

PRESSURE SYSTEMS GROUP

MANAGING THE INTEGRITY OF UK UNDERGROUND CROSS- COUNTRY PIPELINES

**Institution of
MECHANICAL
ENGINEERS**

17 November 2009
One Birdcage Walk
Westminster
London SW1H 9JJ

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UKOPA

United Kingdom Onshore Pipeline Operators' Association

ATTENDING THIS EVENT WILL HELP YOU:

- Improve efficiency
- Solve problems faster and more economically
- Meet, greet and network with key industry players

Improving the world through engineering

MANAGING THE INTEGRITY OF UK UNDERGROUND CROSS-COUNTRY PIPELINES

The many thousands of kilometres of high-pressure pipelines installed in the UK are essential for maintaining a successful economy. Ensuring the continued integrity of this asset, in an environment of increasing commercial pressures and, in many cases, changing legislative requirements, represents a significant challenge for pipeline operators.

This one-day seminar looks at the challenges faced by the pipeline industry, including integrity management throughout the full pipeline life cycle, causes and consequences of pipeline failure with examples, identification and management of pipeline damage, prevention of damage, emergency planning issues, pipeline process safety and proposed amendments to the Pipelines Safety Regulations 1996.

THIS EVENT WILL ATTRACT:

Engineers with an interest in pressure systems, the prevention of onshore pipeline failures, the Pipelines Safety Regulations and the role of UKOPA, as well as those involved in process, petrochemical, power generation, oil and gas, in addition to onshore designers, inspection engineers and managers.

**"WORTHWHILE
EVENT
HEIGHTENING
ASPECTS OF RISKS
TO CATER FOR
AND UPDATING
KNOWLEDGE."**

**GRAHAM FRADGLEY,
FROM SPECIALISTS LTD
SPEAKING ABOUT
PRESSURE SYSTEMS
FAILURES 2009**



TECHNICAL ADVANTAGES:

- Gain an understanding of how pipeline integrity is specified and maintained throughout the life cycle
- Understand current proposals for amending the Pipelines Safety Regulations 1996
- Gain an appreciation of the role of the UK Onshore Pipeline Operators' Association (UKOPA)
- Understand the importance of emergency planning and the role of a Pipeline Emergency Response Officer (PERO)
- Increase your understanding of Quantitative Risk Assessment (QRA) techniques
- Benefit from real case histories of major accidents
- Appreciate the potential causes and consequences of pipeline failure
- See how pipeline damage is assessed, managed and repaired
- Understand UKOPA'S approach to process safety
- Find collaborators for future projects

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MANAGING THE INTEGRITY OF UK UNDERGROUND CROSS-COUNTRY PIPELINES

17 NOVEMBER 2009
ONE BIRDCAGE WALK, WESTMINSTER, LONDON SW1H 9JJ

09:00 REGISTRATION AND REFRESHMENTS

09:25 CHAIRMAN'S WELCOME AND OPENING ADDRESS

09:30 THE PIPELINE LIFE CYCLE FROM DESIGN THROUGH CONSTRUCTION, OPERATION, MAINTENANCE AND CONSEQUENCE PLANNING

- Pipeline life cycle including planning, design, construction, commissioning and testing, operation and decommissioning
- Pipeline integrity management through the life cycle
- Legislation and standards, and the effect on pipeline integrity management at the various stages of the life cycle
- Pipeline safety, including the UK pipeline safety statistics, safety management and risk assessment

Dr Jane Haswell, Director, Pipeline Integrity Engineers, UK

Jane Haswell has over 20 years' experience in the UK gas industry, starting in research and development and then moving to Transco (now National Grid) in 1994, where she worked in engineering support. During this time, she became involved in the set-up of UKOPA.

Jane is now Director of a small specialist pipeline engineering consultancy, Pipeline Integrity Engineers, which is involved in a range of pipeline integrity and safety management work. She is currently Chairman of the Institution of Gas Engineers and Managers (IGEM) TD/1 Committee and represents both IGEM and UKOPA on the BSI committee responsible for PD 8010.

Jane provides technical support to UKOPA's working groups on risk assessment, emergency planning and process safety. She is a Chartered Mechanical Engineer and a member of both IMechE and IGEM.

10:00 CAUSES AND CONSEQUENCES OF PIPELINE FAILURE

- Causes of pipeline failure with particular reference to the UK pipeline infrastructure
- Possible consequences of failure illustrated by experiments and incidents
- Case histories of major accidents involving pipelines, highlighting the significant threat from external damage

Dr Michael Acton, Principal Consultant Safety & Risk, GL Industrial Services, UK

Mike Acton is a Chartered Physicist and has 20 years' experience in the oil and gas industry working on safety and environmental issues, initially for British Gas R&D, subsequently renamed Advantica, and recently GL Industrial Services UK. He joined British Gas shortly after the Piper Alpha disaster, and was involved in ground-breaking experimental work to understand the explosion and fire hazards offshore, and to mitigate the risks. He has been involved in many experimental studies of the hazards associated with pipelines, including full-scale pipeline ruptures. He is responsible for the development and application of QRA techniques for pipelines, and is currently Chairman of an international collaboration developing the PIPESAFE risk assessment package for gas transmission pipelines. He has investigated many gas-related fire and explosion incidents, including a major accident involving rupture of a gas transmission pipeline.

Mike provides technical support to the UKOPA Risk Assessment Working Group, is a member of several committees of IGEM, and has contributed to the development of Codes of Practice for the gas industry, including the recent editions of TD/1 and TD/2.

10:30 REFRESHMENTS

11:00 PREVENTING THIRD-PARTY DAMAGE TO UK HAZARDOUS PIPELINES

- GB regulatory environment and expectations
- Role of UKOPA
- Creation of a national infringement database
- Results, achievements and the future

Mr Jim Stancliffe, HM Inspector of Health & Safety, Operational Policy, HSE Gas & Pipelines Unit, UK and

Dr Mark Harrison, SHE Director, SABIC UK Petrochemicals, UK

Jim Stancliffe has 12 years' experience as an HSE Inspector. For the last five years he has worked within an operational policy team in the Gas & Pipelines Unit, part of HSE's Hazardous Installations Directorate. One of Jim's principal responsibilities is working to prevent third-party damage to Major Accident Hazard Pipelines. He is part of UKOPA's Infringement Working Group and has used the UKOPA infringement database to target companies with a poor third-party infringement record.

Mark Harrison has over 15 years' experience in operations and technical management of COMAH and Pipelines Safety Regulations qualifying operations on Teesside & Northern England for ICI, Huntsman and SABIC. He is a member of the UKOPA Management Council and was the first Chairman of UKOPA's Infringement Working Group which, with effective industry and HSE participation, has developed and exploited a national database of hazardous pipeline infringements.

11:30 CODIFICATION OF THE RISK ASSESSMENT METHODOLOGY AND PRODUCTION OF THE BSI PD 8010 SUPPLEMENT AND IGEM TD/2

- Need for pipeline risk assessment – land use planning and design code compliance
- Development of pipeline QRA in the UK
- Pipeline QRA methodology
- Development of UK pipeline risk codes and supplements

Mr Graham Goodfellow, Consultant, Penspen, UK

Graham Goodfellow is a Consultant within the Integrity Business Unit of Penspen. He has over 15 years' experience in the pipeline and structural integrity businesses, specialising in risk and reliability. Graham has worked for Penspen for the past seven years, previously he has worked at WS Atkins, and the pipeline operations and research departments of British Gas. He is also a member of the UKOPA Risk Assessment Working Group.

12:00 Q&A SESSION

12:30 LUNCH

13:25 CHAIRMAN'S INTRODUCTION



13:30 IDENTIFICATION OF PIPELINE DAMAGE, ASSESSMENT AND MITIGATION

- Pipeline inspection – in-line inspection and above-ground surveys
- Types of damage
- Damage assessment procedures
- Repairs

Mr Robert Owen, Standards Manager, National Grid, UK

Robert Owen is a Chartered Mechanical Engineer with National Grid, with over 25 years' experience in the integrity and safety of high-pressure pipelines and pressure systems. He works in the engineering policy group and has broad experience of gas transmission pipeline design, inspection, maintenance and damage assessment procedures.

14:00 PIPELINE EMERGENCY PLANNING AND ROLE OF PIPELINE EMERGENCY RESPONSE OFFICER (PERO)

- Emergency planning for response to onshore pipeline incidents
- Management of damaged pipelines
- Role of Pipeline Emergency Response Officer
- PERO DVD

Mr Barry Dalus, Network Integrity Engineer, Northern Gas Networks (NGN), UK

Barry Dalus has 30 years' experience in the gas industry, working on transmission pipelines, maintenance and storage. In his current role, Barry has responsibility for ensuring NGN delivers compliance within current regulation, policy and procedures with regard to Pressure Systems Safety Regulations (PSSR), Pipelines Safety Regulations, Cathodic Protection, and Control of Major Accident Hazard & Site Security. Barry also represents NGN on a number of committees and technical panels, and is a member of IGEM.

14:30 REFRESHMENTS

15:00 PIPELINE PROCESS SAFETY AND THE UKOPA BENCHMARKING

- Importance of process safety to the UKOPA members
- UKOPA's work to improve process safety management within the UK pipeline industry
- UKOPA Process Safety Assessment Tool
- Sharing of process safety practices between the members
- Continual improvement in process safety

Mr Tony Stonehewer, Network and Business Performance Manager, National Grid, UK

Tony Stonehewer has over 20 years' experience in the operation and maintenance of transmission pipelines, including 12 years' operational experience as Maintenance Manager in North West Gas, responsible for national and local transmission pipelines, above-ground installations and distribution, low and high-pressure storage and pressure control. This also includes five years in Transco as HSE Performance and Integrity Manager for the National Transmission System (NTS) until the merger with National Grid, when he was allocated additional responsibilities for the development of performance monitoring systems for the electricity and gas transmission networks. In his current position he is responsible for developing engineering policy for the NTS and Liquefied Natural Gas (LNG) Storage.



PRESSURE SYSTEMS GROUP

Organising Committee:

Roger Ellis, Shell UK and UKOPA

Paul Jackson, ABB Engineering Services

The Committee would like to thank the following supporters:

Process Industries Division

15:30 AMENDMENTS TO THE PIPELINES SAFETY REGULATIONS 1996

- Pipelines Safety Regulations 1996
- Amendment process
- Amendments history
- Current proposed amendments
- Progress and timescales

Mr Jim Stancliffe, HM Inspector of Health & Safety, Operational Policy, HSE Gas & Pipelines Unit, UK

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16:00 Q&A SESSION

16:30 CHAIRMAN'S CLOSING STATEMENT

16:40 EVENT CLOSES

This programme is subject to amendment.



FORWARD THINKING.

If you are interested in any of these events, please call Jacqui Parker on +44 (0)20 7304 6966 or email psg@imeche.org

30 SEPTEMBER 2009: LONDON IN AT THE DEEP END

A review of the move into deepwater oil exploration and the technological challenges facing the industry.

John Baxter, Group Head of Engineering, BP, reviews the engineering challenges as oil exploration and production move from fixed platforms on the Continental shelf to floating structures in deep water. The latter present a wide range of unique engineering challenges, which require professional expertise and innovation. Lecture will start at 18:30

Refreshments will be served from 18:00

www.imeche.org/events/L113

21-22 OCTOBER 2009: HAYDOCK RACECOURSE, MERSEYSIDE MAXIMISING THE VALUE OF MODERN NON-DESTRUCTIVE EXAMINATION (NDE)

This seminar will bring together plant engineers with NDE practitioners to compare the capability, selection and use of new advanced techniques with established methods. It will discuss the best NDE solutions for common industry problems, and will give plant operators and inspection bodies extra information to select the optimum approach.

Delegates will have the opportunity to discuss their needs with leading NDE experts, and to see demonstrations of emerging techniques.

www.imeche.org/events/s1448

28-29 OCTOBER 2009: LONDON CARBON CAPTURE AND STORAGE – MAKING IT HAPPEN

Carbon capture and storage is one of the most exciting propositions for reducing carbon emissions, offering affordable low-carbon energy supplies and diversity of energy sources. The technology now exists to achieve substantial carbon reductions, but the regulatory and economic frameworks are not currently in place for full advantage to be taken of this advance in technology.

This seminar will describe and challenge the current position and provide an essential update on both the legislative and technical barriers to this technology. Day one will question the policy and regulatory issues of CCS and will pose the question, 'Is CCS the way to retain coal as a 21st-century fuel?' Day two will address the technical challenges of delivering the technology in a large-scale industrial setting.

www.imeche.org/events/s1439

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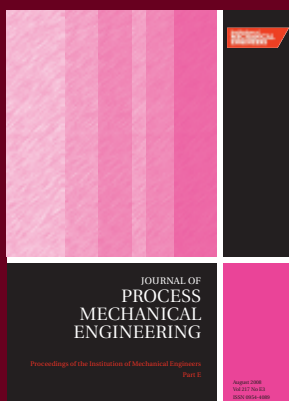
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Please inform us of any special requirements ie dietary or access, on the relevant section of this form.

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.

Supporting Organisations
Members of the following organisations can register at our members' rates: EEMUA, HSE, SAFed, TWI, UK Onshore Pipeline Operators' Association, IGEN

Venue
This event will be held at One Birdcage Walk, Westminster, London SW1H 9JJ. Details will be sent upon registration.

Insurance
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.

Accommodation
We have arranged special discounted rates at local hotels via the Corporate Team. Our list of hotels will be forwarded upon receipt of your registration and payment.

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For event enquiries, please call Jacqui Parker on +44 (0)20 7304 6966 or email psg@imeche.org

For registration enquiries call Tina Churcher on +44 (0)20 7973 1258 or email t_churcher@imeche.org

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

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