Candidate Information

Position:	Process/Chemical Engineer – KTP Associate – Colloide
School/Department:	KTP and Business Networks
Reference:	19/107861
Closing Date:	Tuesday 22 October 2019
Salary:	£24,000 - £30,000 per annum.
Anticipated Interview Date:	Wednesday 6 November 2019
Duration:	24 months

Job Purpose:

Biogas production represents a significant proportion of the UK renewable energy mix but is one which is increasingly likely to face regulation in terms of emissions including methane and ammonia. This project aims to develop innovative processes to treat such emissions within this sector.

Main Activities and Responsibilities:

Through the KTP programme we wish to recruit a dynamic, highly skilled and motivated graduate to work in Colloide in a collaboration with the School of Chemistry & Chemical Engineering at Queen's over 24 months. The postholder will be based in Colloide, Cookstown and will be required to carry out testing on-site at AD plants.

Colloide is a highly skilled process engineering company, specialising in water treatment, energy, environmental and facilities engineering solutions. Our services range from design through to construction, installation, commissioning, maintenance and overall project management. Our experience is wide ranging, from major water utility installations and innovative 'first of its kind' district heating projects through to work with breweries on process improvements and biomass heating installations on farms. Colloide have recently started working in the anaerobic digestion (AD) sector. Whilst there is strong demand for AD technology, continued growth is limited by the restrictions around the disposal of the liquid digestate produced. The project aims to develop innovative processes to treat such emissions within this sector.

Under the guidance of the company and academic supervisors, the KTP Associate will provide the expertise necessary to deliver the following key integrated project phases:

1. Development of a detailed specification for an Anaerobic Digestate Treatment system.
2. Experimental testing using QUB Separation Technology Rigs & Ammonia Recovery Enhancement methods.
3. Techno-economic evaluation, Process Modelling and System Refinement.
4. Design and development of a larger scale continuous prototype unit.
5. Construction, operational testing, commissioning and operational assurances of the larger scale continuous prototype unit.
6. Determination of requirements for full-scale commercial units, IP protection, marketing and dissemination.

Planning and Organising:

1. Manage and coordinate the items of work as laid out in the project plan (individual work plan will be provided by Supervisors).
2. Plan day-to-day activity within the framework of the agreed work plan.
3. Contribute to the planning and management of the project, approximately 3-6 months in advance.
4. Ensure that all training and development activity is scheduled to ensure that progress on the work plan objectives is not interrupted or delayed.

Resource Management and Responsibilities:

5. Plan and manage day-to-day resources to ensure the project runs to time and on budget.
6. Coordinate and obtain approval for planned expenditure/allocation of resources with the Management Committee and Steering Group.
7. Carry out supervision of placement students or other staff members as required.

8. Monitor travel and development budgets and produce a Personal Development Plan which will ensure best use of financial resources.
9. Attend training modules (mandatory and additional job-specific training). This may be local, national and international.
10. Perform any other additional duties as agreed by the Local Management Committee and Steering Groups to contribute to the development of the company, the University and the Associate.

Internal and External Relationships:
11. Present regular progress reports to members of the Steering and Management Groups and to external audiences.
12. Liaise with company staff on a daily basis. Contribute to training of staff in the company and University as required.
13. Build relationships with both company and University staff to ensure effective working practices are established.
14. Attend and contribute to any appropriate meetings, both in the company and the University as required.
15. Establish contacts with additional groups and organisations (other KTP Associates, other University departments, other industrial contacts, and Innovate UK) as required to develop knowledge and understanding and form relationships for future collaboration.
16. Act as an Ambassador for the Knowledge Transfer Partnership Scheme.

Additional Information:
17. Knowledge Transfer Partnerships is a UK programme that enables businesses to work with universities to gain access to specialist knowledge and expertise and apply it within their organisation. Each Partnership recruits a Graduate to work in the company, implementing and embedding the latest research techniques. Guidance is provided by the academic and company supervisors to ensure that the objectives of the project are met. Although the scheme is aimed at recent graduates, any suitably qualified individual may apply.
18. Each KTP is a fully salaried job that lasts between twelve and thirty six months, providing the graduate with an opportunity to fast track a career in industry. Each KTP Associate has a training and development budget and a travel budget. This funding provides opportunities for job-specific training, attending and presenting at conferences, visiting trade shows, customers and suppliers etc. Two one-week residential management training modules are also provided as part of the package.
19. This partnership received financial support from the Knowledge Transfer Partnerships (KTP) programme . KTP 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. This successful Knowledge Transfer Partnership project, funded by UK Research and Innovation through Innovate UK, is part of the government's Industrial Strategy.
20. As members of University staff, KTP Associates can join the University pension scheme and gain access to University resources, such as the Library and sports facilities.

Essential Criteria:
- Hold at least a 2.1 Honours degree (or equivalent) in Process Engineering, Chemical Engineering or a closely related subject.
- Knowledge of equipment design and scale up principles.
- 3 months' relevant experience.
- Good oral written and presentation skills. High level of IT skills.
- Ability to think logically, create solutions and make informed decisions.
- A high level of numeracy and the ability to interpret data.
- Ability to work effectively as a member of a group.
- Well organised, attention to detail and ability to meet tight deadlines.
- An interest in staying with the Company. (Associates are normally invited to apply for permanent positions).
- Ability to take part in Associate management courses (requiring two one-week periods in England).
- Willing/able to travel throughout the UK and Ireland and abroad, as necessary.
- A requirement of this post is that the successful candidate must be able to commute between the main office in Cookstown and AD plants located remotely.

Desirable Criteria:
- Hold, or be about to obtain, a closely related higher degree.
- Specialist knowledge of chemical processes involved in the treatment of liquid digestate.
- 6 months' relevant experience.
- Experience of designing, conducting, statistically analysing and writing up scientific experiments.
- Experience in plant commissioning.
- Ability to deliver training and follow-up support to operatives.

- Ability to influence people effectively.
- Tenacious and committed to achieving goals.