

**July 2010** 



Narmada Offshore Constructions PVT Ltd, India

Netherlocks Safety Systems BV, The Netherlands

Quest Integrity Group, USA

American Tool and Die, Inc, USA

DSV Pipetronix Ltd, Nigeria

### Pigging Products & Services Association

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# **Pigging Industry News**

the newsletter of the Pigging Products & Services Association

### **THE PRESIDENT'S LETTER** by Peter Fretwell

At the AGM in Houston in February I took over the Presidency from Lloyd Pirtle. I would like to thank Lloyd for the sterling work he has done on behalf of PPSA over the last year. As is the tradition with the retiring President, Lloyd will spend a further year as a Director of PPSA.

This year's AGM also saw Ben Cottam elected as the first nonexecutive director to represent our Associate and Individual members. I'd like to welcome Ben to the team and I'm sure we will benefit from his experience in the associate industries that revolve around the pigging industry. Ben's company manufactures brushes which is something all pig manufactures require in one form or another.

Ulli Schneider, Director, and John Lambley, Retired President and Director also both stepped down. Thank you for your contribution to the PPSA. Elected as new directors were Simon Bell of International Pipeline Products, UK and Basil Hostage of 3P Services, Germany. Welcome to the team.

Whilst we had been warned in advance, we were all hoping the day would never come. Gill Hornby, after 12 years announced she would be stepping down from her position as Executive Secretary. I personally can't remember the PPSA without Gill. Even before she became Executive Secretary she was with Jim Cordell founder member of PPSA. As such Gill was sending everything out to members and dealing with the day to day correspondence. Now she says she will spend more time in her garden and with her Lagonda cars. And it has come to light that she prefers cats to pigs... what can I say!!

It was proposed and unanimously agreed that in view of all her hard work and dedication to PPSA that Gill be made an Honorary Member of PPSA. I'm pleased to say that Gill accepted so I hope we'll be seeing her in the future. On behalf of all of PPSA I would like to wish Gill and her husband all the very best for the future.

However in her usual thorough way Gill didn't leave us flat as she had someone standing by in the wings ready to take over her role. Diane Cordell, Jim Cordell's daughter-inlaw came to the AGM in Houston to be introduced to the directors and it was unanimously agreed that she should take over as Executive Secretary. It was a relief to all of us that we didn't have to explain what a "pig" was. With a name like Cordell she already knew. I would like to take this opportunity to welcome Diane aboard.

The 5<sup>th</sup> annual golf tournament took place on the Monday before the AGM and 88 people took part. Gerri Ayers must be thanked for organising the event and the PPSA members who continue to promote it. While I don't play golf myself (I prefer the 19<sup>th</sup> hole) it's good to see the event grow every year.

On 17th November the annual Aberdeen Seminar will be held at the Marcliffe Hotel. A change to the format is planned. In addition to an interesting selection of papers, we are introducing a forum with a panel of experts to replace the ideas workshop. Delegates will have the opportunity to send in questions anonymously before the event. It is hoped this will stimulate interesting debate on topical subjects.

## Industry news.

### Sulfuric Acid Pipelines Case Study

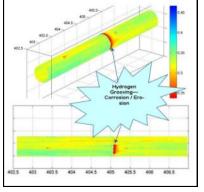
New member, Quest Integrity Group's integrated solution set addresses challenges associated with difficult and unpiggable pipelines.

The solution set offers numerous benefits for overcoming such challenges. InVista, a high fidelity, free-flowing ultrasonic inspection tool, provides 100% overlapping coverage of geometry and metalloss features in a single pass. Operational risk is reduced through improved safety and flexibility. The inspection and assessment are cost-effective and are completed quickly to allow clients to make real-time operating decisions.

Recent inspection of sulfuric acid pipelines shows the benefits of this solution set. Lines of varying diameters and lengths were inspected. Diameters ranged from 4 to 6 inches and lengths varied from 5000 to over 10000 feet. The lines varied in terms of years of service from new to near end-of-life, resulting in baseline examinations and condition assessments. Some lines experienced prior failures which resulted in loss of containment. Damage detected included corrosion under road crossings within casings, water crossings, racked overhead lines and insulated sections.

Most sulfuric acid lines inspected

by InVista indicated areas of corrosion/erosion damage, which was materially significant in most cases. The most severe corrosion found during these recent inspections was on the downstream side, adjacent to the girth welds. Internal pipe wall loss due to localized corrosion/erosion and hydrogen grooving was confirmed (see 2D and 3D graphic images). Several pipe segments contained significant wall loss with indications of greater than or equal to 60%. Clients used the inspection and fitness-for-service information to make rapid decisions to repair or replace pipe segments and significantly reduce the risk of unplanned failure.



### **Pig Detection for Liquid Product Pipelines**

Sonotec GmbH tell us about their non-intrusive method for pig detection. A SONOPIPE ultrasonic sensor is attached to the pipeline by tailored hardware material. The transducer coupler ensures the permanent acoustic connection between sensor and pipe wall. The sensor is electrically insulated.

SONPIPE 12 will be available in two different versions; the 12 S is suitable for non-hazardous areas and the 12 E is for applications in hazardous areas.



Diagram showing internal pipe wall loss due to corrosion/erosion and hydrogen grooving

SONOPIPE 12 Ultrasonic detector

### **PPSA Celebrates its 20th Anniversary**

PPSA was founded in 1990 to promote the knowledge of pigging and its related products and services by providing a channel of communication between the members themselves and with users and other interested parties. As PPSA celebrates its 20th anniversary, membership has risen from 19 to over 90. PPSA deals with thousands of enquiries each year and is represented worldwide at conferences and events. We would like to thank our members for their support. To find out more, visit <u>www.ppsa-online.com</u>



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**PIGGING INDUSTRY NEWS** 

#### ADVANTAGES

- The easy installation of SONOPIPE 12 is carried out without putting a hole into the pipeline so financial losses due to interruptions of pipeline operations can be avoided.
- Permanent self testing routines guarantee a high degree of security.
- Both manual and automatic reset after a pig detection are available.
- SONOPIPE will also work with different kinds of pigs, such as spheres, foam or gel.

### Weatherford's P&SS Group Receives Technip Contract Award

Weatherford P&SS group has been awarded a contract by Technip for precommissioning and commissioning services on the Jubilee Field Development Project, Ghana.

The contract covers the pigging of production, water and gas injection flowlines; hydrostatic testing of the flowlines, riser and jumpers; followed by dewatering of the gas injection system. During installation and post installation Weatherford will perform electrical and pressure monitoring and testing of the umbilicals from the floating production, storage, and offloading vessel (FPSO).

Weatherford will utilize their patented Denizen subsea pipeline commissioning system on this project, which will be the first deployment of such technology in Ghana. The company will also mobilise a high pressure membrane generated nitrogen spread which will be based on a support vessel and used to dewater the gas injection riser and flowlines.

Situated in the Deepwater Tano and West Cape Three Points blocks, the



Denizen remote subsea technology

Jubilee Field lies approximately 60 km offshore Ghana, West Africa. The Jubilee field development comprises production wells, water injection wells, and gas injection wells, to be tied-in via manifolds and riser base(s) to a FPSO located some 130 km WSW of Takoradi. The water depth across the entire Jubilee Field area varies from 900m to 1700 m.

### GE and Al Shaheen Agreements

Al Shaheen Energy Services and GE Oil & Gas signed strategic partnership agreements that will support the growth of Qatar's oil and gas and energy industries and consolidate GE's presence in the Middle East region.

Under the agreements Al Shaheen Energy Services is a 50% strategic JV partner in GE Oil & Gas' PII Pipeline Solutions business. In addition to continuing to provide pipeline inspection and integrity services to its existing customers, PII Pipeline Solutions will establish a dedicated Integrity and Inspection center in Qatar, to support operators throughout the Middle East.



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### Combined In-line Inspection in the world's longest subsea gas pipeline

Dr. S. Brockhaus, Dr. H. Lindner, T. Steinvoorte, H. Hennerkes, Rosen; Dr. L. Djapic, Statoil

With a total length of 1173 km, Langeled Pipeline connecting Nyhamna in Norway and Easington in Great Britain is the world's longest subsea gas pipeline. In 2008, ROSEN was awarded the contract for a single-run in-line inspection of the pipeline. No pipeline of comparable length had been inspected in a single run before.



Route of Langeled Pipeline, the world's longest subsea gas pipeline

The set task posed major difficulties on several accounts. Firstly, there was the pipeline's unparalleled length which would place great wear and tear demands on the inspection tool. ROSEN tackled this problem by reducing cup wear through special tool centralization based on magnet forces and a supporting guiding disc.



The customized RoCorr·MFL/SIC in-line inspection tool has arrived in Easington, England after a historic non-stop run through Langeled Pipeline

Secondly, Langeled is a multidiameter pipeline (42" and 44" sections) with high wall thickness (between 23.3 mm and 62 mm). To ensure that the inspection tool would definitely be able to pass through all parts of Langeled Pipeline despite its multi-diameter design, its internal features had to be verified prior to the inspection run. For this purpose, a specially designed gauging tool was first sent through Langeled Pipeline. This tool featured a gauge and a bend plate and was adapted to the multidiameter pipe to confirm the bend sizes and ID of the pipeline.

Thirdly, the pipeline is characterized by high product flow velocity, likely to push the inspection tool through the pipeline too quickly to warrant precise measurements. ROSEN's response to this challenge consisted of a Speed Control Unit which provided controlled gas bypass thereby enabling the inspection run to be conducted at a pre-programmed target tool speed to ensure reliable measurements without a flow rate reduction.

To meet the objective of the Langeled project of gathering accurate corrosion data, ROSEN designed the RoCorr·MFL/SIC, a customized combo tool equipped in the front segment with Magnetic Flux Leakage (MFL) technology for general corrosion measurement and in the rear segment with caliper arms featuring Shallow Internal Corrosion (SIC) sensors for shallow internal corrosion and high resolution geometry measurements.

The RoCorr·MFL/SIC in-line inspection tool combines the two corrosion measurement methods MFL and SIC. MFL, which is used for measuring relative wall loss, is a versatile and reliable method for determining the geometry of metal loss in pipelines. In contrast, SIC, an Eddy Current based technology, enables absolute geometric measurements of internal corrosion defects.

Since MFL and SIC permit a close approximation of corrosion growth between them, their combination provides an effective tool for monitoring the degradation process. Additionally, the simultaneous application of the two inspection methods ensures an exceptionally high Probability of Identification for internal and non-internal discrimination, notably providing high accuracy in depths, length and width sizing of internal corrosion defects.



**PIGGING INDUSTRY NEWS** 

### **Pipeline Engineering** Wins the Queen's Award for Enterprise

On Monday 28<sup>th</sup> June 2010, Lord Crathorne, Lord Lieutenant of North Yorkshire presented Pipeline Engineering with the Queen's Award for Enterprise for the category of International Trade. After a guided tour of Pipeline Engineering's factory, which he said was the cleanest factory he had ever seen, Lord Crathorne gave a speech saying, 'The Queen's Award for Enterprise is a highly prestigious award for outstanding achievement and that it is only given for the highest levels of excellence. PE had been awarded it based on their exports in recent years, which have grown 150% since 2004, representing over £50m of export business over the period.'

Lord Crathorne said he hoped PE would benefit from the worldwide recognition that they will receive. He recognised that achieving this award was a real team effort and congratulated all the employees on their outstanding performance.

Managing Director, Willy Watson, also gave a speech saying that

"winning this prestigious award is the icing on the cake and reflects the considerable effort all the employees of Pipeline Engineering have put into the Company."

After the award ceremony employees were treated to a lunch of fish and chips to thank them for their achievements.



Lord Lieutenant of North Yorkshire and Willy Watson, MD.with the scroll, signed by Her Majesty The Queen

### PSI's completes multichannel inspection tools

PSI has developed a fleet of highresolution multi-channel inspection tools ranging from 08" up to 60". The advantage of the multi-channel system is to give additional information of the shape and the o'clock position of the defect. It can detect dents, ovalities, girth welds, changes in wall thickness and other features such as T-pieces, valves and other indications or expansions. Each sensing arm has a sensor and measures separately the inner diameter of the pipeline. PSI carried out a multi channel dual diameter survey in Italy, starting and ending with the 42" section containing 36" valves.

PSI are preparing an inspection tool with 50 Channels and separate sensing arms for a High Resolution Multi-Channel inspection of the 56" pipeline for the Opal Project.



PSI's Multi- channel inspection tool



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### **TDW Completes Pipeline Pressure Isolation Operation for Sarawak Shell Berhad**

TDW Offshore Services AS (TDW) announced that it has successfully completed a key pipeline pressure isolation and joint testing operation offshore western Borneo in Malaysia for Sarawak Shell Berhad.

TDW worked on platform F23P-A, which is part of the facilities operated by Sarawak Shell Berhad located 80 to 200 km from Miri and Bintulu. The operation was carried out on a gas export line that forms a portion of the line that from the F23P-A to the E11R-A platform. The network extends to one of the major trunk lines connected to an LNG plant onshore in Bintulu. The TDW operation made it possible for Shell to install a motor-operated valve in preparation for installation of a new compressor module.

TDW used its SmartPlug isolation tool to isolate the section of the line that required a new valve.



TDW to use its SmartPlug® isolation tool

In order to provide a safe isolation while the line was cut and the new valve was installed, TDW "pigged in" a 30-inch SmartPlug isolation tool from the launcher past the site designated for valve installtion. By doing so, the line was safely isolated and a new flange was welded to it. To ensure the flange was properly installed without pressurizing the entire line, TDW tested the weld with a joint tester tool. Following testing of the weld, the new valve was installed. The affected portion of the gas export line was safely isolated for one month for testing and installation.

### BJ Services Introduces the GEMINI<sup>TM</sup> Combo Tool

BJ Services' innovative GEMINI system, contains a new range of combo tools that provide caliper, metal loss and mapping information in a single tool.

BJ Services' Pipeline Inspection Services group embarked on an ambitious campaign to develop and deploy the GEMINI combo tools, integrating existing technology and customer benefits found in the current fleet of GEOPIG and VECTRA tools. Unlike conventional combo tools, the GEMINI tool uses an active speed control with a gas bypass capability to run in high-speed gas pipelines to obtain both corrosion and deformation information without restricting gas flow or line speed. This is a feature common to the VECTRA magnetic flux leakage (MFL) metal loss tools.

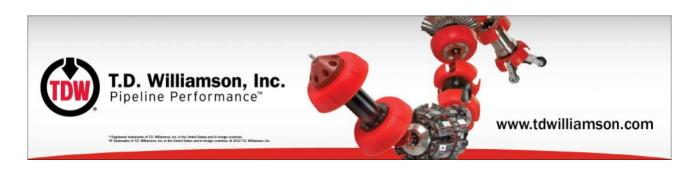
BJ has successfully completed multiple inspections in high-speed gas pipelines with the GEMINI tool for TransCanada Pipeline, ANR and Alliance Pipeline in the United States and Canada.

### New Pipeline Inspection Facility in Canada

PII Pipeline Solutions, a GE Oil & Gas and Al Shaheen joint venture has opened a new state-of-the-art services facility in Calgary. The facility will support North America's oil and gas infrastructure with advanced pipeline inspection technology and services, and will become a global centre of excellence for pipeline crack analysis, serving Canadian, US and European pipeline operators.

# Build-to-print machined components

American Tool & Die, Inc., of Manton, Michigan, USA, recently joined the PPSA, as an Associate Member. Their participation in the PPSA stems from a growing capacity to serve the high precision machining needs of the pipeline integrity and inspection tool industry. President Scot Zimmerman characterized the company's interest this way. "For over three years we have been manufacturing precision product for integrity tools at a price point and quality level difficult to match. The time is right for us to begin offering our services to all industry players, and the PPSA seemed the logical forum."



### Senate, Congress Begin Pipeline Safety Reauthorization by David Bull, Viadata LP technical adviser to PPSA

The US Senate and Congress conducted hearings in June to begin the reauthorization of the federal pipeline safety program as the current legislation, The PIPES Act of 2006 expires in September. Without reauthorization the programs will continue as is with current funding and regulatory requirements.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) is the federal agency charged with promulgating and enforcing pipeline safety regulations. PHMSA jurisdiction covers all onshore pipelines involved in transportation, as well as those offshore lines meeting the transportation definitions. Onshore drilling, production and some gathering lines are exempt from the regulations found in 49 CFR 190-199. Similar offshore facilities are under the regulation of the Minerals Management Service that is being reorganized in light of the current spill in the Gulf of Mexico.

As might be expected the legislators participating in the Congressional hearing initially focused on the Deepwater Horizon disaster. While this facility is under the jurisdiction of PHMSA, PHMSA Administrator Cynthia Quarterman explained the agency has requirements for onshore oil

## **PPSA's Annual Seminar in Aberdeen— Meeting the Challenges of Pipeline Pigging**

PPSA's One Day Annual Seminar is on Wednesday 17<sup>th</sup> November 2010 at the Marcliffe Hotel . The day will include presentations of technical papers and an exhibition. There will also be a Question and Answer Forum with the chance to have your questions answered by a Panel of Experts. Questions can be asked on the day or may be submitted beforehand anonymously at <u>www.ppsa-online/anonymousquestions</u> If you would like more details about the seminar see our website at http://ppsa-online.com/

spill response and does inspect these plans and requires changes if warranted.

In her statement Quarterman said "pipeline safety record is good" and serious incident declined 50% during the last 20 years. Progress in pipeline safety since the PIPES Act includes enforcement programs, Distribution Integrity Management and Control Room Management. PHMSA increased funding for state programs and is working to strengthen damage prevention programs in addition to regulatory enhancements to meet PIPES Act mandates. PHMSA is authorized for 135 personnel for inspection and enforcement and has implemented an aggressive recruitment program to reach that goal. It assists in funding for its state pipeline safety partners that inspect and enforce the regulations on intrastate pipelines and technical assistance grants are assisting in approving damage prevention programs. Committee members agreed that funding, both at the state and federal level, is critical to the pipeline safety program.

Damage prevention was a key topic of discussion in both hearings. Three weeks before the Senate subcommittee hearing there were two pipeline incidents in Texas as a result of excavation damage. Three people were killed in the incidents.

This focused the discussion on damage prevention efforts. The 811 national "Know What's Below -Call Before You Dig" was praised as having a positive effect on reducing excavation damage. Yet there still exist exemptions in many state damage prevention programs for municipalities, railroads, state DOTs and others. Witnesses in both hearings recommended that these exemptions be eliminated. The PIPES Act of 2006 provided for federal enforcement of damage prevention in those states where programs do not meet criteria established in the Act. PHMSA recently requested comments regarding the development of regulations and enforcement to meet this mandate. Witnesses in the senate hearing commented that enforcement of inadequate programs was needed.

National Transportation Safety



Board Chairman Deborah A.P. Hersman, using examples of pipeline failures, suggested that PHMSA establish a more aggressive oversight program for risk based programs. She also stressed the need for excess flow valves for commercial and multi-dwelling facilities.

Integrity management and assessment intervals were discussed in both hearings. The current regulations have specific re-assessment intervals and there has been discussion on amending this to risk-based assessments. Industry testimony was in agreement that risk-based assessments using smart pigs is effective, however the Pipeline Safety Trust commented that the first round of gas transmission assessments should be completed and the results analyzed before making such a change.

The American Gas Association (AGA), representing distribution operators, stated the current law is working and there is vigorous implementation of the 2002 and 2006 Acts and the resulting regulations. AGA did suggest that integrity management for low-stress gas transmission lines, a majority of which are operated by distribution companies, should be amended to a program more like Distribution Integrity Management. This would have no adverse affect on safety and would include all such pipelines in the program, not just those in High Consequence Areas.

The Interstate Natural Gas Association supported the riskbased assessment interval. It recommended that PHMSA look at legacy regulations for redundant requirements or those made obsolete by technology. This review should cover the Incorporated by Reference standards included in the regulations.

The reauthorization acts of 2002 and 2006 added programs to the pipeline safety regulations. **Distribution Integrity Management** and Control Room Management final rules were published in December 2009 and are in the implementation phase. Public Awareness Programs are going through their first required evaluation and it will be some time before those results are finalized. The Gas Transmission Integrity Management baseline assessments are required to be completed by December 2012.

Due to the continuing implementation of these programs, witnesses encouraged legislators to pass a straightforward reauthorization.



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