Meeting Report
25th Anniversary Technical Training Day 5th April 2019
Royal Horseguard Hotel London

Attendees:

Leslie Abrahams  
Iain Baillie  
Jackie Berry  
David Brereton  
Sam Broujeni  
Peter Bruckner  
Andrew Buckley  
Joe Buckley  
Franc Buijsen  
Rogerio Carvalho  
Michelle Clapham  
Roger Edström  
David Eklund  
Rene Normann  
John Ellis  
Laurent Enenkel  
Semin Erstad  
Nell Fernandez  
Thomas Fletcher  
Christina George  
Ian Gough  

John Hansen  
Richard Henderson  
Paul Hillman  
Sean Hughes  
Alex Jackson  
Ashley Jolley  
Stede Marsh  
Peter Nutty  
Mark Ormrod  
Jerome Poirier  
Stuart Price  
Tim Rickets  
Patricia Salas  
Johannes Senders  
Scott Standing  
Jason Taylor  
Adam Thorpe  
Heather Trodden  
Joe Veale  
Ranier Valentin  
Peter Wood  

Welcome and Introduction
The day was started with an introduction by Michelle Clapham (NATL Chair), welcoming everyone to the meeting and setting out the scope of the day’s activities.
This was followed by a video from Dave Mandina (Chairman of ASNT Board) and Scott Cargill (ASNT President) wishing us a great event and passing on their apologies for not being able to attend (https://www.linkedin.com/feed/update/urn:li:activity:6524229467496419328).
There was also a video from ASNT singing Happy Birthday (https://www.linkedin.com/feed/update/urn:li:activity:6524229613273649152).
Session 1 – Zetec – TFM & Full Matrix Capture
The day was started with a presentation by Paul Hillman, Laurent Enkel and Jerome Poirier. Paul opened with a review of their latest handheld eddy current device MIZ-Z1C, detailing its capabilities and applications and also how their surface array probe has possible applications in replacing PT/MT on pipes. This was followed by Jerome who reviewed the principles of Phased Array, Full Matrix Capture and Total Focus Method. The review detailed how the data is collected and interpolated in order to provide the best review of the information. As an example, a 64 Element phased array transducer will fire each element in turn and listen with all remaining elements giving ~64000 A-Scans. The system can then combine all this data into a visual representation.

Session 2 – GUL – Guided Wave Inspection including short range testing
The second session was presented by Patricia Salas of Guided Ultrasonics. She discussed what the principles of guided wave inspection are, how the process of inspection is carried out and the issues companies have in doing these inspections. Guided wave can be used to inspect long runs of pipes in one scan, but have limitations in use based on the conditions of the pipe and surrounding materials. As an example, good quality clear pipe with no obstruction could achieve a scan ~150m each side of the probe array, however a buried pipe in solid wet ground may only achieve ~10m. Guided wave has applications for ongoing monitoring and also for CUPS inspection (Corrosion under pipe supports), the testing of which has a huge time and cost impact to all oil and gas facilities around the world.

Session 3 – GE - Robotics for on-site inspection
After lunch, Peter Nutty of GE presented how they are using robotics to aid inspection activities. He detailed the use of robot crawlers to access areas which were difficult to get to or where a person was unable to gain access, such as confined spaces or where rope access or expensive scaffolds may be required. He also discussed their UAV’s which are being used for remote visual inspection such as Well pressure head gauges which are out at sea, these can be viewed remotely to save on time and money of getting a person out to the Well head. They have also developed 3D modelling using UAV positioning data and pictures taken to generate a full model of a plant. This allows users to monitor sections of a plant and send the UAV’s on an automatic cycle where they can capture further images of the same spots to monitor corrosion etc.
Session 4 – ETHER NDE – Pulsed Eddy Current

The fourth session was presented by both John Hansen and Nelly Fernandez of Ether NDE. They discussed the uses of pulsed eddy current vs standard eddy current and some of the benefits of this technology. It is possible to inspect through thick sections of insulation. Pulsed eddy current differs from conventional in the way that the probe is excited. Instead of the AC current, which brings with it a specific frequency, the system uses a step voltage to pulse the probe. This allows multiple frequencies to be measured in a single step. Since the depth of penetration is somewhat related to frequency, then this system allows for a range of depths to be inspected.

Session 5 – Technology Transfer

The final session of the day was a presentation by Iain Baillie of Rolls Royce regarding technology transfer. He discussed the technology readiness level system which shows that research is quite well funded, however when it comes to implementation into industry, there is no funding available and solutions tend to be bespoke to a user or customer. He suggested creating a leadership forum for NDT which will be the voice of the NDT industry and establish support from the government to create the strategy for future development. It should be led by industry, but co-ordinate across sectors and involve supply chains, academia, government and funding streams.

The day was closed by Jason Taylor who thanked all the presenters for their participation and congratulated the section on a great turnout to the event, with 42 people in attendance. We were also congratulated by John Hansen on behalf of BINDT for our 25-year anniversary, and we received an anniversary card signed by members of the BINDT board (a copy of which is available to view on our website.

http://asnt.org/northatlantic

A gallery of the day’s events will be available shortly on the NATL website.

Tom Fletcher
NATL Vice Chair.