the NBTF cryogenic system, in particular he/she will support the operations, monitoring and management of the MITICA Cryogenic System composed by the Cryogenic plant and two Cryogenic Pumps.

The plant has the function of keeping at specified temperature levels the Cryogenic Pumps of MITICA both during operations and regeneration phases. The Cryogenic Pumps shall guarantee the necessary vacuum level and gas pressure distribution inside the MITICA Vacuum Vessel.

After thorough training about the MITICA Cryogenic Plant and MITICA Cryopumps, he/she will be part of the Team in charge for operating, monitoring and tuning the plant during MITICA operations and Cryopumps regeneration, taking care of the necessary maintenance activities, identifying any possible problem and proposing proper solutions and actions for troubleshooting.

Beside the day-by-day management of the plant and based on the knowledge gained during operations, the job holder will contribute for identifying any possible tuning, update and optimization necessary to guarantee the correct functions of the system and to increase as much as possible its reliability.

Being the MITICA Cryogenic System equipped with calorimetric measurements on separate branches of the cryogenic circuits, the job holder will also contribute in acquiring important information about the energy balance and actual heat loads applied to the Cryopumps during MITICA operations

Specific tasks and responsibilities will be assigned by the Thermo-Mechanical Project Leader according to the commissioning/experimental phase and current needs and commensurate to experience and competences. Work will be coordinated by the Thermo-Mechanical Project Leader and will be done in close collaboration with other functions in the project team, particularly the Host Manager, the CODAS Project Leader and the MITICA Gas Injection and Vacuum system engineer in charge.

The job will be based in Padova, Italy.

Working language will be English.

Functions/ Responsibilities

- Support the management, monitoring, tuning and optimization during commissioning and operation of the MITICA Cryogenic System
- Participate to MITICA operations as engineer on shift for the Cryogenic System during experimental sessions
- Support the monitoring and tuning of the Cryogenic System during Cryopumps regeneration process
- Acquire and process the calorimetric measurements during MITICA operations
- Update the technical documentation of MITICA Cryogenic System according to envisaged optimizations
- Maintain a strong commitment to the implementation and perpetuation of the health and safety, values and ethics

Qualifications and experience

- At least a Master degree in Industrial Engineering (Cryogenic, Nuclear, Mechanical, Energy or Chemical engineering)

Knowledge, skills and abilities

- Consolidated experience in the field of cryogenic plants operations and monitoring is an advantage
- Good knowledge of vacuum technology is an advantage
- Good knowledge of pressure equipment regulations and of cryogenic systems design is an advantage
- Good knowledge of cryogenic codes for plant simulations is an advantage
- Good organisational, interpersonal and communication skills; ability to work in a team and to promote team spirit

Date of vacancy: As soon as possible

CONTACT: Diego Marcuzzi *diego.marcuzzi@igi.cnr.it*