



Process development Engineer – KTP Associate

Reference:

Salary: £27,000 - £32,000 per annum depending on experience

Contract Type: 30 months (fixed term)

Basis: Full Time

Job description

This 30-month project takes the form of a [Knowledge Transfer Partnership \(KTP\)](#), which provides you with practical and formal training and the availability of support from experienced mentors from [Brockhouse Group Ltd](#), [Aston University](#) and [Innovate UK-KTN](#).

Job Purpose:

The vision of the project is to implement enabling technologies to support Brockhouse Group Ltd's (BGL) strategic decision to reduce dependence on mining and develop markets in the emerging energy conservation and renewable sectors. Steel forging is a legacy industry where the fundamental processes that have not changed over many years. BGL has been forging steel for over 100 years, it currently exports 40% of its output into the deep coal mining sector, which is expected to decline in the next 10 years due to the pressure on CO2 emissions.

The KTP project will address two key issues in transforming BGL into a more sustainable business:

- ▶ Improve the operational efficiency of key processes to increase machine utilisation and reduce waste.
- ▶ Identify ways of reducing energy consumption or recovering waste energy (e.g., exhaust gasses) to reduce dependence on external electricity supplies.

The project will look at these two areas of development side by side using Dr Nunes' GRASS Model (Greener Approach to Systems Strategy) to investigate current operations characteristics and sustainability performance, including economic, environmental and social aspects. This is an innovative holistic approach that will direct the project to:

- ▶ Improved Process Control – increasing forge utilisation and reducing gas usage in furnaces
- ▶ Waste material reduction – reducing scrap levels
- ▶ Waste heat to power conversion – implementing Organic Rankine Cycle (ORC) system to convert waste heat to electricity

The role:

This role is an exciting opportunity for candidates qualified to M.Sc / M.Eng in Mechanical Engineering, ideally with industrial experience in a process industry. They will need to be able to demonstrate excellent mechanical engineering skills, with a methodical approach to problem solving.

They should have appropriate industrial experience and be aspiring to move from a technical position towards a higher managerial job. Applicants with good technical background who currently hold or in recent past held supervision of production cells or relevant processes run by small teams are eligible. The project is an opportunity to develop the associate's project management and leadership skills they can aspire to become plant manager after this experience.

Main duties and responsibilities:

- ▶ Build an understanding of the opportunity and challenge for the KTP project
- ▶ Integrate the knowledge and tools from Phase 1 into initial capability models for energy efficiency and process improvement.
- ▶ Validate and implement process management, process control improvement and energy efficiency opportunities identified in Phase 2
- ▶ Develop roadmap pathway for post KTP developments with BGL using legacy capability.

Additional responsibilities

- ▶ Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities to develop themselves and support the development of others.
- ▶ Ensure and promote the personal health, safety and wellbeing of staff.
- ▶ Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- ▶ Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

Additional Benefits

- ▶ Up to £5000 for personal and professional development for the duration of the project.

Person specification

	Essential	Method of assessment
Education and qualifications	M.Sc / M.Eng in Mechanical Engineering.	Application form
Experience	Industrial experience in a process industry.	Application form and interview
Aptitude and skills	Excellent mechanical engineering skills, with a methodical approach to problem solving. Process management/improvement, green/lean manufacturing and process control.	Application form and interview

	Desirable	Method of assessment
Aptitude and skills	Heat transfer and thermodynamics; Energy conservation and management and energy efficiency directives and approaches. Numerical / mathematical modelling of systems, particularly in the used of MATLAB and process management related tools.	Application form and interview

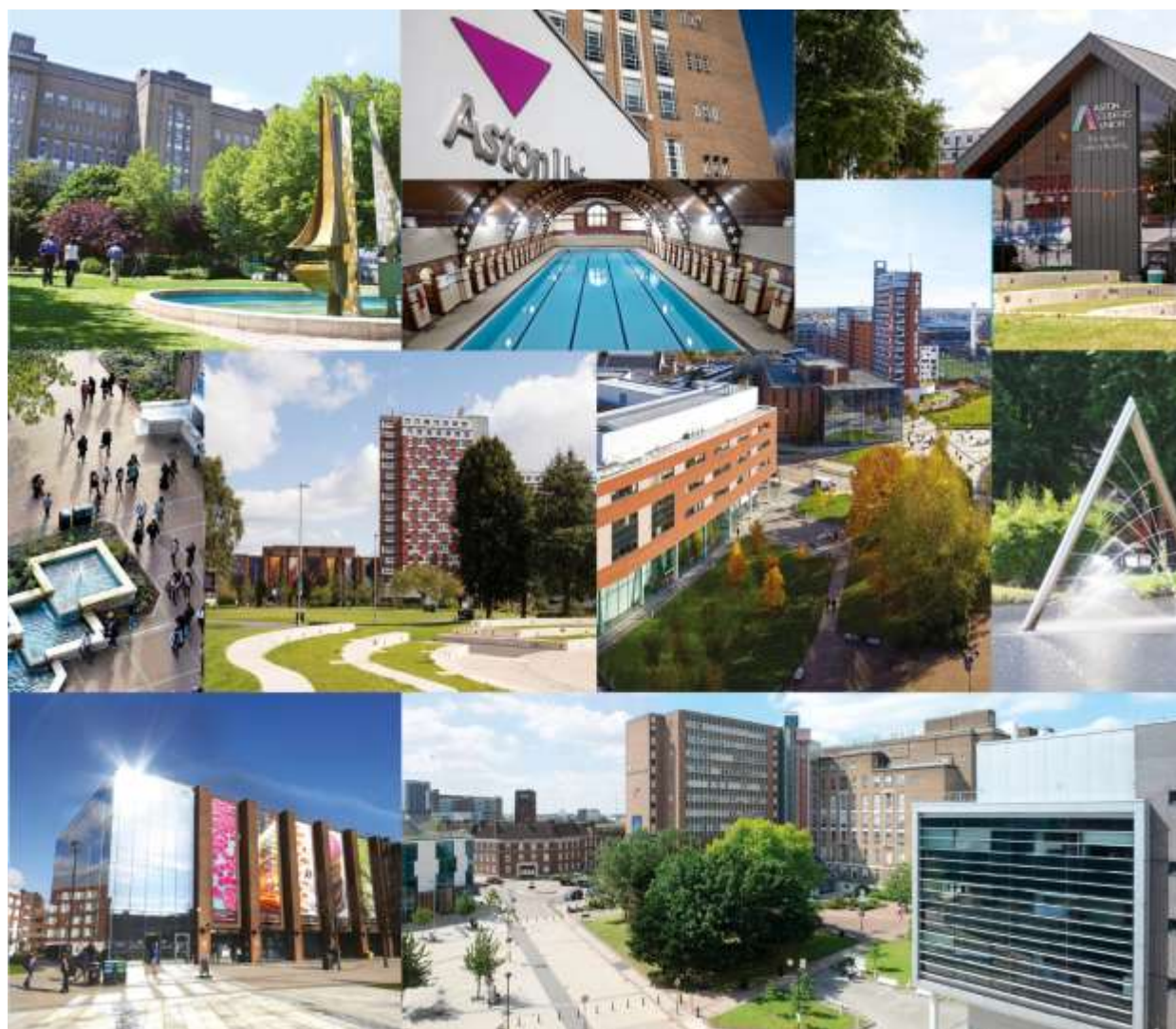
How to apply

You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23.59 BST on the advertised closing date.
All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.

If you require a manual application form then please contact the Recruitment Team via jobs@aston.ac.uk.



Contact information

Enquiries about the vacancy:

Name: Dr Breno Nunes

Job Title: Senior Lecturer in Sustainable Operations Management at Aston Business School

Email: B.NUNES@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:

Recruitment Team via jobs@aston.ac.uk or 0121 204 4500.

Additional information

Visit our website <https://www2.aston.ac.uk/staff-public/hr> for full details of our salary scales and benefits Aston University staff enjoy

Salary scales: <https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index>

Benefits: <https://www2.aston.ac.uk/staff-public/hr/Benefits-and-Rewards/index>

Employment of Ex-Offenders: Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they are applying for is listed as an exception under the act.

Eligibility to work in the UK:

Post-Brexit transition period / EU Settlement Scheme

The post-Brexit transition period ended on 31 December 2020. If you are an EU/EEA citizen and you were a resident in the UK before 31 December 2020, you and your family members (including non-EU citizens need to apply to the EU Settlement Scheme to continue to live, work and study in the UK beyond 30 June 2021. The deadline for applying to the EU settlement scheme is 30 June 2021. You can apply via the Government webpage

<https://www.gov.uk/settled-status-eu-citizens-families>

Irish Nationals do not need to apply for settlement as they retain the right to work in the UK.

New immigration system for EU/EEA and Swiss Nationals who were not resident in the UK before 31 December 2020

A new immigration system has been introduced for people arriving in the UK from EEA countries with effect from 1 January 2021. In addition to those who have always required a visa, EU citizens moving to the UK to work will need to get a visa in advance. You can find more information on the following website. Candidates should check their eligibility to enter or remain in the UK in advance of making any job application via the UKVI website <https://www.gov.uk/browse/visas-immigration/work-visas>. Before applying you should ensure that you meet the requirements, including meeting the English Language requirements. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. If you require a visa to work in the UK the most common types of visa are:

Skilled Worker Visa

<https://www.gov.uk/skilled-worker-visa>

Global Talent Visa

If you are a leader or potential leader in one of the following fields you may be eligible to apply for a Global Talent Visa:

- Academia or Research
- Arts and Culture
- Digital Technology

Please click the following link for further information and to check your eligibility for this visa.
<https://www.gov.uk/global-talent>

Equal Opportunities: Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

Data Protection: Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at <https://www2.aston.ac.uk/data-protection>. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at <https://www2.aston.ac.uk/staff-public/hr/policies>

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gets real.**