

## The Institution of Engineers, Malaysia

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# Talk on "Managing Corrosion Under Insulation (CUI)"

Organised by Oil, Gas & Mining Technical Division, IEM)

- Date Time Venue Speaker
- : 11<sup>th</sup> November 2017 (Saturday)
  - : 11.00am to 1.00pm (Refreshments will be served at 10.30am)
  - : C&S and TUS Lecture Room, 2<sup>nd</sup> Floor, Wisma IEM, PJ
- : Dr. Lee Chee Hong

### **SYNOPSIS**

Most metals used in the construction of facilities are subject to corrosion, much effort have been done by plant owners to minimize corrosion damages, with some corrosion issues are easier to resolve than others. This talk starts with a quick introduction to various forms of corrosion and their mitigation measures performed in the industries. Subsequently the focus will be turned toward the external corrosion occurred on pipe & equipment underneath jacketed insulation, or more commonly known as Corrosion Under Insulation (CUI). The discussion of this subject begins with the description of CUI mechanism in hot, cold and intermittent services for both open and closed systems, with the points of entry for the corrosive substances, CUI initiation and susceptible areas are suggested. As CUI commenced, the extent of the damage is driven by various factors; including the atmospheric and operating conditions, material of construction, insulation and coating systems.

Implementing an effective Corrosion Under Insulation (CUI) detection, monitoring and inspection programme, particularly for a major piping network, can be a major undertaking, let alone replacing them. The industries have learned the hard way to tackle CUI from out of sigh out of mind mentality to painstaking inspection and firefighting approach. An attempt is introduced to examine the front-end engineering aspects that may be engaged as part of the life-cycle CUI management efforts. Several case studies will be shared to demonstrate the CUI-prone onshore and offshore assets that are assessed from the perspectives discussed.

#### **BIODATA OF SPEAKER**

Dr. Lee Chee Hong received his Degree in 1999 and Master of Chemical Engineering from the University Technology Malaysia (UTM) in 2001 while his PhD degree in Corrosion Science and Engineering from the Corrosion and Protection Centre, University of Manchester (formerly UMIST), UK in 2006.

Dr. Lee is currently a lead corrosion engineer with Synergy and has been involved in corrosion and material engineering of the past 15 years; his responsibilities include corrosion risk assessment, failure analysis and materials selection; providing proactive corrosion mitigation solutions and addressing corrosion-related issues, primarily for energy and chemical industries.

Dr. Lee is also an adjunct lecturer at the Centre of Corrosion Research UTP since 2012. He is the immediate past chair of NACE Corrosion Society Founding Malaysia Section and Institute of Materials Malaysia (IMM) Corrosion Committee.

Ir. Mohd Azwira Mohd Azmi Chairman **Oil, Gas and Mining Technical Division** 

**BEM Approved CPD/PDP Hours: 2** 

Ref. No.: IEM17/HQ/440/T

#### **ANNOUNCEMENT TO NOTE**

**Effective 1st October 2017** 

#### FEES FOR TALKS

#### Members: Registration Fee : FOC Administrative Fee: Online Walk-In

: RM15.00 : RM20.00

#### Non-Members

Registration Fee : RM50.00 Administrative Fee: RM20.00

Limited seats are available on a "first come first served" basis (maximum 100 participants).

#### To secure your seat, kindly **REGISTER ONLINE at** www.myiem.org.my

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