

PIPING AND PIPELINE RISK-BASED INSPECTION MINIMISING FAILURES THROUGH GREATER AWARENESS

Institution of
**MECHANICAL
ENGINEERS**

9 December 2014
Aberdeen Marriott Hotel, Aberdeen
www.imeche.org/events/C1420

Pressure Systems Group
Seminar



SPONSORS

ABB

**permasense**
Experts in remote monitoring solutions

DOOSAN

**xodus**
GROUP

PIPING AND PIPELINE RISK-BASED INSPECTION

9 December 2014, Aberdeen Marriott Hotel, Aberdeen



THE PRESSURE ON THE OFFSHORE AND ONSHORE INDUSTRIES IS GROWING AS THE NEED TO REDUCE PIPELINE AND PIPING FAILURES HAS BECOME A PRIORITY.

Piping and Pipeline Risk-Based Inspection will deliver an engaging and honest insight into the successes and failures of the pipeline industry. This event will bring together case studies from operators seeking to maintain high production levels and showcasing the strategies, approaches and solutions used to prevent pipeline failures. Join us on 9 December to address key topics, including: RBI management (offshore and onshore), the benefits and properties of corrosion resistant alloys and isolation valve implementation.

OUR EXPERT SPEAKING PANEL INCLUDES:



PAUL JACKSON
CHAIR PRESSURE SYSTEMS GROUP
INSTITUTION OF MECHANICAL ENGINEERS



ROBIN HASTINGS
FIELD ENGINEER
SHELL



MARK RICHARDSON
NORTH SEA PROJECTS GROUP
MANAGER
APACHE

See page 5 for full speaker list

BENEFITS OF ATTENDANCE:

- **Hear** more operator case studies than any other dedicated piping seminar
- **Learn** how Apache recently installed the subsea isolation valve at Forties Charlie
- **Discover** the Bayesian Approach to RBI as TWI share their experiences
- **Understand** how Shell have recently reduced the percentage of leakages across conical spring washers
- **Network** with key industry figures within the piping and pipeline sector

SUPPORTING ORGANISATIONS:



MEDIA PARTNER:



SPONSORSHIP & EXHIBITION OPPORTUNITIES

GET INVOLVED

Attending this event as either an exhibitor or sponsor will give you the opportunity to display your solutions, services and products to the right people at the right time.

This is an excellent way to enhance your company profile and communicate effectively to your target audience.

BENEFITS OF SPONSORING

- **Showcase** new products
- **Raise** awareness of your operation
- **Improve** perception of your brand
- **Influence** other organisations' spending plans

For more information please call +44 (0)20 7973 1309 or email sponsorship@imeche.org

TUESDAY 9 DECEMBER 2014

- 08:30 REGISTRATION AND REFRESHMENTS**
- 09:00 CHAIR'S OPENING REMARKS**
Paul Jackson, Chair Pressure Systems Group, Institution of Mechanical Engineers
- 09:10 KEYNOTE ADDRESS: SETTING RBI STANDARDS TO MINIMISE FAILURES**
Confirmed representative from HSE
- Improving knowledge and awareness of degradation mechanisms for offshore pipelines through the development of a competent authority
 - Strategies for working with industry to enhance inspection techniques for HPHT and aged pipelines
 - How to optimise pipeline efficiency by reducing operational risk
- 09:40 A CASE STUDY BY APACHE NORTH SEA: INSTALLATION OF THE 36" SUBSEA ISOLATION VALVE AT FORTIES CHARLIE**
Mark Richardson, North Sea Projects Group Manager, Apache
- Understanding and mitigating risk from pipelines
 - The regulatory requirement for SSIVs
 - Planning and execution of a major pipeline intervention
- 10:10 RBI - ENSURING CONTINUOUS IMPROVEMENT**
Bill Hart, Integrity Engineer, Centrica
- Ensuring the RBI process works for an aging asset
 - Enacting the RBI process in a way that satisfies your requirements and addresses the problems you may encounter
 - The good the bad and the ugly- our experiences of running an RBI process
- 10:40 NETWORKING REFRESHMENT BREAK**
- 11:10 APPLICATION OF THE IOW CONCEPT TO VIBRATION RISK MANAGEMENT IN PROCESS PIPING SYSTEMS**
Jim McGhee, Global Integrity Lead, Xodus Group
- Real time mechanical integrity monitoring using IOWs
 - Benefits of incorporating IOWs into an RBI programme
 - Successfully applying the IOW concept to an industry standard vibration risk management model
- 11:40 CASE STUDY: ANALYTIC SELECTION OF CONICAL SPRING WASHERS TO MITIGATE FLANGE LEAKING DUE TO THERMAL SWINGS**
Robin Hastings, Field Engineer, Shell
- An introduction to the problem
 - Mitigation against the affects of thermal swings on large flanged joints
 - Recreating possible worst case scenarios
- 12:10 QUESTION AND ANSWER PANEL SESSION**
Paul Jackson, Chair Pressure Systems Group, Institution of Mechanical Engineers
Mark Richardson, North Sea Projects Group Manager, Apache
Stelios Kalidakis, Pipeline Technical Authority, Nexen
Robin Hastings, Field Engineer, Shell
- Delegates will be given the opportunity to ask questions to the morning's speakers. Should delegates wish to put forward a question prior to the event please email your question to eventenquiries@imeche.org
- 12:40 NETWORKING LUNCH**

- 13:40** **PUSHING FOR A LONG TERM AGEING LIFE EXTENSION (ALE) STRATEGY**
Stelios Kalidakis, Pipeline Technical Authority, Nexen
- Maintaining a strong performance; successes thus far
 - 2014; Oil export Intel Pig run and Tel Prod pipelines IP run
 - Utilising fabric maintenance on the main oil export pipework
- 14:10** **REVISION OF RBI STRATEGIES POST CHEVIOT**
Karen Robertson, Piping, Pressure Vessel and Valves Technical Authority, Total E&P
- Re-approaching inspection methods of in-situ ring type joints
 - Understanding alternative methods post Cheviot
 - New considerations to improve inspection methods
- 14:40** **NETWORKING REFRESHMENT BREAK**
- 15:10** **BAYESIAN APPROACH TO RISK BASED INSPECTION USING API 581**
Martin Quinn, Project Leader Integrity Management Group, TWI
- Converting qualitative data into quantitative results
 - Closing the loop; how to validate your assumptions
 - Implications for life extensions
- 15:40** **QUESTION AND ANSWER PANEL SESSION**
Paul Jackson, Chair Pressure Systems Group, Institution of Mechanical Engineers
Karen Robertson, Piping, Pressure Vessel and Valves Technical Authority, Total E&P
Martin Quinn, Project Leader Integrity Management Group, TWI
 A final opportunity for delegates to ask questions or make any comments to the chair and afternoon's presenters
- 16:10** **CHAIR'S CLOSING REMARKS**
Paul Jackson, Chair Pressure Systems Group, Institution of Mechanical Engineers
- 16:20** **END OF SEMINAR**

Find out more about our speakers at www.imeche.org/events/C1420

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

Organising committee:

Pressure Systems Group

SPEAKERS AND CONTRIBUTORS



**SHARING LOCAL
BEST PRACTICE
THROUGH CASE
STUDIES IS ESSENTIAL
IF THE NORTH SEA
IS TO THRIVE AND
MAXIMISE OIL
RECOVERY WHEN
COMPETING FOR
GLOBAL CAPITAL.**

**- Mark Richardson, North Sea
Projects Group Manager, Apache**

PAUL JACKSON CHAIR PRESSURE SYSTEMS GROUP, INSTITUTION OF MECHANICAL ENGINEERS

Paul Jackson is a Fellow of the Institution of Mechanical Engineers and is Chair of the Pressure Systems Group. Paul started his engineering career at Compair Reavell in Ipswich as an apprentice fitter and graduated six years later with a degree in Mechanical Engineering from Loughborough University. Paul then joined NNC and worked for nine years on the steam generators for Hartlepool and Heysham nuclear power stations. When these were commissioned Paul joined ICI in 1986 to lead the NW vessels team. He now works for ABB Consulting who purchased the engineering department of ICI in 2001. Paul is now Function Leader of Inspection at ABB Consulting, a UKAS accredited pressure systems inspection service, and leads ABB's team of Integrity Management Team Consultants in the NW.

MARK RICHARDSON NORTH SEA PROJECTS GROUP MANAGER, APACHE

Mark Richardson is a qualified project manager, holds a Master of Science in Offshore Engineering with distinction and a Master of Business Administration, both from the Robert Gordon University. Mark joined Apache in 2003 as part of the acquisition of the Forties Field, and since the Apache takeover he has been a member of the Apache North Sea Management Team. Prior to joining Apache, Mark worked for BP, Lloyds Register Integrity Management, North East Corrosion Engineers and various subsea contractors in Aberdeen. The first 12 years of his working career were spent in the military as a Captain in the Royal Engineers, serving with the Commando Brigade and specialising in military diving operations.

ROBIN HASTINGS FIELD ENGINEER, SHELL

Robin Hastings graduated with an MEng in Mechanical Engineering from Edinburgh University in 2008. Robin spent a short time working for Scottish Power on a maintenance improvement project before joining Shell in Aberdeen in their offshore inspection team. Robin's early career development was as an Inspection Engineer, focusing on NDT and Non-Intrusive Inspection, before moving into the Mechanical Static discipline. In this capacity he has spent the last three years supporting Shell's onshore gas plants with front line assistance for all issues relating to Mechanical Static equipment. Engineering is a lifelong passion of Robin's, and he thrives on the variety of different problems that he is faced with in his day-to-day work.

SPEAKERS AND CONTRIBUTORS



THE NEED TO SHARE BEST PRACTICE AND LESSONS LEARNED WITHIN THE PIPING AND PIPELINE INDUSTRY IS KEY TO IMPROVING COMPLIANCE.

**- Paul Jackson, Chair Pressure
Systems Group, Institution of
Mechanical Engineers**

KAREN ROBERTSON PIPING, PRESSURE VESSEL AND VALVES TECHNICAL AUTHORITY, TOTAL E&P

Karen Robertson has worked in the oil, gas and chemicals industries in the UK and internationally for 25 years. She has been a Technical Authority with Total since 2009 and sits on several industry committees.

MARTIN QUINN PROJECT LEADER INTEGRITY MANAGEMENT GROUP, TWI

Martin Quinn joined TWI in 2012 and has been involved with the design and upgrade of various modules of TWI's software suite (Riskwise). Over the past two years Martin has worked in ADMA OPCO (Abu Dhabi) designing and implementing a customised RBI approach on both downstream and offshore assets. Prior to joining TWI UK Martin was a Structural Integrity Project Leader at TWI SEA in KL office and was involved in various RBI implementations for oil, gas and power installations and RBI implementation for PHE (Indonesia).

STELIOS KALIDAKIS PIPELINE TECHNICAL AUTHORITY, NEXEN

Stelios Kalidakis has been with Nexen since 2011 where he joined as Senior Pipeline Engineer and then in 2013 assumed the position of Lead Pipeline Engineer. Prior to joining Nexen Stelios worked at Subsea 7, Genesis Oil and Gas Consultants as Senior Corrosion Engineer. Stelios holds a PhD in High Temperature Corrosion from the University of Manchester.

LAST YEAR'S ATTENDING COMPANIES INCLUDE:

**ABB ENGINEERING SERVICES
AKER SOLUTIONS
ALLIANZ ENGINEERING
AMEC
APACHE
APOLLO OFFSHORE
ENGINEERING
BG GROUP PLC
BP
CONOCOPHILLIPS (UK) LTD.
DET NORSKE VERITAS (DNV)
DOOSAN BABCOCK ENERGY LTD**

**ESSAR OIL (UK) LTD
HEALTH & SAFETY EXECUTIVE
LLOYD'S REGISTER EMEA
MACAW ENGINEERING LTD
MAERSK OIL NORTH SEA UK
LTD
NATIONAL GRID
OCEANEERING INTERNATIONAL
SERVICES LTD
PERENCO UK LTD
PERMASENSE
SCOTTISH & SOUTHERN
ENERGY LTD**

**SELLAFIELD LTD
SHELL EXPLORATION AND
PRODUCTION UK
SUBSEA 7
TOTAL E&P UK LTD
TWI
WOOD GROUP ENGINEERING
XODUS GROUP LIMITED**

BOOKING FORM

EVENT CODE: C1420AB

PIPING AND PIPELINE RISK-BASED INSPECTION

9 December 2014
Aberdeen Marriott Hotel, Aberdeen
AB21 7AZ

REGISTRATION Please complete in capitals.

Family Name	Title (Mr, Mrs, Miss)
First Name	Job Title
Membership No	Institution
Name of Organisation (for name badge)	
Address for correspondence	
Town/City	
Postcode	
Contact Telephone	
Email	
Do you have any special requirements?	

How did you hear about this event? Direct mail Website Colleague Other

We would like to keep you informed of relevant services that may be of benefit to you. Please tick the boxes below to let us know what you're interested in:

- Events and training opportunities
 News and updates from the Institution
 Services and offers from our preferred partners

FEES AND CHARGES Please complete the appropriate box.

Registration fees include entry to the sessions, refreshments, lunch and a copy of the event proceedings.

	STANDARD RATE	VAT	TOTAL
Member, Institution of Mechanical Engineers	£299.00	£59.80	£
Member, supporting organisation	£299.00	£59.80	£
Non-member	£379.00	£75.80	£
Student/retired	£75.00	£15.00	£

PAYMENT DETAILS

Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment.

PLEASE INDICATE METHOD OF PAYMENT:

- Cheque** Cheques should be made payable to IMechE and crossed. Please note international delegates may pay only by credit card, BACS or banker's draft. A copy of the draft must accompany this form. It is the delegate's responsibility to pay any bank charges.
- Credit Card**
Card type: Visa MasterCard (please note we cannot accept American Express, Diners Club or Maestro)
Card No _____ Valid From _____ / _____ Expiry Date _____ / _____
Name of Cardholder _____
Billing Address of Cardholder (if different from above) _____
Postcode _____
Amount to be Deducted _____ Signature _____
- BACS** BACS bank transfers can be made to:
IMechE Current Account, NatWest Charing Cross Branch.
Sort Code: **60-40-05** Acc No: **00817767**
Swift Code: **NWBKGB2L** IBAN Code: **GB96NWBK60400500817767**
A copy of the draft must accompany this form.
- Invoice (UK residents only)** Delegates wishing to be invoiced must provide an order number. If your company does not use order numbers please include a formal request for invoicing on your company's letterhead. A charge of £10 +VAT will be made to cover additional administration costs. Invoices are payable on receipt and no alterations to these terms will be accepted.
Order No _____
Contact Name _____
Name and Address for Invoicing _____
Postcode _____
Tel _____ Fax _____

FIVE WAYS TO BOOK

- 1 Online:
www.imeche.org/events/C1420
- 2 Email:
eventenquiries@imeche.org
- 3 Phone:
+44 (0)20 7973 1258
- 4 Post completed booking form to:
**Event Registrations
Institution of Mechanical Engineers
1 Birdcage Walk
London SW1H 9JJ**
- 5 Fax:
+44 (0)20 7304 6845

Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie. dietary or access, on the relevant section of this form.

CANCELLATION

For a refund (minus £25 +VAT admin charge), cancellations must be received at least 14 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full refund of the fee paid.

The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. As such, the Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

ENQUIRIES

For event enquiries please call **+44 (0)20 7973 1258** or email eventenquiries@imeche.org

The Institution of Mechanical Engineers is a registered charity (no 206882)
VAT No GB299930493.

FORWARD THINKING

We are the market leader among professional engineering bodies. We've been supporting engineers since 1847 and have 110,000 members in over 140 countries, working in the world's most dynamic and important industries. Our comprehensive events programme brings you the latest research and best practice from industry and academia.

OTHER EVENTS TO LOOK FOR:



11-12 November 2014
Aberdeen

PRODUCTION EFFICIENCY: REVERSING A DECLINING TREND

With greater investment needed to maintain ageing assets in order to increase their level of production, comes an opportunity for the offshore industry to share best practice and learn from their partners. The solutions to improve production efficiency are not quick but the initiative to action improvements are and need to be shared so that financial investment continues across the UKCS.

www.imeche.org/events/C1419



19-20 November 2014
North Lincolnshire

LARGE SCALE BULK STORAGE AND HANDLING

As the UK continues to push its renewable energy policy, the demand on imported bulk materials such as coal and wood pellets is growing and the pressure to handle and store such materials safely is a priority for the whole sector.

www.imeche.org/events/S6155



3 December 2014
London

AGEING PLANT: MINIMISING HAZARDS THROUGH BETTER DETECTION TECHNIQUES

To get the best out of structures that are highly susceptible to deterioration, a greater emphasis must be placed on detection. This event will provide case studies showcasing the various different types of detection techniques that ultimately are able to reduce operating costs, reduce hazards and ensure compliance with latest guidance.

www.imeche.org/events/S1826

INFORMATION AND BOOKINGS

CALL: +44 (0)20 7973 1258

EMAIL: eventenquiries@imeche.org

VISIT: www.imeche.org/events

JOURNALS

Professional Engineering Publishing is the publisher for the Institution of Mechanical Engineers. For more information about our magazines, journals and conference proceedings visit www.uk.sagepub.com/imeche

To find out more contact **Subscriptions** on +44 (0)1952 214050 or email subscriptions@imeche.org

MEMBERSHIP

Whether you're a student, apprentice, graduate, qualified engineer or just have an interest in engineering, Institution membership offers the highest professional prestige. Professional registration is a valuable investment for any engineer who is serious about their career.

Find out which level you're best suited for at www.imeche.org/membership or email us on membership@imeche.org

GET INVOLVED

Whether you're new to the profession or well established, volunteering is a great way to gain new skills, knowledge and experience. As an Ambassador you have the chance to represent your profession and give something back to the engineering community as well as inspiring the next generation.

See www.imeche.org/volunteering for more information or go to <http://nearyou.imeche.org>

Institution of
**MECHANICAL
ENGINEERS**

1 Birdcage Walk
Westminster
London
SW1H 9JJ

T +44 (0)20 7222 7899

www.imeche.org

**Keep up
your CPD**

Continuing Professional Development (CPD)

Our online Career Developer tool can help you:

- **Plan** Create an Action Plan and identify targets
- **Record** Download a record of your learning activities
- **Review** Reflect on your professional development

Register for Career Developer and get more from your career www.imeche.org/careerdeveloper

For tailored advice contact cpd@imeche.org

Improving the world through engineering