Job Description

## Summary

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| **Job title** | Maintenance and Experimental Installation Support Technician |
| **Division** | Mathematical, Physical and Life Sciences Division |
| **Department** | Engineering Science |
| **Location** | Oxford Thermofluids Institute, Southwell Building, Osney Mead, Oxford, OX2 0ES |
| **Grade and salary** | Grade 5: £31,459 - £36,616 per annum |
| **Hours** | Full time |
| **Contract type** | Permanent |
| **Reporting to** | Dr Zach Jackson |
| **Vacancy reference** | 177850 |

## The role

The Maintenance and Experimental Support Technician will be part of the team supporting the general upkeep of the building and facilities of the Oxford Thermofluids Institute (OTI), part of the Department of Engineering Science. The OTI houses some of the most complex thermofluids experimental facilities in the UK, many of which utilise highly compressed gas sources. This includes several onsite compressors that feed air receivers that supply the whole of the OTI, along with smaller compressors and compressed gas cylinders.

The postholder will be responsible for the operation of the departmental compressor facilities, the maintenance of these compressors and supporting the servicing of them. They may also advise on any changes to the compressed gas system. The postholder will also provide extensive support on the installation and maintenance of pressured facilities across the building including on research facilities. More generally, they will support the rig installation/upgrade work across the OTI. They will provide advice and assistance to academic and research staff, students and visiting researchers on rig construction and design, along with potential safety considerations.

The postholder will be a self-motivated individual, who excels in working in a research environment as well as working collaboratively and as part of a team. They will be responsible for managing and prioritising their work schedule with input from the rest of the building services team. This will include attending fortnightly work planning meetings with individuals from across the OTI.

The postholder will have an extensive, well-developed set of skills relating to pressurised gas systems, pipework systems, and mechanical assembly work. The technician appointed to this post must be willing to continue to learn new skills to provide continued technical support for activities as they continue to evolve. Where appropriate, suitable training will be provided to fulfil the role. They will also support the goods-in function at the OTI.

## Responsibilities

***Pressurised Gas Systems***

- Assist in ensuring the continued operation and maintenance of the departmental compressed air systems at the OTI. This includes all the infrastructure around these systems (the pipework, dryers, air filters etc).
- Assist in the maintenance of the full log and appropriate records pertaining the departmental compressed air systems.
- Provide support in the installation of pressured pipework and supporting systems across the OTI including in collaboration with research groups. This will include the installation of various proprietary systems such as Victaulic and Swagelok and the postholder is expected to be well-versed in installation of the systems. Where necessary further training will be provided.
- Supporting work around the Statutory Inspections of the pressurised equipment in the OTI.

***Experimental Rig Installation Support***

- Oversee and support the installation of experimental equipment for various research groups around the building (in addition to departmental facilities).
- Provide advice and guidance to staff and students on their proposed installations/modifications.
- Manufacture and install safety guards/cages in response to research requirements. The postholder will work in consultation with the Departmental Safety Officer, the relevant research team and other departmental staff in this regard.
- Plan and manage their workload. This will include ensuring relevant staff are consulted about timetabling.
- Liaising closely with the Engineering Manager and Maintenance Team Leader to ensure that planned works fit into any wider programme.
- Provide technical advice to staff and students on the design of equipment offering ideas and solutions where possible. This may include advising with regards to function, materials selection, and manufacturing processes, commenting on feasibility, offering ideas and solutions where possible.
- Identify and rectify any problems with experimental equipment and/or rigs.
- Install and configure hardware for the various experimental facilities.

***Maintenance***

- Identify, plan and execute maintenance tasks at the OTI. This includes the operation of specialist machinery and equipment (for example high pressure pipe forming and threading equipment and laboratory compressors, air system and air driers). This may on occasion also require limited support in adjacent departmental buildings.
- Maintain records of plant/equipment maintenance and inspections in support of statutory requirements as well as extra records required for the local quality management system at the Southwell Building (ISO9001 and Rolls-Royce: SABRe).
- Plan and execute Planned Preventative Maintenance regimes. This requires logs and reports to be completed and recorded in the Southwell Building maintenance database.
- Liaise closely with the Engineering Manager and Maintenance Team Leader to ensure that planned works fit into any wider programme.

***Safety***

- Ensure all tasks undertaken are planned and completed in a safe manner. Ensure the necessary risk assessments, permit to work, method statements, COSHH forms etc are in place prior to undertaking an activity. Liaise with the Engineering Manager or Maintenance Team Lead where necessary.
- Maintain a record of all training undertaken. Identify training needs where necessary.
- Ensure that the Southwell Building fork-lift truck is operated safely. Ensure the required maintenance and insurance requirements have been provided to the Department by the lease company.
- To always work with due care and diligence according to the requirements of health and safety, quality and other standards and directions relevant to the assigned task.

***General***

- Act as an on-site liaison when needed to resolve problems quickly and efficiently.
- Attend weekly planning meetings.
- Source goods, services and equipment for projects and within budget if a budget is given.
- Work to current legislation and standards.
- Ensure machinery and other facilities are safe and fit for purpose.
- Maintain a good professional knowledge and awareness of new methods, systems and equipment that might benefit Engineering Departments building and facilities.
- Identify requirements for new equipment to the Engineering Manager.
- Work with the Maintenance Team Leader and/or Engineering Manager to identify and communicate with other sub-contract suppliers as appropriate when workload requires this or if specialist facilities are not available within the group or Department.
- Perform welding duties where necessary (training will be provided where needed).

- Record specific task data, drawings, parts used and methodology, for future reference and repeated results.
- Record working time on timesheets and complete any other necessary administrative duties for the effective running of the workshop (e.g. maintain records of equipment).
- Engage in a process of continuous learning and development, acquiring new skills.
- Keep work areas tidy and in good order at all times.
- Any other tasks that would reasonably be expected to support the activities of the research group of Department

## Selection criteria

### Essential

- A formal qualification, such as HNC, BTEC, Advanced level City and Guilds award, NVQ 3 or equivalent in a relevant subject.
- Experience in mechanical installation/assembly work.
- Experience working with pneumatic and hydraulic systems including working with reciprocating compressors.
- Experience installing and modifying pressurised pipework (such as Victaulic fittings etc.)
- Experience in building maintenance and installation of large experimental equipment.
- Strong working knowledge of the theory and application of safety regulations covering workshops and laboratory environments.
- Ability to grasp concepts quickly and to think laterally to build complex and innovative equipment from conceptual ideas, with or without drawings.
- Good IT skills e.g. for email and internet searches.
- The communication and interpersonal skills necessary to work effectively as part of the mechanical team and with staff and students at all levels of seniority.
- Ability to supervise staff/students where necessary.
- Willingness to learn new skills where necessary.
- Ability to work collaboratively as part of a team towards a shared objective.
- Ability to follow instructions and work to deadlines. Providing assistance to others (as well as requesting it) when required and asking pertinent questions.
- Ability to work accurately and to very fine tolerances with a good eye for detail.

- Appropriate qualification in forklift truck driving.
- Working knowledge of health and safety requirements and responsibilities.
- Ordered, planned and disciplined approach to work.

### Desirable

- Ability to perform MIG and TIG welding.
- Experience of working in a research or education environment.

### Pre-employment screening

### Standard checks

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) we will contact the referees you have nominated. You will also be asked to complete a health declaration so that you can tell us about any health conditions or disabilities for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at: https://www.jobs.ox.ac.uk/pre-employment-checks

## Hazard-specific / Safety-critical duties

This job includes hazards or safety-critical activities. If you are offered the post, you will be asked to complete a health questionnaire which will be assessed by our Occupational Health Service, and the offer of employment will be subject a successful outcome of this assessment.

The hazards or safety-critical duties that may be involved are as follows:

- Working at heights
- Lone Working
- Regular manual handling
- Working with category 3b or 4 lasers (laser safety class)
- Work in hot or cold environments
- Work with any substance which has any of the following pictograms on their MSDS:

## About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial

and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities and we rank first in the UK for university spinouts, and in recent years we have spun out 15-20 new companies every year. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information, please visit www.ox.ac.uk/about/organisation.

## Engineering Science Department

Engineering teaching and research takes place at Oxford in a unified Department of Engineering Science whose academic staff are committed to a common engineering foundation as well as to advanced work in their own specialities, which include most branches of the subject. We have especially strong links with computing, materials science and medicine. The Department employs about 90 academic staff (this number includes 13 statutory Professors appointed in the main branches of the discipline, and 25 other professors in the Department); in addition, there are 9 Visiting Professors. There is an experienced team of teaching support staff, clerical staff and technicians. The Department has well-equipped laboratories and workshops, which together with offices, lecture theatres, library and other facilities have a net floor area of about 22,000 square metres.

*Teaching*

We aim to admit 160-170 undergraduates per year, all of whom take a 4-year Engineering Science course leading to the MEng degree. The course is accredited at MEng level by the major engineering institutions. The syllabus has a common core extending through the first two years. Specialist options are introduced in the third year, and the fourth year includes further specialist material and a major project.

*Research*

The Department was ranked the top engineering department in the UK, as measured by overall GPA, in the Research Excellence Framework 2014 exercise. We have approximately 600 research students and about 200 Research Fellows and Postdoctoral researchers. Funding for research grants and contracts, from a variety of sources, generates an annual turnover of approximately £36m in addition to general turnover of about £32m. The research activities of the department fall into seven broad headings, though there is much overlapping in practice: Thermofluids; Materials and Mechanics; Civil and Offshore; Information, Control and Vision; Electrical and Optoelectronic; Chemical and Process; Biomedical Engineering.

For more information please visit:

http://www.eng.ox.ac.uk/

The Department of Engineering Science holds a bronze Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

## The Mathematical, Physical, and Life Sciences Division

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University. In the results of the six-yearly UK-wide assessment of university research, REF2014, the MPLS division received the highest overall grade point average (GPA) and the highest GPA for outputs. We received the highest proportion of 4* outputs, and the highest proportion of 4* activity overall. More than 50 per cent of MPLS activity was assessed as world leading.

The MPLS Division's 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. We have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships

We have around 6,000 students and play a major role in training the next generation of leading scientists. Oxford's international reputation for excellence in teaching is reflected in its position at the top of the major league tables and subject assessments.

MPLS is dedicated to bringing the wonder and potential of science to the attention of audiences far beyond the world of academia. We have a strong commitment to supporting public engagement in science through initiatives including the Oxford Sparks portal (http://www.oxfordsparks.net/) and a large variety of outreach activities. We also endeavour to bring the potential of our scientific efforts forward for practical and beneficial application to the real world and our desire is to link our best scientific minds with industry and public policy makers.

For more information about the MPLS division, please visit: http://www.mpls.ox.ac.uk/

## How to apply

Applications are made through our e-recruitment system, and you will find all the information you need about how to apply on our Jobs website https://www.jobs.ox.ac.uk/how-to-apply.

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

As part of your application, you will be asked to provide details of two referees and indicate whether we can contact them now.

You will be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants).

Please upload all documents **as PDF files** with your name and the document type in the filename.

All applications must be received by **midday** UK time on the closing date stated in the online advertisement.

## Information for priority candidates

A priority candidate is a university employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

## If you need help

Help and support is available from: https://hrsystems.admin.ox.ac.uk/recruitment-support

If you require any further assistance, please email recruitment.support@admin.ox.ac.uk.

To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our e-recruitment system to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.

## Important information for candidates

### Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy. The University's Policy on Data Protection is available at: https://compliance.admin.ox.ac.uk/data-protection-policy.

### The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. The University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at **grade 8 and above**. The justification for this is explained at: https://hr.admin.ox.ac.uk/the-ejra

For **existing** employees, any employment beyond the retirement age is subject to approval through the procedures: https://hr.admin.ox.ac.uk/the-ejra

There is no normal or fixed age at which staff in posts at **grades 1–7** have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

### Equality of opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post

and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

# Benefits of working at the University

## Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See https://hr.admin.ox.ac.uk/staff-benefits

## University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and https://www.sport.ox.ac.uk/.

## Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See https://welcome.ox.ac.uk/

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependents. See https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme

## Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to the Work+Family Space, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See https://hr.admin.ox.ac.uk/my-family-care

The University has excellent childcare services, including five University nurseries as well as University-supported places at many other private nurseries.

For full details, including how to apply and the costs, see https://childcare.admin.ox.ac.uk/

## Disabled staff

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University's Staff Disability Advisor, see https://edu.admin.ox.ac.uk/disability-support

## Staff networks

The University has a number of staff networks including the Oxford Research Staff Society, BME staff network, LGBT+ staff network and a disabled staff network. You can find more information at https://edu.admin.ox.ac.uk/networks

## The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is an organisation run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.