

Job Title: Laboratory & Test Technician

Reference: SPA015

Location: Warrington

Job Type: Permanent, Full-time

Reports To: Senior Design & Test Engineer & Facilities Manager

Travel Requirements: Occasional UK and International Travel

Job Summary:

The Laboratory & Test Technician is responsible for providing practical technical support to research, development, qualification and investigative testing programmes within the Space Group.

This is a hands-on laboratory-based role requiring the operation, maintenance and calibration of specialist test equipment, vacuum systems and cleanroom facilities. The postholder will support engineers and scientists in delivering high-quality testing programmes whilst ensuring compliance with ISO 9001, AS9100 and internal quality standards.

The successful candidate will demonstrate a proactive approach, excellent practical engineering skills and a willingness to learn new technologies whilst working within a multidisciplinary team.

Key Responsibilities:

Vacuum Systems and Facility Operations

- Set up, configure, operate and decommission high vacuum (HV) and ultra-high vacuum (UHV) test facilities.
- Carry out helium leak testing and leak localisation activities.
- Verify vacuum system performance and troubleshoot faults.
- Operate, maintain and service vacuum pumps, gauges and associated vacuum equipment.
- Support contamination-sensitive testing and cleanroom-based activities.
- Assist with routine maintenance and continuous improvement of vacuum facilities.

Instrumentation and Test Support

- Install, configure and verify pressure, temperature and vacuum instrumentation.
- Set up and commission motor controllers, motion systems, drives and data acquisition (DAQ) systems.
- Operate Residual Gas Analysis (RGA) and mass spectrometer equipment.
- Support thermal vacuum, tribology, contamination and other environmental testing programmes.
- Assist with test preparation, execution and post-test equipment recovery.
- Support engineers during customer demonstrations and qualification testing.

Calibration, Metrology and Measurement Systems

- Maintain the laboratory calibration register.
- Plan and coordinate internal and external calibration schedules.

- Carry out in-house calibration and verification activities.
- Liaise with approved calibration suppliers.
- Review calibration certificates for compliance and accuracy.
- Maintain calibration records and measurement traceability.
- Support uncertainty assessments where required.
- Calibrate and verify:
 - Pressure instrumentation
 - Temperature instrumentation
 - Force measurement systems
 - Torque measurement equipment
 - Displacement measurement systems
 - Vacuum measurement equipment
- Support ISO 9001 and AS9100 audit activities relating to calibration and measurement systems.

Cleanroom and Laboratory Support

- Support the operation of ISO Class 7 cleanroom facilities.
- Carry out housekeeping activities to maintain laboratory standards.
- Follow contamination control procedures and best practices.
- Assist with laboratory maintenance and facility improvements.
- Ensure laboratories remain safe, organised and operational.

Mechanical and Electrical Assembly

- Assemble mechanical fixtures, rigs and test equipment.
- Assemble electronic hardware and wiring harnesses.
- Install instrumentation and electrical components.
- Support commissioning of new laboratory equipment.
- Carry out fault-finding on laboratory systems where appropriate.

Requirements:

- Practical experience in mechanical assembly.
- Practical experience in electronic hardware assembly, wiring and harness assembly.
- Experience working with instrumentation, motor drives and mechanical components.
- Experience commissioning, configuring and calibrating laboratory or test equipment.
- Experience with data acquisition systems and/or control software.
- Ability to troubleshoot technical equipment and resolve faults.
- Good practical engineering skills with excellent attention to detail.
- Experience operating high vacuum (HV) or ultra-high vacuum (UHV) systems.
- Experience using Residual Gas Analysis (RGA) or mass spectrometer equipment.

Desirable Skills

- Helium leak testing and leak localisation experience.

- Experience using Residual Gas Analysis (RGA) or mass spectrometer equipment.
- Experience supporting thermal vacuum, tribology or contamination testing.
- Knowledge of cleanroom operations and contamination control.
- Experience maintaining calibration systems and traceability records.
- Knowledge of measurement uncertainty.
- Experience working within ISO 9001 and/or AS9100 quality management systems.
- Experience supporting laboratory infrastructure and facility maintenance.
- Previous experience within the aerospace, defence or space sectors.

Qualifications

Essential

- HNC, HND, NVQ, BTEC, Apprenticeship or equivalent practical experience in one of the following disciplines:
 - Mechanical Engineering
 - Aerospace Engineering
 - Vacuum Technology
 - Electronics
 - Instrumentation
 - Physics
 - Or another relevant engineering or scientific discipline

Desirable

- Degree in Mechanical Engineering, Aerospace Engineering, Physics or a related engineering discipline.
- Additional training or certification in calibration, metrology, vacuum technology or cleanroom operations.

Person Specification:**Job Title:** Laboratory & Test Technician**Reference:** SPA015**Location:** Warrington**Job Type:** Permanent, Full-time**Reports To:** Senior Design & Test Engineer & Facilities Manager

	Essential	Desirable
Qualifications		
HNC, HND, NVQ, BTEC, Apprenticeship or equivalent practical experience in Mechanical Engineering, Aerospace Engineering, Vacuum Technology, Electronics, Instrumentation, Physics or another relevant engineering/scientific discipline.	x	
Degree in Mechanical Engineering, Aerospace Engineering, Physics or another related engineering discipline.		x
Additional training or certification in calibration, metrology, vacuum technology or cleanroom operations.		x
Experience		
Practical experience in mechanical assembly.	X	
Practical experience in electronic hardware assembly, wiring and harness assembly.	X	
Experience working with instrumentation, motor drives and mechanical components.	X	
Experience commissioning, configuring and calibrating laboratory or test equipment.	X	
Experience using data acquisition (DAQ) systems and/or control software.	X	
Experience troubleshooting technical equipment and resolving faults.	X	
Experience working within a laboratory, workshop or engineering environment.	X	
Experience operating High Vacuum (HV) or Ultra High Vacuum (UHV) systems.	x	
Helium leak testing and leak localisation experience.		X
Experience using Residual Gas Analysis (RGA) or mass spectrometer equipment.	x	
Experience supporting thermal vacuum, tribology, contamination or environmental testing.		X
Experience maintaining calibration systems and traceability records.		X
Experience supporting laboratory infrastructure and facility maintenance.		X
Previous experience within the aerospace, defence or space sectors.		x

Skills and Knowledge		
Good practical engineering skills with excellent attention to detail.	X	
Ability to configure, calibrate and commission technical equipment.	X	
Ability to diagnose faults and apply effective problem-solving techniques.	X	
Good understanding of mechanical assemblies, instrumentation and test equipment.	X	
Good written and verbal communication skills.	X	
Ability to work independently and collaboratively within a multidisciplinary team.	X	
Good organisational skills with the ability to prioritise workloads and meet deadlines.	X	
Proactive approach with a willingness to learn new technologies.	X	
Commitment to working safely and following quality procedures.	X	
Knowledge of cleanroom operations and contamination control.		X
Knowledge of measurement uncertainty and metrology principles.		X
Knowledge of vacuum technology and vacuum system operation.		X
Knowledge of ISO 9001 and/or AS9100 Quality Management Systems.		X
Understanding of calibration traceability requirements.		X
Knowledge of contamination-sensitive testing environments.		X
Continuous improvement mindset and an interest in developing laboratory processes.		X