University of Salford MANCHESTER

Job Description

Role Title:	Thermal Laboratory Operative
Faculty:	Faculty of Science, Engineering and Environment
Reference:	MPF4357
Grade:	Grade 6
Full or Part time:	Full time
Hours:	1.0 FTE
Reports to:	Technical Manager & The Quality Manager

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Overview

The University of Salford has a rich history stretching back to 1896 and today is a leading provider of Higher Education based over a Main Campus, one and a half miles from Manchester. Currently undergoing a transformational change affecting every area of university life, Salford is positioning itself at the leading edge of higher education institutions in this country.

Energy House Laboratories is a large research and innovation unit within the University of Salford's School of Science, Engineering and Environments. The group focuses on the delivery of net zero and low energy buildings and products. It has a complex multi-project portfolio that covers both research and innovation activities, many with commercial partners. The group is made up of four labs, Energy House 1, Energy House 2.0, the Smart Meters Smart Homes Lab, and the Thermal Measurement Lab. The group is high profile and is currently undergoing a growth phase due to the high interest from industry and policy makers.

The role holder will join the Thermal Measurement Laboratory, which has been providing services for over 40 years and offers accredited commercial testing providing independent certification for a wide range of companies involved in thermal insulation and construction. The role will involve working as part of the Energy House Labs, in which they will have the opportunity to work in all aspects of building physics, insulation materials and energy conservation methods, for external companies and the wider research community.

The requirements of the role will be to work and interact closely with multi-discipline teams internally,

including the Technical Manager, Quality Manager, Energy House Labs Director, Analytical and Commercial teams within the University, and also with external bodies such as Regulatory Authorities, Organisations, and clients. The main purpose of this post is to support the commercial activities of the Thermal Measurement Laboratory by supporting the Technical Manager and Quality to provide the testing service. The post presents an excellent opportunity for an enthusiastic employee to immerse themselves in a lively and varied research and commercial community.

Role Purpose

At the School of Science, Engineering and Environments we have an enviable reputation for undertaking world-class research and teaching with a real-world focus. Underpinning this activity is an extensive array of facilities, resources and expertise that can be accessed by business, industry, and the community. Our laboratories and research facilities are world leading and state-of-the-art and our investment in the latest testing equipment means that you work in a modern environment with the added benefit of having professional and technical expertise to hand.

One such laboratory within our facilities is the Thermal Measurement Laboratory, who provide accredited testing services that are second to none. The laboratory provides clients with test data and information that they require to enhance their own business. The reliability, impartiality and confidentiality of the test data are paramount. In order to ensure the accuracy and reliability of the work we operate according to test procedures accredited by the UK Accreditation Service (UKAS). It will be the responsibility of the Thermal Laboratory Operative to work in accordance with this system which covers all aspects of the work, the testing itself, recording of data, reporting, communication, and confidentiality. The

role holder will be expected to make a commitment to maintain and enhance our reputation and standing at every opportunity.

The purpose of the post is to support the Technical Manager and Quality Manager to ensure the successful operation of the commercial activities in particular within the Thermal Test Laboratory. As part of the wider Energy House Team, opportunities will also be available for collaboration between the laboratories where clients, particularly within the building industry as well as others; may find unique outcomes and benefits from working with the laboratories as well as other departments within the University structure.

The main tasks of the Thermal Laboratory Operative will be to develop and undertake work as specified to achieve the overall objectives of the Thermal Measurement Laboratory. The role will be required to initiate, participate in, and support the Thermal Measurement Laboratory and its managers in fulfilling its commercial plans and activities by having initiation and technical expertise for day-to-day laboratory operation. Standard tests performed in the Thermal Measurement Laboratory include measurement of thermal conductivity/resistance of a wide variety of materials using heat flow measurement equipment.

The role holder will be required assist and collaborate with all members of Academic Enterprise and the Energy House Laboratories staff within the faculty in achieving the above objectives. It is also a requirement to initiate and foster strong client relationships to optimise commercial project objectives maintaining the high level of service as well as liaising with appropriate external bodies and regulatory organisations to uphold current high standards in the Laboratories. The post holder will also be required on occasion to assist students and researchers with locating and setting up equipment, and from time to time may have the opportunity to assist academics or research students with research projects.

Principal Duties & Responsibilities

The post holder will report to the Technical Manager and the Quality Manager of the Thermal Measurement Laboratory. It is expected that the role holder will initially work closely with these managers and that increasing responsibility and independence will follow as appropriate.

The Thermal Laboratory Operative will be responsible for:

- Supporting the Technical Manager and Quality Manager in their roles
- Carrying out internal calibrations and independent thermal testing committed to excellent professional practice according to written procedures and making accurate and timely records
- Provide high quality commercial analytical services to clients from outside University/Industry/Business in accordance with the UKAS Accreditation and UK Approved Laboratory standards
- Be aware of unique opportunities for collaboration between in house departments which may be beneficial to our clients

- Provide technical expertise in all matters connected with the assigned project and analytical activities under their control
- Working to and supporting the Quality Manager in maintaining laboratory quality systems
- Equipment maintenance, logging of environmental conditions, quality system documentation, and calibration procedures required to maintain the current accredited status of the Laboratory and its associated quality system
- Performing reliable numerical analysis of test results according to standard procedures and occasionally non-standard procedures
- Preparing accurate and timely test reports and checking the accuracy of reports produced by others
- Dealing with clients on the phone, by written correspondence, and in person, whilst maintaining impartiality and confidentiality and ensuring they receive the guidance that they need
- Receipt of samples for testing, including careful and safe handling of goods
- Working to maintain and enhance the outstanding reputation of the University of Salford, with clients, students, visitors, and others
- Carrying out work in a safe and professional manner at all times
- Interpreting standards and client requirements by drawing on an understanding of physical principles
- Conducting guided tours of the facilities
- Bringing the attention of managers to any matters relating to the health and safety of staff, students, and visitors

Generic Duties

- Perform any other duties appropriate to the grade as may be required by the Head of School/Head of Division etc.
- Comply with the personal health and safety responsibilities specified in the University Health and Safety policy.
- To engage with the University's commitment to put our students first and deliver services which are customer orientated, represent value for money and contribute to the financial and environmental sustainability of the University when undertaking all duties and aspects of the role.
- Advance equality, support our work towards eliminating unlawful discrimination, foster an inclusive study and work environment for students, staff and visitors in accordance with our public sector equality duties and university policy.

This role detail is a guide to the work you will initially be required to undertake. It may be changed from time to time to meet changing circumstances. It does not form part of your Contract of Employment.

Person specification follows on next page

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Person Specification

The successful candidate should demonstrate the following, which are 'Essential' (E) or 'Desirable' (D)

Qualifications

1. A degree or equivalent in a science subject including Physics or Engineering. **(E)**
2. Experience with energy and buildings work in building performance, systems or digital. **(E)**
3. A postgraduate qualification in related discipline or relevant previous experience. **(D)**
4. Membership eligibility for the Institute of Physics or the Institute of Chartered Engineers. **(D)**
5. A clean driving licence for occasional fieldwork and site visits. **(D)**

Background and Experience

6. Experience of taking general scientific laboratory and field measurement. **(E)**
7. Experience of taking scientific measurement specifically in thermal conductivity/resistance, environmental conditions, and material properties. **(D)**
8. Experience of scientific record keeping. **(E)**
9. Experience of working to standard and in-house procedures. **(D)**
10. Experience of the construction industry. **(D)**
11. Experience of dealing with customers or clients. **(E)**
12. Experience of writing and checking technical reports. **(E)**

Knowledge

13. National and international standards particularly relating to Thermal Conductivity. **(D)**
14. The basic principles of thermal conductivity. **(E)**
15. Construction and building techniques. **(D)**
16. Ability to work on their own initiative or as part of a team. **(E)**
17. Working within a commercial environment within the University structure. **(D)**
18. Working within quality systems such as UKAS, ISO9000 etc. **(D)**

Skills and Competencies

19. The aptitude to follow written procedures, including standards and in-house procedures, carefully and accurately and to make correct records as necessary. **(E)**
20. The ability to perform reliable numerical analysis of test results according to standard procedures. **(E)**
21. The ability to produce accurate and timely technical reports and to check the accuracy of reports produced by others. **(E)**
22. The ability to deal with clients, on the phone, by written correspondence, and in person, to maintain impartiality and confidentiality and to ensure they receive the guidance that they need. **(E)**

23. The ability to maintain and enhance at all times the outstanding reputation of Enterprise at the University of Salford, with clients, students, visitors, and others. **(E)**
24. The ability to use computers for numerical work (spread sheets and other programmes) and for word processing. **(E)**
25. The ability to use software code, such as VBA, to perform data processing. **(D)**
26. The ability to use statistical analysis to ensure reliable results and certainty in measurement. **(D)**
27. The ability to conduct work in a safe and professional manner at all times and to ensure confidentiality of Client data. **(E)**
28. The ability to learn to interpret standards and client requirements by drawing on an understanding of physical principles. **(E)**