

Pigging Industry News

the newsletter of the Pigging Products & Services Association



President's Letter

by **Bryce Brown**
H Rosen USA Inc, USA

IT IS AN honour for me to have been nominated and elected as the President of the PPSA for 2005. This is based on the fact that the PPSA represents a group of internationally-recognized companies that have established themselves as being the leaders within the industry for their products and services. I would also like to recognize and thank my predecessor Gordon Short for his service in this position: we look forward to his continued support of and input to the PPSA.

I have been in this industry for almost 14 years. Pigging products and services have both evolved and advanced tremendously over that time. The members of the PPSA have been at the forefront of these changes and meeting the demands and challenges that have been presented to them by the industry.

As our industry continues to advance to meet the current and

future demands and challenges, the PPSA stands ready, as always, to support and educate the industry when necessary. In today's environment, effective "communication" is imperative to understanding the capabilities, and limitations, of the products and services offered versus the objectives and demands that need to be met by our customers. The PPSA has updated its website (www.ppsa-online.com) to further assist the industry in getting the correct information and in a timely manner. The PPSA website is an important tool for effective communication of technical information and with the addition of the area "frequently asked questions" will give the audience the opportunity to ask and get answers to the questions of interest as well as review others.

We, the PPSA, hope that you are getting the information that you need on our products and services: if not, please do contact us. ●

New members

Full
PIT AG, Stutensee, Germany

Associate Member
Multitex Pipeline Division,
 New Delhi, India

Pigging Products & Services Association is at:
 PO Box 2, Stroud, Glos GL6 8YB, UK
 tel: (+44) (0) 1285 760597 fax: (+44) (0) 1285 760470
 e-mail: pps@pps-online.com
 web: <http://www.ppsa-online.com>

Management changes in the PPSA

IN JUNE, Tom Sowerby tendered his resignation as a director of the PPSA due to pressure of work. Tom was Treasurer of the Association from 2000 to 2004, and was appointed a director in 2002. His enthusiastic support of PPSA, particularly in connection with the European seminars, has been greatly appreciated, and we are sure that members will want to join us in thanking him for all his hard work.

After due consideration, the directors invited new member Macaw Engineering to nominate one of its people to fill the gap left by Tom as director (the treasurership has already passed to Dr Aidan O'Donoghue), and we are therefore delighted to announce that John Healy has agreed to accept the position. John joined Macaw Engineering recently to further expand its pipeline-integrity and corrosion-management services, particularly in the UK North

Sea, and has over 15 years experience in providing integrity services to the oil and gas industry, world-wide. For the last six years, John has represented PII as its integrity manager for clients, primarily in the Middle East but also in Western Europe.

John's recent project experience includes the development of a major long-term integrity-management programme for an offshore pipeline system in Middle East, together with a wide range of integrity projects covering many aspects of pipeline integrity management, such as the application of risk-based inspection for both on- and offshore pipelines, integrity consultancy, and fitness-for-purpose and remaining-life assessments following internal inspection for many on- and offshore pipelines, world-wide. We welcome John to the PPSA, and look forward to working with him. ●



The towing unit of a multi-diameter cleaning tool from PIT.

the international pipeline industry.

"Combining the special multi-diameter technologies owned by Pipecare with the expertise and experience NDT Systems & Services has in the field of advanced in-line inspection systems creates a range of exciting and effective inspection solutions for the pipeline operators," said Thomas Jung, the CEO of the new company. The products and technologies provided by PIT AG will be used for a comprehensive range of pipeline inspection services which PIT AG will offer through its strategic alliance partners NDT Systems & Services (*see below*) and **Tuboscope Pipeline Services (USA)**. "Our services, provided through our partner organizations, are directed towards enhancing efficiency and cost effectiveness with a full commitment to the success of our customers," Roger Vogel, the COO of PIT, said.

PIT will be headquartered at Stutensee, close to the German city of Karlsruhe. The close strategic alliance with NDT Systems & Services AG and Tuboscope will enable the company to use an established international network, combining a global presence with a local

Industry news

The multi-diameter specialist

PIT AG, Stutensee, has announced the start of its international operations: the company is now offering an advanced range of pipeline inspection technologies, including

products for multi-diameter application and special inspection requirements. The company has been established by its parents, **PipeCare AS** (Norway) and **NDT Systems & Services AG** (Germany) to create a platform to make technologies developed by or on behalf of PipeCare available to

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service from day 1. The company's product range now includes multi-diameter extra-high-resolution magnetic-flux leakage tools, opto-electronic laser-based inspection equipment, caliper and cleaning tools. ●

First 6in and 8in crack-detection tools for pipelines

NDT Systems & Services has introduced a further addition to its highly-successful range of *LineExplorer* in-line inspection tools. The tools, incorporating a new generation of electronics, make use of the company's proven modular design, and are available in crack, as well as metal-loss, inspection configurations.

The new *LineExplorer* tools are understood to be the first ever that offer crack-inspection capabilities for 6in and 8in pipelines. The new electronics and sensor carrier design also leads to a marked increase in the circumferential resolution for metal-loss and corrosion inspection compared to other in-line inspection tools on the market that use ultrasound technology. The new tools are now available, and will be used commercially in both configurations during the third and fourth quarters, 2005.

NDT Systems & Services is one of the leading providers of high-resolution in-line inspection tools. The company's product portfolio includes a full range of metal-loss and crack-inspection tools based on ultrasound technology, which are designed to provide unparalleled accuracy and

sensitivity. The design of the tools ensures that the full circumference of the pipe wall is inspected, and the wall thickness of a pipeline can be measured accurately. Internal, external and mid-wall flaws and defects can be detected and sized quantitatively. The *LineExplorer* range is currently available in three different configurations:

- wall-thickness configuration: used for metal-loss inspections, especially internal and external corrosion inspection. The tool can also detect and size mid-wall flaws such as laminations, and is available in sizes from 6 to 56in.
- crack-detection configuration: the tool is used for crack detection and sizing in pipelines, detecting problems such as fatigue cracks, stress-corrosion cracking, etc. A special crack configuration is available for the detection of circumferential cracks and crack-like flaws (such as girth weld inspection). It is available in sizes from 6 to 56in.
- combined tool: allows crack- and metal-loss inspection in a single run. The first operational size is 40in, and the configuration is available in sizes 20 to 56in. ●

Inpipe Products expands

SINCE THE take-over of this family run company in 2003, and now that **Inpipe** is part of a £30-million holding company, there has been a rapid growth in demand for its products and

services world-wide, with sales on target to double. Contributing factors to the expansion in business has also been the introduction of certified product training in 2004, an aggressive selling/marketing approach, and considerable re-investment.

The company's hire division has been introduced to the European market, and the appointment of new agents has also helped generate more business and enquiries world-wide.

The increased demand has seen new employment within the company, creating new positions in sales/engineering/works and senior management, and the formation of a completely new department devoted to business development and marketing. ●

Brenntag goes offshore with cleaning chemical

THE *N-Spec 50* dispersant / solvent developed by **Brenntag Oil & Gas** has recently been tested in Scandinavia for aquatic toxicity, biodegradation, and bioaccumulation in marine environments. These tests are universally accepted in the N Sea countries, and are recommended by the *Ospar* guidelines. Based on this test data, the chemical is classified in Norway as 'yellow', which means that it is an acceptable chemical for use offshore (the rating colours and their significance are: green and yellow are accepted; red is to be replaced after a certain period of time; and black is not allowed). Compared to other dispersants/solvents like xylene, diesel, and

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toluene, *N-Spec 50* is a preferred alternative thanks to the better environmental properties, and is designed to penetrate and remove organic deposits, such as paraffin and waxes in oil and gas applications; it has already been successfully applied in cleaning crude oil and gas pipelines, flowlines, and gas-lift wells.

The UK's Centre for Environment, Fisheries and Aquaculture Science has similarly approved the product for use in UK territorial waters, based on tests done according to the HOCNF (harmonized offshore chemical notification format) procedures, which are universally accepted by the N Sea countries.

Brenntag is a reputed solutions provider in the pipeline and system-cleaning industry. Its special expertise in handling fouled pipes, rail and road tankers, as well as amine, glycol, and heat-transfer units in refineries, has led the company to develop an innovative package of environmentally-friendly cleaning chemicals, together with supporting technology, under the *N-SPEC* brand-name. An important advantage of the company's products and services is that they allow pipeline operators to clean their lines on-line, without interrupting operations, thereby eliminating downtime and loss of production.

The chemical-cleaning method makes use of specially-formulated 'tensides' that emulsify pipeline sediments rather than scraping-out these residues with traditional mechanical devices. This technology has successfully removed paraffin, waxes, black

powder, hydrates, scales, sand, and metal scraps. The company's services include a technical-support team, cleaning chemicals, and a maintenance programme designed to meet the customer's specific needs.

Environmentally safe pipeline cleaning

Randy L Roberts (of N-SPEC Pipeline Services) and **Theo Verleun** (of Brenntag Oil & Gas Europe) write:

MONITORING pipelines for potential failures is of increasing importance but in-line inspection is far more effective when the pipe is properly clean. Time, deterioration and corrosion of the world's ageing pipeline infrastructure have served to increase the overall likelihood of pipeline failures, according to industry trends. The consequences of these pipeline failures can include environmental impact, worker and public safety issues, clean-up costs, unscheduled downtime due to repair(s) and maintenance costs. These possible threats are a concern among pipeline operators. Internal inspections, using various types of technical in-line inspection (ILI) tools or other integrity methods, are and will be in greater demand in our industry. World governments are putting into place pipeline integrity laws that regulate our business.

There are two types of pipeline cleaning programmes and the terminology used to describe them depends on whom you ask. The first type is referred to as 'mechanical cleaning' and is the one mostly-widely used. However,

cleanliness is relative: dry pigging only spreads the debris from the 6 o'clock position to 360° around the pipe wall. Even if more mechanical pigs are run, the solids such as black powder and iron compounds, and other organic and inorganic compounds can be broken-down to sub-micro particles, causing nuisance downstream. The more one runs mechanically-dry pigs, the smaller the particles become. If the solids are iron compounds (iron sulphides, iron carbonate, iron oxides, and the like), these particles and sub micro-particles will be pressed by the pig's disc and cups, at pipeline pressure, into any pipe wall anomalies and/or pitted areas, which may interfere with the magnetic-flux readability of actual pipe wall metal-loss areas.

The second type of pipeline cleaning, 'advanced liquid cleaning', is quickly becoming an industry standard. Liquid cleaning in conjunction with the use of mechanical pigs removes a greater volume of debris with fewer runs. Liquid cleaning, by definition, means the use of liquid cleaners mixed in a diluent (water, diesel, methanol, IPA, xylene) to form a cleaning solution pushed through a pipeline by mechanical pigs. There are various manufacturers of cleaners; a careful choice of designed pipeline cleaners should be based upon the following characteristics:

- a neutral pH
- permeating and penetrating capabilities
- original design parameters of the cleaner and its case histories



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Brenntag's advanced chemical cleaning agents are designed to provide a more-effective and environmentally-friendly solution than current chemical cleaners. ●

Inline moves

INLINE Services has moved into a new corporate office, which includes expanded manufacturing capability. The new address is: 27731 Commercial Park Rd, Tomball, Texas 77375, USA. The phone and email contacts are unchanged: tel: +1 713 973 0079, and glsmith@inlineplc.com. ●

Data-management software from Rosen

DATA-MANAGEMENT software from Rosen has been specifically designed for in-line inspection data results to provide a comprehensive look at the status of a pipeline asset. *ROSOFIT* is built on a highly-flexible framework that integrates several views of a pipeline's in-line inspection (ILI) data, including detailed inspection analysis, GIS, 3-D visualization and risk-management results. The most relevant information is provided on demand for the user to easily view and analyze. All applications are well supported through a context sensitive help system and experienced support personnel to help answer any questions.

The latest version of the software has several new advances to aid in pipeline-integrity management, and two new predictive techniques for corrosion growth future projection and rupture/leak

analysis have been incorporated. Both are designed to provide excellent assessment capabilities in determining which defects are most likely to fail and when. In addition, a new risk-management module has been included that builds upon the significance of defects and diagnosis results already provided by the program, and performs a risk assessment ultimately providing insight into the reliability of a particular pipeline section. ●

40-in high-resolution MFL inspection tools from China...

AFTER TWO years of cooperation and joint development with **Advantica, Pipeline Technologies Co of China** (PTC) has successfully introduced the first high-resolution MFL inspection tool in China. The tool is designed for in-line inspection of most 40-in diameter gas and liquid pipelines, both on- and offshore.

The new tool is designed and built to the highest level, using state-of-the-art technologies and its performance is intended to match (or exceed) the performance of similar tools which are already in the world marketplace. PTC has also developed data-analysis software to support the tool and which will provide pipeline operators with an inspection database and customized reports in a format that either complies with that recommended by the Pipeline Operator Forum (POF), or as specified by the customer. These reports, either paper or electronic, can be produced in any format as required.

An option to run the system with an inertial navigation system to provide 3-D mapping of the pipeline system is also available. ●

...and intelligent inspection pig test centre

WITH THE support of **Advantica, PTC** has invested in the design, development and construction of a multi-functional pull-through facility for testing intelligent inspection pigs. The facility is intended for comprehensive testing of newly-developed inspection tools of various sizes between 6 and 56in diameter. By the use of multi-accumulator hydraulic storage, the facility's winch unit is capable of pulling a pig at a range of speeds up to 10m/sec through a series of pipe spools.

The test spools used simulate pipeline features; there are also specially-developed calibration spools containing defects of specified sizes and shapes which have been machined into the wall of the pipes to simulate a wide range of corrosion defects. The purpose of the tests is to check the performance and functionality of the pigs and their dynamic response. In addition, simulated defect signals can be obtained for defect database development. ●

Precommissioning the Langeded line

THE Pipeline and Process Services Department of **Halliburton AS**, the Halliburton affiliate in Norway, has been awarded a contract for



Competence in

- high resolution in-line inspection using MFL, DMR, GEO technologies
- MFL scanner equipment for pipe and tank inspection



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precommissioning the Langede pipeline by **Statoil**. The 42 to 44in pipeline, which is 1,200km long, will provide gas from Ormen Lange in Western Norway to the United Kingdom.

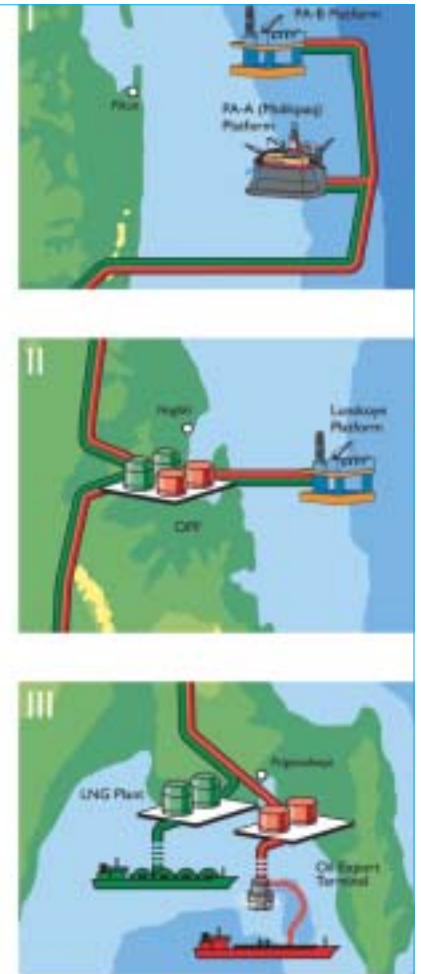
Engineering design work will begin this year with the precommissioning operation phase occurring in 2006 and 2007. The project consists of pigging, hydrostatic testing, dewatering, and drying the pipeline with work locations onshore in the UK and Norway and offshore both on the Sleipner platform and on vessels. The estimated value for this award is \$22 million.

The Ormen Lange development operator, **Hydro**, has contracted project execution of the Langede transport system to Statoil and the project organization is staffed with personnel from both Statoil and Hydro. ●

Sakhalin 2 precommissioning

THE CONTRACT for pipeline precommissioning services for the Sakhalin 2 project on Sakhalin Island, Russia, has been awarded to **WEUS Inc** by **Saipem UK Ltd**. Worth more than £2.3 million, the work started in 2004 and is scheduled for completion in 2006. WEUS Inc., based at Yuzhno in southern Sakhalin, is a licensed branch of a Moscow established company which is wholly-owned by **Weatherford**.

The workscope being carried out by Weatherford's Pipeline & Specialty Services (P&SS) group, includes project management, initial and final flooding, cleaning,



The Sakhalin project layout.

gauging, hydrostatic testing, integrity leak testing, dewatering, drying and dry-air packing of a variety of oil, gas, multi-phase and MEG pipelines at the Piltun, Lunskeya and Aniva Bay sites. Caliper geometric inspection of the pipelines will also be provided. The operations team will include some of the Russian technicians first trained and employed by Weatherford for the Blue Stream project.

The Sakhalin 2 project is a development of offshore oil and gasfields on the NE shelf of Sakhalin Island. Two production fields are associated with the

project: Piltun-Astokhshoye (PA) is an oilfield with associated gas, and Lunskeye (LUN) is a gasfield with associated condensate.

The Phase 1 development, comprising the PA-A platform and oil-export facilities, was installed in 1998 and production commenced in July, 1999. During the Phase 2 development, the PA-B and the LUN-A platforms will be installed together with infrastructure and facilities for export of oil and gas. Crude oil and stabilized condensate will be pumped together through a single onshore pipeline from the onshore processing facilities (OPF) to a



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new oil export terminal (OET) at Prigorodnoye. Gas from the OPF will be transported through a single onshore pipeline to a new liquefied natural gas (LNG) plant, near a new OET at Prigorodnoye. Stabilized oil will be transported through an offshore pipeline from the OET to a tanker loading unit (TLU) located offshore from Prigorodnoye. ●

GE joins PRCI

GE Energy's pipeline services group has joined the PRCI (**Pipeline Research Council International**) – a global network of energy-transmission companies – as one of the first intake of associate members in the organization's 52-year history. PRCI is the energy pipeline industry's leading, collaboratively-funded, technology-development organization. It identifies industry needs, including products and services and helps develop safe, reliable, environmentally-compatible and cost-effective solutions.

The 35 member PRCI is expanding its membership as the organization looks to sustain a \$15-million annual technology-development programme. "We are committed to expanding our resources to develop near-to-mid-term technological solutions to support the energy pipeline industry's continued success and also to address government regulations concerning pipeline safety," said PRCI President George Tenley. "Inviting GE to join PRCI is in line with our core mission, given GE's leadership in the pipeline-integrity and inspection-technology arenas." ●

The other newly-appointed associate members of the PRCI are **BJ Pipeline Services, Baker Hughes, Industrial Pipeline Solutions, Lincoln Electric, Rosen, Solar Turbines, Team Inc, Tenaris,** and **TD Williamson**, several of whom are also PPSA members. ●

NGKS awarded contract in Oman

NGKS has been awarded a contract by **Petroleum Development Oman (PDO)** to inspect around 2,500km of pipelines sized from 6-48in. Within the next three years NGKS will clean the lines and perform high-resolution MFL surveys. As part of the contract, NGKS will also supply detailed final reporting and its service and data-management software with enhanced data analysis capabilities. The contract execution will be supported by NGKS personnel and equipment from the Middle East base in Oman. ●

Magnetic mandrel pigs

HOUSTON-based Pigs Unlimited has recently introduced a new magnetic mandrel pig for ferrous debris and pig-indicator detection. With its radial placement of high-powered, specially-designed, magnets, the entire spool piece is transformed into a giant single magnet. The pig is said to be ideal for removing ferrous debris from a pipeline (including worn brush particles left by previous pig runs), as well as providing failsafe detection by magnetic pig indicators. Available

to fit in sizes of 4in and above, the company's magnet packs can be incorporated into any steel-pig style, including cup, disc, conical-cup and brush pigs, as well as existing models manufactured by others. ●

FTL's new MD...

APRIL saw big changes at **FTL Seals Technology**: Malcolm Harwood, who has been with the company for over 30 years, retired from full-time employment and Steve Smith has taken on the role of running the company. Steve has assumed the role of managing director and takes over the reins during a six-month transitional period. The remaining senior management team consists of: Bryan Wilkinson, financial director, Phil Todd, commercial director, and Tony Snowdon, marketing director. ●

...and brings in new bearing solutions

BEARING solutions for difficult sliding-element bushing applications is continuing to be an area of growth for **FTL Seals**. Any applications where there are problems with lubrication, high or low temperatures, or aggressive media, are perfect areas for which the company can provide solutions. With new legislation excluding the use of lead in bearings in many applications, the company can offer both its *Graphalloy* and *Glycodur* materials in lead-free alternatives; both materials are designed to be used in a wide range of applications. ●



Benefits of joining the Pigging Products & Services Association

Members receive:

- ☆ e-mail notification of technical enquiries and tender invitations received by the PPSA
- ☆ entries in the PPSA's Buyers' Guide and Directory, and on the PPSA's web site
 - ☆ free copies of *An introduction to pipeline pigging*
 - ☆ free access to the PPSA's database of pipeline pigging contacts
 - ☆ free technical information and problem-solving
- ☆ free copies of the PPSA Buyers' Guide and Directory and regular copies of *Pigging Industry News*
- ☆ **the opportunity to present papers and/or exhibit at PPSA seminars**
 - ☆ discounts at pipeline pigging conferences organized by *Pipeline World* and *Clarion Technical Conferences*

To join the PPSA, please fax back the form below.

Annual membership fees:

Full member: £890 plus £50 joining fee
 Associate member: £410 plus £50 joining fee
 Individual member: £140

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