

5th Annual

Pipeline Integrity Management & Maintenance Forum

Understanding the Challenges Faced By Pipeline Operators and Offering Innovative and Practical Solutions

London, UK
22nd–25th March 2011

Including:

Half Day Interactive Pre-Conference Workshop:
Pipeline Integrity and Flow Insurance

MENA Focus Day

Attending this Premier **marcus evans** Forum Will Enable You to:

- **Learn** about the latest pipeline life-extension strategies
- **Benefit** from expert opinion on how to control corrosion and limit its impact on onshore and offshore infrastructures
- **Benchmark** your Pipeline Integrity Management System (PIMS) against your competitors
- **Review** the latest regulations and requirements for the transportation of CO₂
- **Gain** valuable insight into the latest advancement in black powder management

Learn from Key Practical Case Studies:

- Learn how **Chevron** assures productive pipeline operations
- Capitalise from **ADCOS** experience with risk assessment and reliability analysis
- Profit from **Eni's** knowledge of CO₂ transmission pipeline infrastructure
- Analyse **GRTgaz's** methodology for the rehabilitation of aging pipelines
- Explore **DNV's** best practices and methods for pipeline requalification

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EXPLOIT the **Full Potential**
of **Pipeline Infrastructure**
and **MINIMISE Operational Issues**
THROUGH
Best in Class Inspection
and **Maintenance Strategies**



In the Chair:

Asle Venas
Director, Offshore
Pipelines Segment
DNV

Mike Kirkwood
Pipeline Integrity Manager
TDW

Durga Murti
Superintendent Asset
Integrity Division
Chevron

marcus evans Expert Speaker Panel:

Mike Kirkwood
Pipeline Integrity Manager
TDW

Mike Billio
Process Integrity Leader
HSE

Samir Akel
Consultant
GRTgaz

Mohamed Daoud
Manager Project Quality
**ADCOS – Abu Dhabi
Company for Onshore
Operations**

Øyvind Omland
Senior Engineer
DNV

Frits Doddema
CEO
Stopaq

Carlo Maria Spinelli
Technical Manager
Eni

Ken Lax
Technical Director
Corroconsult

Markus Buetchler
Managing Director
**SGK – Swiss Society for
Corrosion Protection**

Asle Venas
Director, Offshore
Pipelines Segment
DNV

Andrew Jackson
Managing Partner and Head
of Pipelines and Utilities
Fisher German LLP

Dr. Henry Tan
Senior Lecturer Safety &
Reliability Engineering
University of Aberdeen

Durga Murti
Superintendent Asset
Integrity Division
Chevron

Markus Brors
Executive General Manager
Rosen

Gert Jan Heerens
Sr. Business Developer
Monitoring Systems
Oil & Gas
TNO Science & Industry

Willem Coppoolse
Head of Capacity
Development Transmission
Storage and LNG
GDF Suez

Patrick Pelle
Managing Director,
Region Val de Seine
GRTgaz

Mylene Poutou
Head of Dispatching and
Development Department,
Region Val de Seine
GRTgaz

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marcus evans conferences

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marcus evans congresses bring together the leading vendors and decision makers from a wide range of services and industries. Each event provides an opportunity for key suppliers to exhibit and demonstrate their products to the region's key professionals. In addition to the exhibition format the event's educational conference is attended only by delegates who are pre-qualified, in most cases to a minimum spend of US\$5 million and many with budgets in excess of \$50 million.

22nd March 2011

PIPELINE INTEGRITY AND FLOW INSURANCE

Led by:

Gert Jan Heerens

Sr. Business Developer
Monitoring Systems Oil & Gas
TNO Science & Industry

13:30 Registration and Coffee

14:00 Opening Address from the workshop Workshop Leader

14:10 Inspection and Monitoring of Pipeline with Ultrasonics

- Usage of new ultrasonic simulation to develop weld TOFD inspection procedures
- The value of the POD-curve. Probability of detection-curve: an inspection technique
- Usage of guide wave technology for pipeline inspection
- Localisation and sizing with guided waves
- Remote corrosion monitoring with guided waves
- Case: corrosion under supports

15:50 Coffee Break

16:00 Pipeline Operational Issues

- Design issues: overcoming pulsations and vibrations generated by internal flow
- Acoustic evaluation of risers
- Flow induced pulsations at T-joints, chokes, etc
- Flow induced forces due slugging flow
- Scraping and ultrasonic pigging
- Prevention of wax deposition and hydrate formation
- Usage of inhibitors for corrosion control

17:00 Closing Remarks from the Workshop Leader and End of Workshop

23rd March 2011

08:30 Registration and Coffee

09:00 Opening Address from the Chair

Asle Venas

Director, Offshore Pipelines Segment

DNV

OPERATIONAL RISK AND MAINTENANCE

09:10 **Opening Address:**

Structural Integrity Management – Adopting the Right Risk-Based Mitigation Strategy

- Securing immediate repair prioritisation
- Extending operations safely beyond original design life
- Implementing a systematic managed approach to defects, repairs and replacement
- Developing effective pipeline response schemes: corrosion control

Dr. Henry Tan

Senior Lecturer Safety & Reliability Engineering

University of Aberdeen

09:50 **Reducing the Risk of Third Party Damage – Achieving Safe Operations**

- Third party interference – minimising the impact on network's reliability
- Assessing common areas of interference and selecting the right preventive measures
- Use of data on unplanned works and near misses in the focus of resources to prevent damage
- Pipeline surveillance – localisation and identification of external interference

Andrew Jackson

Managing Partner and Head of Pipelines and Utilities

Fisher German LLP

10:30 Morning Coffee and Networking Break

11:00 **Key Note Address:**

Life Extension and Requalification of Offshore Pipelines – Why and How

- Drivers for extended life or new mode of operation
- Safety securing a second life for ageing assets
- Guidelines, best practices and methods for requalification
- Some practical examples and case studies

Øyvind Omland

Senior Engineer

DNV

11:40 **Case Study:**

Characterising the Status of Your Pipeline – Increasing Capacity

- Examining current regulations
- Adopting successful economic models
- Maximise the capacity of your pipe – pros and cons
- The way forward – assessing the condition of the pipe through absolute measurements of the whole surface

Willem Coppoolse

Head of Capacity Development Transmission Storage and LNG

GDF Suez

12:20 **Ensuring Safe Operations and High Productivity – Pipeline Protection**

- Overcoming traditional limitations in pipeline inspection
- Managing oil and gas pipeline infrastructures – regulatory, public and environmental concerns
- Promoting a reliability culture across the company

Mike Billio

Process Integrity Leader

HSE

13:00 Luncheon

14:00 Coffee and Networking Break

CORROSION MITIGATION SYSTEMS

14:30 **Managing Pipeline Integrity by Predicting and Mitigating HVAC Interference**

- Exploring the latest technical developments: Cathodic Protection (CP) is moving towards the numerical simulation and remote monitoring
- Achieving a reliable and cost effective design of CP system
- Avoiding severe environmental and economic risks through the correct Advanced Corrosion (AC) mitigation strategy

Markus Buetchler

Managing Director

SGK – Swiss Society for Corrosion Protection

15:10 **Panel Discussion:**

Choosing Cost Effective Materials and Accountable Control Methods

- Discussing material selection to minimise risks
- Avoiding sour corrosion
- Understanding the importance of material selection related to the environment and potential corrosion threats
- Debating the benefits of a cost effective long-term strategy
- Ensuring a long-term pipeline life cycle

Moderator:

Frits Doddema

CEO

Stopaq

Panellists:

Markus Buetchler

Managing Director

SGK – Swiss Society for Corrosion Protection

Willem Coppoolse

Head of Capacity Development Transmission Storage and LNG

GDF Suez

Øyvind Omland

Senior Engineer

DNV

Dr. Henry Tan

Senior Lecturer Safety & Reliability Engineering

University of Aberdeen

16:10 Afternoon Tea and Networking Break

16:40 Closing Remarks from the Chair and End of Day One

24th March 2011

08:30 Registration and Coffee

09:00 Opening Address from the Chair

Mike Kirkwood
Pipeline Integrity Manager
TDW

REPAIR AND REHABILITATION

09:10 **Opening Address:**

New Developments in In-Line Inspection (ILI): Using Spiral Magnetic Flux Leakage Techniques

- ILI tools based on Magnetic Flux Leakage (MFL)
- Overcoming limitations: new TDW Spiral MFL tool
- Looking at the concept and assessing the results

Mike Kirkwood
Pipeline Integrity Manager
TDW

09:50 **Case Study:**

Advanced Life Prediction and Performance Assessment Methods

- Increasing reliability of existing pipelines through cost effective measures
- Evaluating the asset life-cycle phases and integrity management parameters
- Enabling accurate life cycle cost estimates

Patrick Pelle
Managing Director, Region Val de Seine
GRTgaz

Mylene Poitou
Head of Dispatching and Development Department, Region Val de Seine
GRTgaz

Samir Akel
Consultant
GRTgaz

10:50 Morning Coffee and Networking Break

11:20 **Interactive Round Table Discussion:**

External Corrosion and Pipeline Cathodic Protection (CP)

- Using inhibitors to protect the pipeline
- Testing methods to ensure CP effectiveness
- Analysing the relationship between AC corrosion and CP
- Enhancing pipeline performance

Frits Doddema
CEO
Stopaq

Ken Lax
Technical Director
Corroconsult

DESIGN AND MATERIAL SELECTION

12:20 **Doing it Right the First Time: Seamless Data
Collection, Analysis and Integration During
Pipe Manufacturing and Pipeline Construction
Builds the Comprehensive Foundation for
Future IM Assessments**

- Pipe tracking solution from production to construction
- Ensuring the integrity during transportation and storage
- On the spot data collection and the benefits for future integrity management decisions
- Transition from baseline assessments to ongoing integrity assessment

Markus Brors
Executive General Manager
Rosen

13:00 Luncheon

14:00 Coffee and Networking Break

NEW GENERATION PIPELINES

14:30 **Case Study:**

CO₂ Transmission Pipeline Infrastructure: Challenges and Opportunities

- Reviewing technical issues for the large scale deployment of pipelines
- Exploring current pipeline standards: moving forward
- Assessing the needs for CO₂ transmission infrastructure: CCS pipeline requirements
- Eni's experience

Carlo Maria Spinelli
Technical Manager
Eni

15:10 **Panel Discussion:**

Ensuring a Well Designed Pipeline Integrity Management System

- Conducting baseline inspections
- Planning your strategy: safety and integrity at the top of your agenda
- Regulation developments: increasing the opportunities for PIMs

Panellists:

Markus Brors
Executive General Manager
Rosen

Patrick Pelle
Managing Director, Region Val de Seine
GRTgaz

Mike Kirkwood
Pipeline Integrity Manager
TDW

15:50 Afternoon Tea and Networking Break

16:20 Closing Remarks from the Chair and End of Day Two

25th March 2011

08:30 Registration and Coffee

09:00 Opening Address from the Chair

Durga Murti

Superintendent Asset Integrity Division

Chevron

BLACKPOWDER MANAGEMENT STRATEGIES

09:10 **Black Powder in Sales Gas Transmission Pipelines**

- Black powder chemistry – formation and composition
- Examining the international industry experience with black powder
- Black powder impacts
- Management strategies: mitigation and removal

Mike Kirkwood

Pipeline Integrity Manager

TDW

OPTIMISING PIPELINE INTEGRITY MANAGEMENT IN THE MENA REGION

10:10 **Case Study:**

Designing for Optimal Pipeline Functionality

- Understanding technical design for integrity
- Overcoming challenges on new pipeline project management
- Aligning the different phases of the project to ensure future pipeline integrity
- Minimising construction challenges

Mohamed Daoud

Manager Project Quality

ADCO – Abu Dhabi Company for Onshore Operations

11:10 Morning Coffee and Networking Break

11:40 **Case Study:**

Assuring Functionality and Productive Pipeline Operations

- Governing factors in profitable pipeline operations
- Understanding available tools:
 - Fitness For Service Analysis (FFS)
 - Risk Based Analysis (RBA)
- Analysing applicable codes and practices for FFS and RBA
- Current business practices and optimal trade-off between FFS/RBA
- The best solution

Durga Murti

Superintendent Asset Integrity Division

Chevron

12:40 **Panel Discussion:**

Reaping the Benefits of Preventative Maintenance Strategies

- Debating how to minimise risk of failure
- Solutions to cracking localisation
- Discussing how to ensure safe operations and productivity
- Detecting and eliminating defects and anomalies

Panellists:

Durga Murti

Superintendent Asset Integrity Division

Chevron

Mohamed Daoud

Manager Project Quality

ADCO – Abu Dhabi Company for Onshore Operations

Mike Kirkwood

Pipeline Integrity Manager

TDW

13:10 Closing Remarks from the Chair and End of Conference

13:20 Luncheon

Business Development Opportunities:

Does your company have services, solutions or technologies that the conference delegates would benefit from knowing about? If so, you can find out more about the exhibiting, networking and branding opportunities available by contacting our sponsorship division.

James Driscoll

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Speaker Profiles

Dr. Markus Büchler

Experience

CEO: 4/06–present

Swiss Society for Corrosion Protection, Zürich, Switzerland;
Participating in various EN working groups and heading several research projects related to cathodic protection and ac-corrosion
Head of Research and Development: 6/00–03/06

Swiss Society for Corrosion Protection, Zürich, Switzerland;
Responsible for numerous research and development projects related to the durability of materials and corrosion.

Postdoctoral Associate: 8/98–5/00

Corrosion Research Center, University of Minnesota, Minneapolis, MN, USA; Development of microscopic techniques for in-situ high resolution investigation of electrochemical processes and characterization of microelectronic devices.

Ph.D. Student: 1/95–1/98

ETH-Zürich, Switzerland; Thesis title: Experimental modeling of passive films on iron; Investigation of semiconductive properties of passive films, synthetic iron oxides, and hydroxides in combination with a new light reflectance technique.

Functions

President of commission 2 (external corrosion) of CEOCOR: 5/09–present

Gert-Jan Heerens

is Business Development Manager Instrumentation Oil and Gas Industry at TNO. He studied Mechanical Engineering in Utrecht in the Netherlands B.Sc. After his study he has been working in industrial research and development of instrumentation and process equipment. First as a designer and later as a system engineer and project manager being involved in both national and international projects. Mr. Heerens worked for the paper industry, consumer electronic industry, semiconductor industry and the process industry. Companies he worked for are Ferag AG, Philips, Stork N.V. and FCI Electronics. The past 13 years he has worked for TNO. His broad knowledge of different technologies provides him firm basis for his current position as a Business Development Manager Instrumentation for the Oil and Gas Industry. Mr. Heerens contributed to a number of patents and publications.

- Insight in the technology and outlining possible fields of application.
- Case study non-accessible corrosion under supports.

Mylène Poitou

Head of Dispatching and Development Department, Région Val de Seine

GRTgaz

Mylène Poitou is in charge of the monitoring and the development of the regional networks as well as the relationships with the industrial customers; Previously, she had various experiences as project manager and team manager in gas infrastructure. From 2006 to 2009, she was the Executive Secretary of Gas Infrastructure Europe, the European association representing gas infrastructure operators in Europe.

Mike Billio

a Chartered Chemist and Chartered Scientist, is the head of the QRA, Fire & Explosion Specialists in HSE's Offshore Safety Division, having recently returned to OSD after a 12 month secondment to HSE's Emerging Energy Technologies Team. Mike joined HSE following 20 years in industry where he spent several years commissioning major projects. In HSE's Major Accident Hazard Assessment Unit Mike became HSE's national topic specialist for high pressure gas pipelines, high & low pressure gas storage and low pressure distribution, producing many papers on the various aspects of risk assessment and provided substantial input in to the development of Statutory Instruments such as the Pipeline Safety Regulations. Within the EET team Mike provided its technical resource across all technologies including carbon capture. This required him to engage with stakeholders, identify and develop research, collaborate with other government and non-government organisations, industrial stakeholders and researchers. His participation with such bodies resulted several publications including a collaborative paper that was awarded Institute of Chemical Engineering (ICChemE) Safety and Loss Prevention Subject Group for the 'most meritorious publication on the topic of safety and loss prevention' in an ICChemE publication.

Patrick Pelle

Managing Director, Région Val de Seine

GRTgaz

Patrick Pelle is GRTgaz Region Val de Seine general manager . He is in charge of 25 per cent of the gas transmission network of GRTgaz, covering the region of Paris and Normandy. He is also the President of the regional French Gas Association in the region of Paris. He was previously in charge of the expertise in cathodic protection and in metallurgy for gas equipment within the former Gaz de France .

Samir Akel

Network Expert/Consultant

GRTgaz

Samir Akel has 20 years experience in the field of Gas Industry: 8 years of R&D in gas distribution and transmission, 2 years in Gaz de France International business (Canada), 7 years within the French gas distribution operator (GrDF) and 3 years within the French gas transmission operator (GRTgaz). His main activities were related to pipeline integrity, asset management and risk assessment. During the last three years, he contributed to GRTgaz Policy on pipeline inspection/rehabilitation/replacement.

Frits Doddema

CEO

Stopaq

Drs. JF Doddema, CEO of Stopaq. A producer of patented visco-elastic coating systems for critical infrastructural assets. Frits is active in the corrosion prevention industry since 1998. He worked for Carboline in Central and Eastern Europe. And is since 5 years with Stopaq. He holds a master in business administration. Frits is a member of the iso21809-3 fieldjoint coating working group.

Speaker Profiles

Dr. Henry Tan

is a Senior Lecturer in Safety & Reliability Engineering, and Subsea Engineering, of the School of Engineering, University of Aberdeen, UK; a Guest Professor of the School of Aeronautics and Astronautics, Zhejiang University, China; and a member of the American Society for Quality. He supervised PhD and MSc students on condition monitoring, aging pipelines integrity, flexible-pipeline fatigue assessment, and corrosion inspection/monitoring techniques. Dr. Tan taught courses, such as Subsea Integrity, Explosion Engineering, Fluid Mechanics and Thermodynamics, Deformation and Fracture of Engineering Materials, Materials and Structures, Simulation in Materials, Engineering Materials Laboratory, Aircraft Structural Analysis, Mechanical Design etc. at institutions world widely including: the School of Engineering, University of Aberdeen, Scotland; International Centre for Mechanical Sciences, Udine, Italy; School of Mechanical, Aerospace and Civil Engineering, University of Manchester, England; Department of Mechanical Engineering, Louisiana State University, USA; and Department of Engineering Mechanics, Tsinghua University, China.

Carlo Maria Spinelli

was employed as a Junior researcher on pipeline integrity for Snam Rete Gas Laboratory in San Donato Milanese until 1999. Then he became the Head of the Laboratory and moved to Eni Gas & Power (San Donato Milanese) in 2003. Here he was involved in many operative projects as : The GreenStream Pipeline from Lybia to Italy in 2003-2004, SiRCoS pipeline repair system from 2004 to 2007, as well as in other R&D activities as: Eni X100 TAP Project from 2002; X80 Intermediate Pressure Eni Project from 2008. He is actually the Technology Planner for Eni Gas & Power. Carlo who is the Eni G&P official member in EPRG (European Pipeline Research Group), in GERG, in IGU he has been recently involved also in the area of CCTS (Carbon Capture Transportation and Storage) focusing on CO2 transportation by pipeline. Author of several papers mainly on High Pressure Pipeline Technology with High Grade steels has presented his works in many occasions or published on specialized magazines.

Andrew Jackson

Managing Partner

Fisher German Llp

ANDREW JACKSON is Managing Partner of Fisher German LLP, a firm of UK based Chartered Surveyors , Chairman of Fisher German Prietsner Ltd and immediate past Chairman of the Onshore Technical Panel of the Pipeline Industries Guild (of which he remains a Committee member). Andrew has been involved in the management of pipeline safe operation for over 28 years, setting up the Utilities and Infrastructure sector of that business in 1983. Fisher German holds a market leading position in pipeline third party activity management and provides services to the majority of the multi- national oil, chemical and gas companies operating high pressure onshore pipeline systems in the UK