INSTITUTE OF CORROSION (ICORR) London BRANCH

Annual Joint Event with TWI

Thursday 8th April 2021, Start Time: 18.00 (BST)

It is **Free** and **Open to all** ICorr / TWI Members and Non-Members.

Optimising impressed current cathodic protection (ICCP) anode sled locations for offshore jacket structure retrofits.

Speaker:

Matthew L. Taylor, Ph.D.
Chief Technology Officer
Deepwater Corrosion Services, Inc

Virtual Event Programme:

- 18:00 – 18:05 LB Chairman welcome and introduction of Speaker
- 18:05 – 18:45 Technical Presentation
- 18:45 – 19.00 Q&A Session
- 19:00 – 19.05 Closing Remarks, and thanks for speaker

Please register for the event by using the link below:

https://forms.gle/pLdDZXUUvYb92GSq6

Synopsis:

Choosing anode sled locations is a critical step in the ICCP retrofit design process. Typically, a CP engineer locates sleds based on site plans, experience, intuition, and some simple equations evaluating “remoteness” criteria.
3D CP Multiphysics software (both BE and FE) models have been used to evaluate the performance of a given CP design. These models, typically proprietary in construction and calibrated by historical structure polarisation data give general indications of system performance, often ignoring the effects of ICCP on associated pipelines. Any attempted optimisation procedure involves “guess and check” techniques, with no method of validating the results.
Pipeline CP measurements made during and after ICCP system commissioning has revealed that pipelines were more affected than previously believed given the “remoteness” criteria traditionally used.
This talk describes algorithms and analysis to optimise the placement, quantity and output of anode sleds to improve system efficiency, minimise risk to pipelines and reduce cost.

About the Speaker:

Dr Matthew Taylor is a corrosion engineer with a Ph.D. in Materials Science and Engineering from The Pennsylvania State University and INSA de Lyon. Dr. Taylor applies corrosion science to offshore infrastructure world-wide, developing technologies and custom solutions to overcome a variety of challenging corrosion issues. He has been studying diverse corrosion control technologies since 2005 and focused on the field of offshore corrosion and cathodic protection since 2012. He currently resides in Houston, TX