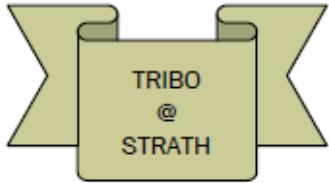


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TRIBOLOGIA



Strathclyde Tribology Group

New Project & Development

CAMREG & SPIRE 2

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SPIRE 2

“The SPIRE 2 project will involve collaboration between Strathclyde and the lead coordinator Ulster University, 2 research institutes and 14 businesses via a cross-border Virtual Research Graduate School.”

“The SPIRE 2 project is funded by the EU’s Interreg VA programme, with the match-funding provided by the Department of Jobs, Enterprise and Innovation in Ireland and the Department for the Economy in Northern Ireland.”

“The research is part of the €6.7 million cross-border [SPIRE 2 project](#), led by Ulster University, which aims to develop a range of consumer-owned energy storage devices to help meet current and future electricity market needs.”

“The announcement by the Business Secretary Greg Clarke outlined how the UK Government intends to stimulate a drastic modernisation of energy markets.

[BBC News "Electricity shake-up could save consumers 'up to £40bn'"](#)



5 Tribology Research Opportunities: Wear, Erosion and Corrosion Issues of Wind Turbine and Tidal Turbine Materials

- 1) Raindrop erosion of hybrid coatings for wind turbines
- 2) Modelling hailstone impact on leading edge of wind turbines
- 3) Mapping seawater effects on wind turbine material degradation
- 4) Sea water and biofouling for tidal turbines
- 5) Modelling materials maps for tidal turbines

CAMREG

CAMREG is a partnership of 3 research-intensive universities, Edinburgh, Cranfield and Strathclyde, which would gather and network the interests, capacity and networks of many of the RCUK investments in energy research and training, and accruing over 200 industry connections: through 3 SuperGen Hubs, Marine UKCMER, Wind and Power Networks; 4 EPSRC Centres for Doctoral Training - Wind Energy Systems, Wind & Marine Energy Systems, Offshore Renewable Energy Marine Structures and Integrative Sensing and Measurement; the EPSRC Industrial Doctorate Centre in Offshore Renewable Energy and the DECC SLIC (Offshore Wind Structural Lifecycle) Joint Industry Project - the largest industry-funded offshore renewables related materials and structures research project worldwide, involving Certification Authorities (DNV-GL and LR) and 10 of Europe's largest energy utility companies. The Centre will also respond to the needs and experience of device developers, project planners, legislators and consenting bodies, and academic partners will continue to work closely with key UK policy stakeholders

Image of Research Finalist - Rafee Ahamed

Ongoing Projects

BP, ETP, UoS Partnership

Erosion-corrosion mapping of pipeline grade steels

Tribology is an area of paramount technological significance, associated with immense costs in the oil and gas production industry. In an environment such as the aforementioned, there are several contributing factors and it is important to identify each factor's effect on the degradation of materials. In this project, tests will be conducted on an in-house developed jet impinging rig. The environment simulated is that of low yield well pipeline containing CO₂ seawater and erodent particles. Results from the tests will be utilised to create erosion – corrosion maps which offer an effective understanding of the conditions under which erosion – corrosion regimes and wastage rates change. Identifying parameters causing synergistic additive and antagonistic effects could aid in the material degradation prevention and prediction, reducing costs and mitigating risks in the sector of oil and gas.

