

March 2018

Integrity Management of Storage Tanks

**In Brief:**

- Corrosion Mapping of Storage Tanks
- Dropping a remote UT scanner through the fluids of the tank
- Analysis of results
- Iterative process to check the model is accurate
- London Branch AGM

**The Route to Chartered Status**

Program starts February 2018

**The Fundamentals of Corrosion**

Next course: March 2018 TBC

**Young Engineer Program**

Next YEP 21<sup>st</sup> March; Materials, Sadegh Parvizi at CB&I in Paddington

**Winter Meetings:**

January 11<sup>th</sup> 2018

Developments in Remote Magnetic Monitoring of Stress in Ferromagnetic Pipelines by Hamed Habibi of Speir Hunter Skempton, Imperial College  
18.00 for 18.30 start

February 8<sup>th</sup> 2018

The use of EIS as a predictive tool for coating lifetime of FBE coated pipe by Axalta Powder Coating Systems  
Skempton, Imperial College  
18.00 for 18.30 start

March 8<sup>th</sup> 2018

Non-intrusive inspection methods to determine metal loss on the base plates of Storage Tanks by Sonomatic Ltd  
Skempton, Imperial College  
18.00 for 18.30 start

## Technology Advancements in Integrity Management of Storage Tanks

By Mark Stone - Sonomatic Ltd

Mark Stone delivered a fascinating presentation on the advancements of Storage Tank Integrity. It's of particular interest to David Mobbs having been a career objective to establish a mechanism for detecting metal loss on the base plates of tanks without the need to "drop the tank". The industry is well versed with Non-intrusive inspection of vessels and pipework, but Corrosion Mapping of Storage Tanks has always relied on man entry and physical base plate inspection. The industry does not like working in confined spaces and there are moves towards zero-man entry over the lifetime of storage and process vessels. Mark Stone explained that Storage Tank inspection plays a major role in effective integrity management of Storage Tanks. Historically, inspection of the floor has relied on emptying the tank and personnel entry for cleaning and inspection and that the common method of using MFL is not necessarily the most effective method of determining metal loss.

Sonomatic have developed a range of methods for inspection of Storage Tanks while in-service. This includes the use of traditional shell wall inspection using crawlers coupled with new technology to determine metal loss in the first meter of the tank using multi skip technology deployed around the outer chime of the tank.

The key element of the program is however the use of a robotic cleaning and inspection of the floor. The tool dropped through the tank fluids to the floor and remotely guided by use of sonar. The first part of the program is to understand the level of sludge which is completed by the sonar that is strategically placed around the base of the tank. The tool is then able to remove the sludge and scan the base plates, results are transmitted to a mobile unit outside where the program is supported by statistical analysis. The presentation included a case study of a field application and the detail can be seen on the LB page of the website



Mark Stone discussing Technology Advancements in Integrity Management of Storage Tanks

April 12<sup>th</sup> 2018

HDPE Field joint coating –  
Stephan Couprie of Saipem.  
Skempton, Imperial College  
18.00 for 18.30 start

There was a good level of discussion around the floor and it was the view of David Mobbs that this process real value is in an “iterative process” where a tank farm operator would screen all the tanks and identify which was detected as the worst. On opening the tank and carrying out full base plate inspection its possible to check the model to see how accurate it is. By the time the 3<sup>rd</sup> tank is completed its full inspection the model is going to be pretty accurate.

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### **The London Branch AGM**

The London Branch AGM was held ahead of the meeting in which David Mobbs (Chair) delivered a short presentation on the Achievements

- Moved to Imperial College; a learned institute in a learned institution
- Meetings moved from 20-30 to 40-50
- Made steps to bring in speakers with new technology, new ideas with technical content
- Produce a Flyer for each evening event
- Produce a LB Newsletter which we post on the website
- We are hosting the YEP 2018
- Membership affiliated to London Branch 463/1020
- Accounts are positive with a healthy surplus from LB

### Awards

- Honorary Life Fellow
  - Mike Allen
- Chartered Status
  - 64 applicants via ICorr
  - Peter Sinclair - Saipem
  - Yuhua Sun of BP
  - David Mobbs
- 22 members qualified for there long service pins, (20 and 30 years)

### Plans

- Continue to drive innovative presentation with good technical content
- Continue to drive up numbers
- Attract new members
- Restructure the committee to make better use of the resource we have
- Paul Brooks                      Chair
- Ben Moorhouse                Vice Chair
- Jim Glynn                        Treasurer
- Steve Barke                     Secretary
- Events                            Trevor Osborne
- Events                            Ben Moorhouse
- PR                                 Brian Goldie
- Speakers                        George Winning
- Membership                     David Mobbs

### Thanks

- Thanks to all of you for the support
- Thanks to all the speakers that have given up their time to tell us about new developments
- Thanks to the London Branch Committee who give up their time voluntarily to make it all work
- The committee hope we have served its members well

### **Contact Us:**

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### **Find Information:**

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