JOB DESCRIPTION – SENIOR RESEARCH ASSOCIATE

Project “Friction Stir Welding Crawler for Internal Repair and Refurbishment of Pipelines”

Vacancy Ref: A2297

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Senior Research Associate</th>
<th>Present Grade: 7P</th>
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<tr>
<td>Department/College:</td>
<td>Engineering Department</td>
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<tr>
<td>Directly responsible to:</td>
<td>Professor Chris Dungey</td>
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<td>Supervisory responsibility for:</td>
<td>Supervision of PhD students at the NSIRC</td>
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Other contacts

Internal:
Professor Chris Dungey, Academic staff and PDRAs in the Engineering Department

External:
Forth Engineering, Innvotek Ltd, Proserve UK Limited, National Structural Integrity Research Centre

Major Duties:

1. Undertake research activities specific to Innovate UK grant ref. 104056/2178 concerning the development of a Friction Stir Welding Crawler for Internal Repair and Refurbishment of Pipelines (FSWBot). This is an Innovate UK collaborative project with Forth Engineering as the lead organization, TWI Ltd, Innvotek Ltd, London South Bank University, Proserv UK Limited, and Lancaster University as project partners. Lancaster’s role in the project is to implement automated weld tracking in operational conditions for the FSWBot system. This will be through the implementation of intelligent algorithms, able to detect, and track welds, while classifying any detected welding defects.

2. Responsible for the planning, development & writing of research publications and research / progress reports or disseminate research findings using other appropriate media.

3. In collaboration with the research partners, making of presentations at conferences and to funding bodies (both internal and external) or exhibit work at other appropriate events.

4. Responsible for the co-ordination, administration and supervision of research at the National Structural Integrity Research Centre, especially those working in digital manufacturing related research fields.

5. To promote the digital manufacturing research activities of the Joining 4.0 Innovation Centre (J4IC) within the University and with external bodies.