

Whisky Barrel Inspection Lead (KTP Associate)

Department	Electronic and Electrical Engineering (www.strath.ac.uk/engineering/electronicalelectricalengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	KTP	Reference No	447973
Reports To	Dr Gordon Dobie (Academic Supervisor), John Rennie (Company Supervisor)	Grade:	RS79
Salary Range:	£32,000 to £37,000 p.a. plus £4,000 training and development budget	Contract Type:	Fixed Term (24 months)
FTE	1 (40 hours/week)	Closing Date	22/05/2022

Job Advert

The Department of Electronic and Electrical Engineering in partnership with Inspectahire (www.inspectahire.com) are seeking to appoint a Whisky Barrel Inspection Lead (KTP Associate), with a focus on novel ultrasonic inspection and low power sensors.

Headquartered in Aberdeen and established over 35 years ago, Inspectahire have grown to become a diversified and highly flexible NDT Inspections and testing business. As one of the UK's leading inspection specialists, Inspectahire has worked on a diverse range of projects across the world. From the legs of oil & gas platforms to the tips of wind turbines, via railway infrastructure and factory machinery, Inspectahire have been called upon to undertake all types of inspections, in all environments – including harsh and hazardous areas. The particular focuses considers a new application in the inspection of Scotland's vast whisky stores.

The position offers the KTP Associate the following benefits:

- a challenging and rewarding job with real responsibility
- a planned programme of training courses, including a £4k personal development budget
- mentoring from experienced industrial and academic supervisors
- the support and resources of the University of Strathclyde
- the possibility of registering for a higher degree with the University
- the potential for good career development with the company at the end of the scheme
- developing and proving expertise in the prospering fields of renewable energy and remanufacturing
- the opportunity to make important and tangible improvements in an ambitious and dynamic company
- the opportunity to create foundations with the organization to develop new business models
- the opportunity to make a significant contribution to wind industry sustainability and carbon footprint

The post will be predominantly based at the company premises in Aberdeen with visits to the Strathclyde University Campus.

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: www.ktpws.org.uk

The objective of this project is to develop of a portable fluid level measuring device for use in the hazardous zoned area of bonded warehouses to enable owners to monitor cask contents whilst in situ, thus greatly reducing the risks and costs of moving casks from within racks and stores. The device must be portable, ATEX compatible and capable of propagating ultrasonic signals through the wooden cask to estimate the liquid depth.

To be considered for the role you will be expected to have a PhD degree in Electronic Engineering or equivalent. The successful candidate will have experience in ultrasonic inspection, ultrasonic propagation in difficult materials, algorithm development, embedded electronics, firmware development and software development. For a full list of role requirements please see the person specification below.

In addition to the KTP core development training, you will have a dedicated training budget of £4,000 to further support your career development.

Job Description

Brief Outline of Job:

There are 2-3M high value casks located at around 100 facilities across Scotland. Beyond the UK and Ireland markets, there is opportunity to use this product in other markets such as the bourbon, Japanese whiskey, rum and high-end wine markets. Any liquid that is stored in a wooden cask can benefit. Whisky barrels are currently 'dip tested' to check the levels of whisky within the barrel. Whilst a simple solution, it creates great expenses for whisky companies who have to move the barrels (weighing 600lbs (~270kg)) from high warehouse shelving, to transport vehicles, to a bottling facility to test safely then repeat the process backwards. This KTP will develop expertise in ultrasonic testing, specifically in wood, which will allow us to test barrels in-situ, greatly reducing cost for whisky companies.

The KTP Associate will undertake a 2-year programme of work to research and develop both business and technical solutions to develop a device for in-situ estimation of whisky barrels. This multi-disciplinary project will include fundamental work in ultrasonics, transduction, data acquisition, electrical design, firmware and software development. It will produce a prototype device that can be put forward for ATEX certification. The device will be trialled in the lab, then at initial customer sites.

The Associate will also contribute to the knowledge base through training workshops and reports which will be the basis for journal publications. Consistent reference to literature and use of academic and industry expertise will ensure best practice and successful delivery.

Main Activities/Responsibilities:

1.	Lead and project manage the KTP
2.	Collate existing information on the work to date, technical requirements and business need
3.	Review and familiarise yourself with the academic literature
4.	Develop conceptual solutions with high level systems engineering
5.	Perform detailed system design
6.	Produce a prototype device
7.	Validate the prototype in a lab setting, then perform field trials
8.	Engage in continuous professional development within the University and Company as appropriate
9.	Dissemination of KTP outputs and industry engagement with Academic team (e.g. through publication and presentation of work at conferences, tradeshow and in peer reviewed journals)
10.	Develop training manuals
11.	Completion of all KTP training and the KTP Associate Final Report by the required deadline.
12.	Ensure proper project management and reporting requirements are met throughout.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

EI PhD in Electronic and Electrical Engineering or equivalent

Experience

E2 A strong background in ultrasonics and signal processing

E3 Experience with electronic and software system development

E4 Experience working on KE projects with industry

Job Related Skills and Achievements

E5 Awareness of commercial drivers

E6 Proficient in technical writing/presentation

E7 Proficient in electronics including circuit design and PCB layout

E8 Proficient in firmware and software programming

E9 Proficient in ultrasonic transduction

Personal Attributes

E10 Strong project management skills (particularly communication, organisation, and leadership)

E11 Self-directed and self motivated

E12 Good interpersonal and collaboration skills

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Dr Gordon Dobie, Electronic & Electrical Engineering (gordon.dobie@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the KTP staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 6 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Interviews

Informal interviews will be held on a date to be confirmed.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

