

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



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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.

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

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

SUPPORTING ORGANISATIONS:



MEDIA PARTNER:



See page 5 for full speaker list

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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 ONSHORE RISK BASED INSPECTION

Confirmed representative from ABB

10:40 NETWORKING REFRESHMENT BREAK

11:10 PUSHING FOR A LONG TERM AGEING LIFE EXTENSION (ALE) STRATEGY

Stelios Kalidakis, Pipeline Technical Authority, Nexen

- Maintaining a strong performance, successes so far
- 2014: oil export Intel Pig run and Tel Prod pipelines IP run
- Utilising fabric maintenance on the main oil export pipework

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	REVISION OF RBI STRATEGIES POST CHEVIOT Karen Robertson, Piping, Pressure Vessel and Valves Technical Authority, Total E&P <ul style="list-style-type: none"> • Re-approaching inspection methods of in-situ ring type joints • Understanding alternative methods post Cheviot • New considerations to improve inspection methods
14:10	BAYESIAN APPROACH TO RISK-BASED INSPECTION USING API 581 Martin Quinn, Project Leader Integrity Management Group, TWI <ul style="list-style-type: none"> • Converting qualitative data into quantitative results • Closing the loop; how to validate your assumptions • Implications for life extensions
14:40	NETWORKING REFRESHMENT BREAK
15:10	AN OPERATOR'S IMPROVED RESPONSE TO RBI STRATEGIES Confirmed representative from ConocoPhillips <ul style="list-style-type: none"> • Working harder to identify potential degradation mechanisms • Minimising shutdowns and losses across offshore assets through a revision of existing strategies • Evolving current RBI strategies to meet future challenges
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.

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BOOKING FORM

EVENT CODE: C1420AB

EARLY BIRD ENDS 31 OCTOBER

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	
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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

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FEES AND CHARGES Please complete the appropriate box.

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

	EARLY BIRD RATE Before 31 October 2014	STANDARD RATE	TOTAL
Member, Institution of Mechanical Engineers	£250.00+VAT	£299.00+VAT	£
Member, supporting organisation	£250.00+VAT	£299.00+VAT	£
Non-member	£320.00+VAT	£379.00+VAT	£
Student/retired	£65.00+VAT	£75.00+VAT	£

PAYMENT DETAILS

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

PLEASE INDICATE METHOD OF PAYMENT:

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Post completed booking form to:
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- 5

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

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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.

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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

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