18th International Conference on
Pipeline Protection
Antwerp, Belgium
4 – 6 November 2009

Supported by:

Sponsored by:
**Introduction**

There are estimated to be over 2.5 million kilometres of existing energy pipelines globally. In addition to these, there are similar numbers of water pipelines world-wide. It is recognised that a pipeline is the most environmentally-friendly, efficient and cost-effective way of transporting liquids, slurries and gases.

Yet without careful installation, regular inspection, monitoring, maintenance, and repair, refurbishment or upgrade, these installations will fail, potentially causing polluting leaks from hydrocarbon pipelines or unacceptable losses from water mains. Economic downturns may put pressure on pipeline owners to curtail expenditures but with in some cases ageing infrastructures, and in others demands for longevity in new pipelines, industries cannot afford to cut corners. The media – newspapers, magazines, radio and television – regularly report problems with pipelines either through poor practices during installation or upkeep, or progressive, unforeseen deterioration or complete failures of the pipe assemblies.

The Pipeline Protection Conference, now in its fourth decade, has since its inception brought together experts knowledgeable in good practices for today’s pipelines and the latest techniques to counter tomorrow’s challenges.

The oil and gas industry has always sought the latest methodologies for protecting its pipelines. Demands from the water and waste industry across the World for higher performances and longer useful life from their pipelines are growing ever greater. Safety and security are paramount for suppliers and operators alike, and in some countries certification is already demanded as proof of standard.

For owners, designers, financiers, suppliers, constructors and operators of pipelines, the Pipeline Protection Conference offers an unrivalled European gathering of the World's experts and the capacity to provide the answers to fundamental problems.

**Who Should Attend**

- End-users
- Contractors
- Pipeline operators
- Consultants
- Researchers
- Designers
- Coatings manufacturers and developers

**Opening Address**

We have pleasure in announcing that Mr Derek Mortimore from Selmers BV will be opening the conference with his address on '49 years in the business, from Granny ragging to J-laying'.

**Language**

The language of both the Conference and the published Proceedings will be English.
Venue, Timing and Registration

The 18th International Pipeline Protection Conference will take place in Antwerp. This city, described as “a pocketsize metropolis”, is a refreshingly down-to-earth yet vivacious cosmopolitan habitat blessed with magnificent architecture, fashionable shop fronts, dazzling monuments, jazzed-up clubs, inspired artworks and multicultural restaurants. Antwerp not only has a wealth of outstanding museums, picturesque galleries, sculpted streets and beautiful architecture, but is also laced with refreshing greenery and urban haunts. Its culture, history, vibrant nightlife and world class shopping are all within easy reach, thanks to excellent access by air, train, motorway and even water.

The conference will be held at the Ramada Plaza Antwerp hotel, which is conveniently located in the heart of the business district and just ten minutes away from the historic city centre.

<table>
<thead>
<tr>
<th>Ramada Plaza Antwerp</th>
<th>Tel: 0032-3-2448211</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desguinlei 94</td>
<td>Fax: 0032-3-2164712</td>
</tr>
<tr>
<td>Antwerp, BE 2018</td>
<td>E-mail: <a href="mailto:info@ramadaplazaantwerp.com">info@ramadaplazaantwerp.com</a></td>
</tr>
<tr>
<td>Belgium</td>
<td>Web: <a href="http://www.ramadaplaza-antwerp.com">www.ramadaplaza-antwerp.com</a></td>
</tr>
</tbody>
</table>

The Conference will run from 4 – 6 November 2009. It will open on the morning of Wednesday 4th November and will conclude with lunch on Friday 6th November 2009.

Registration will take place in the lobby adjacent to the Conference room Margaux I, from 17:30 – 18.30 on Tuesday 3rd November and 08.00 to 09.00 on the Wednesday morning.

Accommodation

Delegates are responsible for booking their own accommodation in Antwerp. However, an allocation of deluxe double rooms (for single use) at the Ramada Plaza Antwerp has been reserved at a special discounted rate of €131.00, this price is based on availability and limited until 5th October 2009. **To avoid disappointment delegates are to make their online reservations directly with the Ramada Plaza Antwerp hotel before 5th October 2009**, any unconfirmed accommodation in our allocation will be released for general sale – therefore we cannot guarantee availability or the discounted price after this date.

Online bookings – what should you do?

A valid credit card is required to confirm your reservation and guarantee your room.

1) Go to: <http://www.ramada.com/Ramada/control/home>
2) Choose “hotels & reservations”
3) Select destination city – Antwerp and country – Belgium
4) Choose the correct arrival & departure dates
5) Select the number of rooms and number of guests
6) Scroll down to Discounts and Promotions, choose “select a rate plan” and select “promotion” from the drop down menu
7) Enter the promotion code ‘LKBR’ and click search
8) The Ramada Plaza will be displayed, click the reserve button
9) Now you are at the reservation page for you to choose your room type and complete the reservation by filling in your name and credit card details
**Travelling to Antwerp**

The motorways to Brussels, the coast, Germany and the Netherlands are all close by.

The city centre is easily accessible by regular tram service which operates seven days a week from 6am to midnight. Journey time to city is approx 10 minutes. The Antwerp Tourist Board website www.antwerpen.be has detailed information on travel to, from and around the city.

**Social Functions**

Admission to the social functions is included in the delegate fee. Additional tickets for partners to attend the gala dinner are available to purchase from the conference organisers when registering.

**Welcome Reception** – Lyondell Basell are generously hosting the welcome reception on Wednesday evening, drinks and canapés will be served while you renew old friendships and make new contacts.

**Gala Dinner** – On arrival to Thursday’s gala dinner Acotec are kindly sponsoring the pre-gala dinner drinks, delegates and their “partners are then invited to dine at the Ramada Plaza where a three-course dinner with matching wines will be served, our thanks go to Jotun who are sponsoring the gala dinner drinks.

**Supporting Organisations**

- NACE
- Pigging Products and Services Association

Members of the above Organisations are entitled to claim a 10% discount off the conference registration fee. Please indicate your membership details on the registration form to obtain the discount. We regret we cannot give multiple discounts.

**Sponsoring Organisations**

- Bredero Shaw
- Canusa
- Jotun Powder Coatings Ltd
- Lyondell Basell Industries
- Acotec

Other organisations wishing to participate in the sponsorship of the conference are asked to contact the conference organiser confx2@bhrgroup.co.uk

**Media Partner**

- World Pipelines

**Sponsorship Opportunities**

Various sponsorship packages are still available. A popular choice is the best paper award, this award is short-listed by the TAC and presented to the winner (approx. £500) at the gala dinner. The aim of this scheme is to encourage new engineers/graduates in the industry, this is judged on the quality of the paper and not the presentation. For more details on available sponsorship items, please contact the organisers.
OPENING ADDRESS:
Derek Mortimore, Selmers BV, UK
49 years in the business, ‘from Granny ragging to J-laying’

AC CORROSION WORKSHOP:
The protection package – time for a review?

Offshore
Latest developments within the field of subsea insulation
A Kopystynski, Bredero Shaw, UK

Long term experience with polypropylene thermal insulation for subsea pipelines
B Melve, D Ali, K Haraldsen, H Thon, StatoilHydro ASA, Norway

Cathodic
AC corrosion de-mystified
K Lax, R Lindley, Corroconsult International Ltd, UK

Evaluation of NACE 100 mV decay criteria for cathodically protected PCCP of the Great Man-made River project pipe lines in Libya
E Salah, Great Man-Made River Authority, Libya

3 Layer Coatings
Residual stresses in 3LPO external pipeline coatings – disbondment and cracking
B Chang, PolyLab LLC; S Hung-jue, J Han, Texas A/M University, USA; D Wong, ShawCor, Canada; A Kehr, M Mallozzi, 3M Company; F Aquirre, H Pham, The Dow Chemical Company; W Snider, NOV Tuboscope, USA

Update in the development of the Borcoat/Wehocoat FJ coating solution for polyolefin coated steel pipes
B Turner, L Leiden, Borealis BU Pipe, UK; K Punonnen KWH Ltd, Finland

HDPE anti-corrosion pipe coating system with outstanding performance
L Quillet, Arkema, France; P Nathiez, Total Petrochemicals Research, Belgium
FBE Powder

Development and performance of a low application temperature FBE coating
J K Pratt, M Mallozzi, 3M Company, USA

Design of MID-Tg FBE powder coatings to meet the requirements of pipe coaters and pipeline owners
S Drew, Akzo Nobel Powder Coatings GmbH, Germany

Rheokinetic modeling of fusion bonded epoxy powder coatings at standard and low application temperature
M A Shafi, F Aguirre, E Trottier, S Falcone-Potts, The Dow Chemical Company, USA

Maintenance

Automatisation of the polyamide 11 fine powders application as internal pipe coating at welded joint level
A Thomas, ARKEMA; M Gobin, A Fidani, CYBERNETIX; L Quillet, ARKEMA, France

Best practices in managing SCC on gas pipelines
J Perez, Saudi Aramco, Saudi Arabia

Efficient transport and storage of coated pipes
I van Assema, C Verhoeven, Dhatelc, The Netherlands

Rapid hardening concrete cloth for oil and gas pipeline protection applications
F A Orr-Adams, Applied Concrete Systems Partnership; P Brewin, Concrete Canvas Ltd; C H Fentiman, Greenwich Analytical Testing Services LLP, UK

Field Joints

Liquid applied field joint coatings: Are generic classifications a reliable guide to coating performance?
I Robinson, 3M/E Wood, UK

“Let’s stick together”: Hybrid polyurethane systems with superior adhesion to polyolefins
W Stevens, Rosehill Polymers Ltd, UK

PNC: A new solution for offshore field joint coatings
M Mallozzi, M Perez, 3M Company, USA

Novel field joint coating solutions the construction of subsea pipelines
D Tailor, E Tacoma, Canusa-CPS, Canada

Description of PIH fused field joint coating system
C Vincent, Pipeline Induction Heat Ltd, UK
Rehabilitation

Rehabilitation of corrosion protective coatings on buried steel pipelines
M Schad, C Ströter, T Rehberg, DENSO GmbH, Germany

Long gas transmission line clean-up operation
A S Al-Subaei, M Espedal, J P Perez, Saudi Aramco, Saudi Arabia

Evaluation a quick turn-around time coating system
E Broesder, Stopaq Europe BV, The Netherlands

The challenge – renovation project in new dimensions: the renewal of the anti-corrosion protection of the hydropower station at Wehr, Germany
M A Zwanzinger, Corro Tec Korrosionsschutz Vertriebsges.mbH; I E Rainer, TIWAG-Tiroler Wasserkraft AG; T Huber, Schluchseewerk AG, Germany

FBE Applications

A new application process that assures good adhesion of fusion bonded epoxy coatings exposed to very severe conditions
G Gaillard, J L Bouliez, BS Coatings, France

Adhesion failure of external 3 layer extruded polyethylene (3LPE) based coatings for gas/oil transmission pipelines buried under soil
A Hussain, C Pflugbeil, Comtech GmbH, Germany

Water

Foamed cement mortar to protect coated steel pipelines from external acid attack
N Trebicki, Rand Water, South Africa

Title to follow
E Varkevisser, Rand Water, South Africa

Conference Proceedings

The conference papers will be professionally published as a softbound volume, and will include a CD. They will be on sale from BHR Group upon the close of the conference. The proceedings are included as part of the delegate fee. To purchase additional copies, please contact Mrs Marian Rolfe at the BHR Group address, or by email at confy@bhrgroup.co.uk.
Acknowledgements

We would like to thank the Technical Advisory Committee, the panel of referees, the supporting organisations, media partners and sponsors for their help and support.

Technical Advisory Committee

UK Members
Mr Chris Bates  
Dr Mikael Braæstrup (Chairman)  
Mr Nigel Curson  
Mr John De Rosa  
Mr Richard Galka  
Mr Denis Grimshaw  
Mr John W T Harwood  
Mr John Healy  
Mr Robin John  
Mr Derek Mortimore  
Mr Ian Robinson

International Members
Mr Mark Davidson  
Mr Joe Duncan  
Mr Ashley Fletcher  
Mr Wayne Hodgins  
Mr Alan Kehr  
Dr Emile Trottier  
Mr Edwin Varkevisser  
Ms Cindy Verhoeven

BHR Group Company Profile

BHR Group Limited is an independent contract Research and Technology Organisation (RTO) and SME. We specialise in the fluid dynamics and mechanics, and fluid physical and chemical behaviour of industrial processes from the nano to macro scales. We provide our expertise through consultancy; research and testing services; physical and computational modelling; technology translation; specialist training, conferences and seminars; and product development and exploitation. These services are applied to solve problems for a wide range of industrial processes and sectors including chemicals, pharmaceutical, renewable and conventional energy sources, water and wastewater, and aerospace.

Our aim is to provide new innovative or optimised designs, analytical models and operating methodologies from which cost-effective and sustainable industrial processes can be developed. To do this we work closely with our customers to understand their business needs, and develop and implement practical technical and business solutions.

Consultancy and training courses are available for all aspects of slurry transportation and handling including sand, hydrates, cuttings & drilling fluids and GTL catalysts.

For more information, visit BHR Group at www.bhrgroup.com.
Registration

The registration fee includes entrance to all technical sessions from 4 – 6 November, a bound book and CD of the conference proceedings, lunch and refreshments daily, and entrance to both the welcome reception and gala dinner.

<table>
<thead>
<tr>
<th>Early bird rate (before 6th October)</th>
<th>Full registration rate (after 6th October)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting author</td>
<td>Presenting author</td>
</tr>
<tr>
<td>£648 + VAT</td>
<td>£720 + VAT</td>
</tr>
<tr>
<td>Delegate</td>
<td>Delegate</td>
</tr>
<tr>
<td>£860 + VAT</td>
<td>£960 + VAT</td>
</tr>
<tr>
<td>Rising star</td>
<td>Rising star</td>
</tr>
<tr>
<td>£430 + VAT</td>
<td>£480 + VAT</td>
</tr>
<tr>
<td>Students</td>
<td>Students</td>
</tr>
<tr>
<td>£430 + VAT</td>
<td>£480 + VAT</td>
</tr>
</tbody>
</table>

Early bird rate – applicable to all bookings received with payment on or before 6th October 2009.

Presenting authors – each presenting author (maximum of 2) is entitled to a 25% discount off the conference fee.

Rising Stars – in keeping with its audience, BHR Group wishes to foster recent graduates (within the last 5 years), engineers and managers and encourage their development and interaction with experienced technical managers. For full paying delegates, the organisers offer the option of a second place at a discounted rate of 50% for a colleague that meets the above ‘rising star’ criteria.

Students – a limited number of places are available for bona fide students at 50% of the full conference fee. Please contact the conference organiser directly to register as a student.

Exhibition Service

The cost of exhibiting is £1452.00 / €1754.50 / $2420.00 (including Belgian VAT at 21.0%)

This includes the following for 1 person.

- Attendance at all technical sessions
- Refreshments and lunch daily
- Attendance at the registration and welcome reception
- 5 minute presentation to conference delegates
- A list of delegate details (post conference)
- Printed conference proceedings and CD
- Attendance to the gala dinner

Promotional Literature Service

There is an opportunity for companies to insert promotional literature in the delegate information packs at a cost of £400 +VAT. Material for insertion must be sent to BHR Group Limited before 26th October 2009. A sample of literature must be sent when making your booking for this service.

Proceedings Publicity

Companies may purchase a full page of advertising in the book and CD version of the proceedings. The cost of each page is £400 +VAT. The book is a softbound volume, produced in Royal Octavo size. As well as being distributed to all attendees of the conference, the proceedings and CD are sold worldwide after the event. Copy must reach the conference organiser by 28th August 2009 to meet the publishing deadline.
Methods of Payment

Full payment must accompany the registration form. Please submit one form for each delegate and quote PP09 and the delegate’s name and company on all correspondence. Photocopies of a blank form may be used.

- **Credit Card** – payment details should be entered on the registration form by completing the appropriate boxes and signing the form

- **Cheques** – make payable to BHR Group Limited

- **Sterling Bank Drafts** – delegates attending from countries with currency restrictions may wish to use sterling bank drafts

- **Bank Transfers** – payable to National Westminster Bank Plc, Cranfield University Branch, Wharley End, Cranfield, Bedford MK43 0SR, England

  **Sterling payments**
  - Account No: 36565466
  - Sort Code 60-06-56
  - IBAN: GB40 NWBK 6006 5654 66
  - BIC: NWBK GB 2L

  **Euro payments**
  - Account No: 550/00/39509257
  - Sort Code 60-06-56
  - IBAN: GB07 NWBK 6072 1139 5092 57
  - BIC: NWBK GB 2L

  **US Dollar payments**
  - Account No: 140/00/39509273
  - Sort Code 60-06-56
  - IBAN: GB43 NWBK 6073 0139 5092 73
  - BIC: NWBK GB 2L

Cancellations

A full refund (minus a £50 admin fee) will be made for cancellations received on or before 5th October. No refunds will be made for cancellations after 5th October, however substitutions can be made at anytime.

Enquiries

Enquiries should be addressed to:

The Conference Organiser
BHR Group Limited
The Fluid Engineering Centre
Cranfield
Bedfordshire MK43 0AJ, UK

Tel: +44 (0)1234 750422
Fax: +44 (0)1234 750074
E-mail: confx2@bhrgroup.co.uk
Web: www.bhrconferences.com
**INVOICE AND REGISTRATION FORM**

18th International Conference on

**Pipeline Protection**

Antwerp, Belgium: 4 – 6 November 2009

*Your details*

**Please complete in block letters ticking appropriate boxes**

<table>
<thead>
<tr>
<th></th>
<th>Prof</th>
<th>Dr</th>
<th>Mr</th>
<th>Mrs</th>
<th>Miss</th>
<th>Ms</th>
</tr>
</thead>
</table>

Last name

First name

Position

Company

Company VAT Number

Address

Post/Zip Code

Country

Telephone

Fax

Email

Dietary requirements or special requests

Signature

Date

I am unable to attend the conference but am interested in purchasing the Proceedings

**Please complete and return to:**

Mrs Marian Rolfe

BHR Group Limited

The Fluid Engineering Centre

Cranfield, Bedfordshire MK43 0AJ, UK

Registered in England No. 2420351

Tel : +44 (0)1234 750422

Fax : +44 (0)1234 750074

Email: confy@bhrgroup.co.uk

www.bhrconferences.com

VAT Reg No. 536 4271 46

Please note that your name and company will be included in the List of Participants for the conference. This list will be made available to delegates, sponsors and exhibitors of the conference. If you do not wish your name and company to appear in the List of Participants please tick here . If you do not wish your name and address to be forwarded to conference sponsors and exhibitors please tick here .

We would like to keep you informed of other relevant BHR Group conferences and services. This will be carried out in accordance with The Data Protection Act 1998. Please write to the Conference Department, BHR Group, Cranfield, Bedfordshire, MK43 0AJ if you do not want to receive this information.
### INVOICE AND REGISTRATION FORM

**18th International Conference on**  
**PIPELINE PROTECTION**  
**Antwerp, Belgium: 4 – 6 November 2009**

**Registration**

<table>
<thead>
<tr>
<th>CONFERENCE CODE: PP09</th>
<th>£ GBP inc VAT</th>
<th>€ Euro inc VAT</th>
<th>$ USD inc VAT</th>
<th>Amount due £/€/$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgian VAT is charged at 21%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Early bird rate (before 6th October)**
- Presenting author: £648 + VAT  
  - £784.08 (€943.80, $1,225.73)
- Delegate: £860 + VAT  
  - £1,040.60 (€1,246.30, $1,720.62)
- Rising star: £430 + VAT  
  - £520.30 (€623.15, $860.31)
- Students: £430 + VAT  
  - £520.30 (€623.15, $860.31)

**Full registration rate (after 6th October)**
- Presenting author: £720 + VAT  
  - £871.20 (€1,046.65, $1,433.85)
- Delegate: £960 + VAT  
  - £1,161.60 (€1,391.50, $1,911.80)
- Rising star: £480 + VAT  
  - £580.30 (€695.75, $955.90)
- Students: £480 + VAT  
  - £580.30 (€695.75, $955.90)

**Exhibitors**
- Incl. registration for 1 person: £1200 + VAT  
  - £1,452.00 (€1,754.50, $2,420.00)

**Less 10% for members of supporting organisations**

**Promotional literature service**
- £400 + VAT  
  - £484.00 (€580.80, $798.60)

**Proceedings publicity**
- £400 + 15% UK VAT  
  - £460.00 (€552.00, $759.00)

**Conference Dinner**: # .... extra tickets x £60 + VAT  
- £72.60 (€87.12, $121.00)

**TOTAL** *(full payment must accompany this form)*

*Early bird registration discount requires payment at time of registration and before expiration or full rate will apply.*

**PAYMENT**  
*(Please tick relevant box and complete as appropriate)*

- [ ] Please find enclosed my cheque for £_________  
- [ ] Please debit my credit card: [ ] MasterCard [ ] Visa [ ] Eurocard  
  - Expiry date __________ / __________
  - Card holder's name and address

**Signature**

**Date**

- [ ] I attach herewith a purchase order  
- [ ] The fees will be settled by bank transfer direct to the BHR Group account