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Pigging Industry News

the newsletter of the Pigging Products & Services Association

THE PRESIDENT'S LETTER By Mark Slaughter, Applus RTD, USA

First I'd like to take this opportunity to welcome our new PPSA members. As membership grows so does PPSA's knowledge base - a key resource that operators and others in the industry can draw upon. PPSA's technical enquiry service continues to be in great demand. By sending just one email to PPSA you can find the answer to a technical question or easily source pigging products and services across the world. Most often people receive the answer the same day.

The Buyers' Guide & Directory of Members 2015 has been published and mailed worldwide to over 8000 people all with an interest in the pigging industry. If you haven't received your complimentary copy and would like one please contact Diane Cordell at ppsa@ppsa-online.com.

As voted for by the PPSA members, PPSA will be attending and exhibiting at the Australian Pipelines and Gas (APGA)

Convention in October. It is PPSA's first time attending the APGA event and we look forward to telling the delegates 'down under' about our members and their work. Please visit us at stand 91 if you are there.

The PPSA annual seminar on 'Operational Pipeline Pigging' will be taking place on 18th November 2015 in Aberdeen, Scotland., with an evening reception on 17th in the exhibition area. This year's programme consists of 10 presentations on the subject of pigging and two of our members are running workshops at the seminar. There is also an exhibition and plenty of opportunities to network. For more details about the seminar, please visit www.ppsaonline.com/seminar.php.

Regarding the global pipeline industry, the drop in oil prices has negatively impacted through project cancellation or

October 2015



Full

Avrasya Teknoloji Muhendislik ve Inşaat As., Turkey

i2i Pipelines Ltd, UK

Associate KOTI-Dawson Ltd, UK

delays to infrastructure investment in some parts of the world. This has created some uncertainty in the pipeline industry. At the same time the level of public scrutiny for pipeline safety and new development projects is unprecedented.

While these opposing economic forces can be difficult for the petroleum and pipeline industries, it also creates an environment for change. In the US, for example, legislators are reviewing the possibility of allowing oil exports and streamlining LNG production. In addition, with the increased public scrutiny, companies that bring technology innovation to pipeline integrity will be rewarded.

SEMINAR 18 November 2015 ABERDEEN, UK PIGGING PRODUCTS & SERVICES ASSOCIATION

OPERATIONAL PIPELINE PIGGING SEMINAR

for Pipeline operators, contractors and engineers 18th November 2015

Pre-seminar evening reception and exhibition 17th November 2015



KEY THEMES:

- Operational pipeline
 cleaning
- Controlling internal corrosion
- New inspection techniques for onshore and offshore pipelines
- Inspecting challenging pipelines
- Decommissioning of unpiggable lines and platforms

Further details and online booking at: www.ppsa-online.com/seminar.php

Industry news

In-line inspection of non-piggable jetty pipelines - Mersin, Turkey

Project Overview

In August 2015 **3P Services** successfully completed the re-inspection of five jetty pipelines operated by **ATAŞ, Anadolu Tasfiyehanesi A.S.**

The pipelines in question are located at Mersin, Turkey and connect the terminal for petroleum products with the wharf area. The scope of work included pre-inspection cleaning and high-resolution in-line inspection of 3 x 12", 1 x 24" and 1 x 26" lines. These lines were constructed in the 1960s and run in parallel for a length of approximately 5km each.

Tool development, testing and inspection works were already performed by 3P Services in 2012. The target of the regular in-line inspection is to ensure safe operation in particular leakage prevention.



Launch of 24" MFL tool

The challenges

The main technical challenge associated with all these lines is the presence of several 90° mitred bends, typically having three cuts - $22.5^{\circ}/45^{\circ}/22.5^{\circ}$.

In addition, prior to the 2012 project, there were no facilities or chambers to launch or receive internal inspection tools.

Solution

All of the inspection tools deployed were custom made by 3P Services specifically for these pipelines. The sensor technologies deployed on board these tools are high resolution and include:

- Magnetic Flux Leakage (MFL) full internal and external metal loss inspection
- XYZ (Inertial Measurement Unit) generation of a vertical profile as well as Northing and Easting coordinates of the girth welds and other features of the pipeline

3P Services offered substantial advantages to the re-inspection project:

- The tools were proven in these pipelines in 2012 with verified results
- Lessons learned from 2012 were used to optimise project preparation and execution
- Direct comparisons of original and new inspection data sets

Conclusion

The inspection delivered high quality MFL data including geographic coordinates over the entire length and circumference of the pipelines to the integrity management for the second time.

ATAS is in the process of investigating a number of features, which will feed into their repair and reinspection planning.



PIGGING INDUSTRY NEWS

STATS Groups' fast-track delivery meets Middle East demand

STATS Group were recently retained by a major oil producer in Qatar to provide fast-track delivery of a high pressure isolation tool to facilitate safe and reliable isolation of a 24 inch pressurised gas line. With a verified double block and bleed isolation in place valve replacement and maintenance work was successfully carried out on the connected 16 inch production tee.

In line with the client's standard maintenance and safety procedures, a verified double block and bleed isolation is compulsory prior to valve replacement on a live system. Conventional repairs of this type would typically require the entire pipeline to be completely hydrocarbon free and nitrogen purged to enable a safe intervention. This approach adds extensive operational and procedural requirements which have significant time, environmental and cost implications.

After a detailed site survey and piggability assessment STATS proposed the use of a Remote Tecno PlugTM. In order to verify functionality for the offshore operations, all equipment was subject to a Factory Acceptance Testing programme at STATS Group head-quarters in Kintore, Aberdeenshire prior to delivery to Qatar. This fast-track project was engineered, risk assessed, assembled and mobilised within a two week window.

Once onsite, the Remote Tecno PlugTM was pigged with nitrogen from the launcher through two valves, passed the production tee and through three 90 degree bends to the set location. Once at location and hydraulically set, the Tecno PlugTM provides fail-safe and fully tested double block isolation against pipeline pressure and contents, ensuring a safe and reliable barrier prior to breaking containment.

During pigging operations the Remote Tecno Plug[™] was tracked and accurately positioned using throughwall communication. An extremely low frequency (ELF) radio control system sets and monitors the plug throughout the isolation. The remote control system provides a high degree of flexibility and eliminates the need for tethers or modified pig-trap doors.

Independent testing of each seal with full pipeline pressure confirmed leak-tight isolation and the pipeline was bled down to ambient from the platform launcher to the rear of the Tecno PlugTM. The annulus between the Tecno PlugTM seals was vented to ambient to create a zero-energy zone. After a twelve hour isolation stability hold period, an 'Isolation Certificate' was issued and the Tecno PlugTM was confirmed as providing double block isolation allowing the valve maintenance to commence. The Remote Tecno PlugTM remained isolating the pipeline for three days while the valve was replaced.

With maintenance work successfully completed, the Tecno PlugTM was used as a test boundary to perform a reinstatement pressure test. This was achieved by raising the pipeline pressure from the launcher side while the Tecno PlugTM remained in a fully 'set' condition. The reverse pressure test operation created a test boundary to confirm the newly installed valve. Finally the plug was unset and reverse-pigged back to the launcher for demobilisation.

This successful delivery demonstrates STATS' ability to provide safety critical isolation services that enable urgent maintenance activity to be completed, within schedule and with minimal production outage.



STATS field technicians with Remote Tecno Plug following successful valve changeout



Ultrasonic In-Line Inspection Services



Obtain precise, quantitative data about cracking in your pipeline.

Learn more >

Simultaneous isolations on a platform's 10-inch oil pipeline and 14-inch natural gas pipeline

Operating in the deepwater Gulf of Mexico presents technical challenges that make assuring structural integrity and safety highly complex, time-consuming, and expensive. That's why most offshore operators see even regularly scheduled maintenance activities as anything but routine.

For example, when an oil and gas exploration and production company prepared for the planned replacement of two flexible joints connecting two steel catenary risers to their tension leg platform 120 km (75 mi) off the coast of Louisiana, it could have chosen to bleed down and flood the entire pipeline a costly, time-consuming, and potentially hazardous endeavor. Instead, the operator contracted **T.D. Williamson** (TDW) to per form simultaneous isolations on the platform's 10-inch oil pipeline and 14-inch natural gas pipeline.

Jay Knudsen, TDW Project Manager, points out that as a result of the SmartPlug® double block and monitor isolations, only a very low volume of product needed to be evacuated before the inline joint



replacements, reducing the project turnaround and overall cost. Effective seals on the two pipelines helped safeguard workers by preventing hydrocarbons, vapors, or seawater from backing onto the work platform, Knudsen adds.

Pigging through an offshore pipeline system can be a high-risk operation. But with proper planning, engineering, and execution, risks can be mitigated.

In this case, TDW assured the efficacy of its tools and ensured that the isolation operations would achieve first-time run success—by performing communication and pull-tests in a test rig that replicated the platform's risers.

In order to execute the isolations, the SmartPlug tools were launched into both the 10- and 14-inch pipelines and monitored by the through-wall SmartTrack[™] pig tracking system.

The 10-inch oil pipeline was first isolated using a combination of high friction and high sealing pigs that travelled a total distance of 84 m (276 ft). After the pipeline section was depressurized, it was partially lifted out of the seawater to allow access to the flexible joint. Once the new joint was in place, the pipeline was re-pressurized. The SmartPlug tool was then lowered by cable into the riser—below the new flexible joint—where it was used, along with a ported blind flange, to create an isolation barrier for hydrotesting the new welds.

The 14-inch natural gas line isolation followed a similar, yet more intricate, course: A three-module SmartPlug tool travelled a total distance of 72 m (250 ft) to perform a DNV GL-certified, double block and monitor isolation and provide an additional barrier to enable a hydrotest after the flexible joint was replaced.

What made the isolation tool's journey more complex was the fact that it had to pass through the platform's inline check valve on its way through the pipeline. In order to assure that the check valve could accept the tool, TDW recommended that the line first be inspected using a high resolution deformation inspection tool. The inline inspection (ILI) data was utilized in the SmartPlug tool piggability report during the engineering phase, giving both TDW and the client the confidence that the tool would make it through the check valve and that the project could be performed successfully.

Jee Ltd's span assessment expertise delivers significant savings to the oil and gas industry

Jee Ltd, a leading multi-disciple subsea engineering and training firm, has completed more than a thousand specialist span assessments already this year, delivering major cost-savings by avoiding remediation work.

Graham Wilson, Head of Late Life at Jee Limited, said: "Pipeline spans are formed due to an uneven seabed, scour or sandwaves, and can cause integrity issues with potential catastrophic and costly results. These spans can be susceptible to failure through fatigue and, as span length increases, the risk of fatigue damage due to direct wave loading or vortex -induced vibrations (VIV) also increases."

Jee's engineering team boasts a proven track-record for providing pipeline span assessment to the global oil and gas industry, with systems in place to run span analysis quickly and accurately.

Mr Wilson continued: "We have an in-depth understanding of the codes and standards and appreciate their limitations, allowing us to effectively challenge them without adversely affecting safety. By doing so we can remove conservatism and increase the allowable span length, minimising the remediation work required which can lead to expensive operations and potentially create new issues.

"When intervention work is necessary, we are pragmatic in our approach and ensure offshore vessel time and activities are optimised to maintain economical operations."

In addition, Jee has developed an innovative span monitoring kit which monitors the motion of spans and the associated environmental conditions. The data collected can be used to prove that VIV isn't occurring when predicted by the design codes, removing the need for costly corrective work. Alternatively, the kit allows the occurrence of VIV to be detected, providing supporting evidence of the need for intervention (the kit can also be used to provide assurance that remediation measures are having the desired effect).



Jee span monitoring kit



Pipeline span formed due to an uneven seabed, scour or sandwaves



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Contact PPSA members to answer your questions about pigging and pipeline integrity at ppsa@ppsa-online.com



PIPELINE PIGGING AND MAINTENANCE EQUIPMENT

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New pigging polyurethanes are supertough, ultra-stable and easy to process

Working closely with pipeline pig manufacturers, **Innovative Polymers** is formulating next-generation liquid polyurethanes designed for processing at lowertemperatures than conventional methylene diphenyl diisocyanate (MDI) ester-based systems. These new products are also high-stability materials that resist crystallization during shipping and storage. Field testing demonstrates that the tough new polyurethanes can more than double the service life of cups and discs for metal mandrel pipeline cleaning pigs used by companies involved in the natural gas and oil-field services industry.

The most recent additions to the Inno-Tuf[®] MDI ester -based polyurethanes family, including HP-1086A, are pourable at 100°F (39°C), eliminating the need for expensive, temperature-controlled metering equipment. The polymers are ideal for use with rapid, low-cost tooling that provides for economical production of molds for the broad variety of sizes and contours needed for natural gas and oil-field pigs and other components.

After curing in the mold for an hour, Inno-Tuf parts can be demolded and post-cured in an oven for four hours at 150°F (66°C). Cured cups and discs exhibit excellent dimensional and UV stability. The parts offer outstanding wear/cut/gouge and abrasion resistance and are virtually unaffected by exposure to oil and chemicals. With this combination of characteristics, pigs molded with the Innovative Polymers advanced polyurethanes maintain a reliable seal inside pipelines from 6 to 42 inches in diameter and lengths of 60 miles or more. For special applications, the polymers can be supplied with an additive package containing moisture scavengers, antioxidants and custom pigments. Alternative hardeners are also available to alter the standard Shore 85A hardness featured for most Inno-Tuf pigging materials.

Innovative Polymers' tough new polyurethanes are ideal for pig manufacturers seeking to improve product reliability and simplify processing.



Innovative Polymers' advanced polyurethanes

An industry standard has a new home with an industry leader

Pigs Unlimited International, Inc. is pleased to announce that they have acquired the original Flex-I-Pig molds from **Greene's Energy Group**.

The Flex-I-Pig was initially designed to be used for coating, but has also proved to be a very effective utility pig. With its superior sealing capabilities and wear characteristics, the Flex-I-Pig can be used for batching, cleaning, coating, and de-watering applications in sizes from 2" to 36". This unique and effective pig design has become a standard in the industry. This acquisition will allow Pigs Unlimited to provide the industry leading Flex-I-Pigs, without compromising our industry leading production times.



Pigs Unlimited International Ltd acquires Flex-I-Pig Mold



ROSEN Group wins ASME Global Pipeline Award 2015

ROSEN Group has won this year's prestigious **ASME Global Pipeline Award**. The trophy was handed to Hermann Rosen, President and CEO of the ROSEN Group during an award ceremony at the Rio Pipeline Conference held in Rio September 22nd to 24th.

ROSEN received first prize amongst a group of 17 contenders for their innovative Pipe Grade Determination Service. This novel service is the first of its kind utilizing a new generation of In-line Inspection tools to determine material specifications of operational pipelines including yield strength and ultimate tensile strength. The benefit of the service for operators is the ability to document the actual pipe grade of their operating systems. Precise knowledge material specifications is also essential for integrity assessment purposes.

The Global Pipeline Award is awarded annually by the Pipeline Division of the American Society of Mechanical Engineers (ASME) and presented during the Rio Pipeline Conference and the International Pipeline Conference in Calgary. The prize is awarded for an outstanding contributions, including research and development, products and services in the field of pipeline engineering.



Hermann Rosen receives ASME Global Pipeline Award in Rio

TDW replaces shut down valves on production platform, West Africa

Performing maintenance or repair on a live crude export pipeline can be a daunting task. The steps – from product removal and depressurizing to flooding and then de-watering the line – can be risky, costly, and complicated.

During the recent replacement of two emergency shutdown valves (ESDVs) on one of its production platforms offshore West Africa, the operator, an independent Anglo-French oil and gas company, not only avoided those difficulties, but also maintained production and ensured increased safety through topside pipeline isolation for both valves. The operation on two 8-inch and 12-inch incoming risers integrated multiple isolation methods, including industrystandard double block and bleed technology.

To isolate the 8-inch riser, a single position STOPPLE® plugging system with bypass was set through a three-way spool. The 12-inch riser was similarly isolated via a three-way spool, complete with bypass, but this setup allowed for use of a STOPPLE Train system, which provided the additional safety of double block and bleed capability.

The double block and bleed technology provided by **T.D. Williamson (TDW)** allows two independent seals to enter the pipeline through a single hot tap opening, reducing the total number of fittings and hot taps required. A bleed port between the two seals then allows for pressure and product evacuation, which means workers performing welding or pipe cutting downstream are separated from the line's pressurized contents.

Due to the limited amount of workspace on the platform, the isolation equipment had to be positioned directly below the ESDVs through a complex network of scaffolding and lifting tools. The location of the valves meant that, ultimately, all equipment was operated while positioned horizontally near the surface of the water, just a few meters from the splash zone.



IK-UK Ltd introduces ATEX compliant pigs

IK-UK Ltd, an **IK-Group** company, has announced the introduction of utility pipeline pigs compliant with the latest European ATEX Directive, 2014/34/EU, to add to its growing portfolio of in-house manufactured products.

These pigs are classified Group II, Category 2G and fully complement the ATEX pig transmitters and other equipment manufactured by sister IK-Group company **Online Electronics Ltd (OEL).** On satisfactory completion of design, manufacture and testing each pig is supplied CE marked in accordance with the Directive and displaying the appropriate Ex code. In addition to meeting the Technical File requirements of the Directive, a full documentation package is included which includes a Declaration of Conformity and instructions for safe use.

Using current harmonised European Norms, this specialist range of pigs has been developed by IK-UK's R&D team to assist clients towards meeting their own compliance requirements. ATEX compliant pigs can now be specified and manufactured for similar applications by other users.

Pigging Products



IK design and manufacture in-house solutions to your pigging challenges for either standard products in new applications, operational changes in pigging activities or special "one-off" solutions to resolve your immediate needs.

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An IK-UK ATEX Pig fitted with an ATEX Online Transmitter'

Pipeline inspection at \$40 pb...... Think simple !

Simple, low cost inspection solutions for pipeline pigging operations are going to take centre stage in the pipeline services industry over the next few years. Oil companies and pipeline operators are facing increasing pressure to reduce operational costs and increase value as the financial squeeze due to the low price of oil takes hold. However, pipeline inspection activity needs to remain high as maintaining existing, ageing, infrastructure will become more important as investment in new fields are put on hold in this challenging economic climate.

Developing innovative, low cost in-line inspection solutions to the pipeline industry does not mean dropping the high standards expected by operators and regulatory bodies, quite the opposite in fact. A new generation of utility inspection pigs, with a focus on simple operational design and advanced data collection are going above and beyond the capabilities of existing in-line inspection tools.

i2i Pipelines Ltd is a sensor technology company that is pioneering the integration of advanced sensors into simple in-line utility tools for the frequent and low cost inspection of oil and gas pipelines. i2i's new generation of Discovery Smart Utility Pigs® are designed for ease of operation, high frequency deployments, with zero impact on production operations. Discovery pigs collect data on internal corrosion and cracking, provide P V T profiles along the length of the pipeline and the composition of in-line products.

Discovery Smart Utility pigs include a range of hybrid / foam pigs as well as mandrel style pigs, which can be deployed depending on the pipeline or application. Key advantages are summarised as:

- They require no special preparation, calibration launch / receive facilities or personnel to be onsite prior to deployment.
- No prior cleaning is required, they can inspect through debris and scale.
- All Discovery tools are designed for complex geometry lines and min 1.5D bends.
- Discovery foam pigs can inspect multi-diameter lines and negotiate partial blockages.
- They inspect for internal corrosion and cracking in all mediums up to 8 m/s, 240 bar (3500psi) and temps of up to 70° C.
- Pipe sizes ranging from 4 48" can be inspected.
- Discovery pigs do not require encoders or odometers but use a proprietary feature mapping system to record the location of defects.
- i2i's proprietary Pipeception signal recognition software is cloud based and carries out autonomous data analysis and reporting within hours of pig recovery and data upload.

The new financial climate will drive innovation and change across all disciplines within the oil and gas industry over the next few years and pipeline pigging technology will be no exception. In-line inspection will evolve from a high cost, infrequent activity to a frequent, big data, low cost activity that will improve pipeline safety and integrity into the future.



Discovery hybrid / foam pig. A fully capable inspection pig that offers significant value. The internal pressure housing containing the electronics can be swapped between different sized sensor heads.



Discovery Smart pig. Deploys and looks as a traditional cleaning pig with embedded inspection sensors detecting internal

CDI expansion complete

By 2014, CDI was well established for their innovative products, quality, on-site manufacturing and efficient distribution. But to take the company to the next level, a training area was needed where customers and resellers could learn how to make full use of their new feature-rich devices.

Thus, the *Tony Farqué Conference and Learning Center* was born. Named in honor of CDI's president and founder, it is a spacious (800 sq ft) facility accommodating 25 students at a time and is complete with all the amenities one would expect of a corporate classroom, but it's what goes on inside that makes it unique. Attendees can network while they receive first-hand exposure to CDI's land and subsea tracking and passage detection equipment, time-based benchmarkers, and electromagnetic transmitters. With this training, equipment can be utilized to its fullest ability.

Students learn industry best practices, how to record pipeline pig passage, how to benchmark an inline inspection tool, and how to pinpoint a stuck pig. Because even in an age of instant electronic information,

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PIGGING INDUSTRY NEWS

some things are still best learned hands-on. In addition, CDI application engineers are readily available for the most challenging questions.

One of their most popular courses is on the new TRAXALL 770, a feature-rich, hand-held receiver that not only tracks, locates, and pinpoints pigs and MFL inline inspections tools, but has built-in GPS and Bluetooth.



CDI's Tony Farqué Conference and Learning Center

TD Williamson decommissions offshore pipeline

There are no shortcuts when it comes to decommissioning and abandoning offshore production platforms. The process is time-consuming, costly, and involves meeting stringent regulatory requirements.

But what if offshore operators could reduce the risk of leaks when isolating the pipelines that feed into the platform? That would help them reduce environmental concerns, aid in regulatory compliance, and increase operational safety.

Those were the benefits **Discovery Producer Services LLC**, an American natural gas midstream service provider operated by **Williams**, realized when they decommissioned and abandoned a pipeline tied into production facilities in the South Timbalier area offshore Louisiana. The project, located at a depth of 43 m (140 ft), included cutting and capping an 18-inch gathering line – part of a looped system being tied into another platform – without disrupting production.

As it would ultimately feed into another pipeline system, the 18-inch line was to remain pressurized and protected from seawater ingress throughout the cutting and capping operation. To accomplish these goals, **Williams** chose to isolate the line using STOPPLE® Train technology – a double block and bleed isolation system from pipeline service company **T.D. Williamson**.

The STOPPLE Train isolation provides a number of benefits:

- Reduced cost: fewer fittings, less time on-site, higher first-time success
- Reduced risk: fewer hot taps and welds (requires only one entry point)
- Increased safety: two independent seals and bleed port
- Ensured environmental stewardship: no product release

In contrast to traditional double block and bleed isolations requiring two hot taps and two fittings, the STOPPLE Train system provides two independent plugging seals inserted through a single hot tap entry – in this case, through a mechanical clamp and permanent ball valve. Less equipment affixed to a line and fewer tapped openings mean a reduction in cost and risk, particularly when working with divers subsea.

To further reduce risk to personnel and the environment, this double block and bleed method utilizes a bleed port between the two seals.



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PII Pipeline Solutions' next generation MagneScanTM hits 1,000 successful runs

PII Pipeline Solutions (PII) recently celebrated 1000 successful pipeline inspection runs of its Next Generation MagneScanTM inspection tool for assessing metal loss features, deformation and geometry plus advanced integrity assessments in oil and gas pipelines. Using high resolution Magnetic Flux Leakage technology (MFL), PII's signature inspection system has distilled and enhanced the capability of all multiple legacy MFL, caliper and inertial measurement unit (IMU) mapping systems into a single system, reducing the number of runs required to meet a specification.

"1000 runs is a major milestone for a product that PII has developed from vison to reality and is now proven and continues to gain market share," said Martin Bluck, Magnetics Product Manager at PII. "Every year we are serving more customers with more runs and delivering more reports. Next Generation MagneScan[™] is a robust and accurate inspection tool that delivers a level of verification accuracy that sets new standards within the industry and ensures safety and peace of mind for our customers."

Launched in 2009, Next Generation MagneScanTM has delivered over six years of year over year growth in numbers of runs. This super-high resolution, multi mission tool has provided increasingly high levels of first run success and reliability to customers on six continents, with proven performance, offering a higher specification of data than previously available from a single run. Next Generation MagneScanTM tools have completed 50,000+km of inspections in pipelines from 6" to 36" with a longest run of 560km since launch, and achieved 95% first run success in 2013, 2014 and to date in 2015 at time of publication.

A major part of Next Generation MagneScan'sTM success has come from the inherent system capability to deliver excellent performance on dig verification, coupled with PII's focus on evolving the service in response to customer issues and tailoring new offer-

ings to meet the customer's needs. In order to make each inspection commercially flexible and costeffective for the customer while maintaining excellent metrics, the Next Generation MagneScan[™] tool is run in a standard configuration, with data processed, analysed and reported as required to comply with the customers' specific requirements. This allows customers to choose combinations of data from MFL, caliper or IMU at a range of resolutions from High Resolution, to Super High Resolution Plus, Because data is recorded from each module at maximum resolution, the client has the option of revisiting the data up to Super High Resolution Plus without the need for an additional run. In 2013 and 2014, 70% of runs included mapping and 49% of reports were delivered at Super High Res specification or higher.

From Next Generation MagneScan's[™] first run, PII worked with its customers to gather dig verification data to validate and improve published specifications, and to develop new improved specifications to address specific customer concerns. Feedback from blind test programs conducted by major customers around the world has been a key enabler to develop and validate these new applications, the results of which have been subsequently published in technical papers.



PII's Next Generation MagneScanTM



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STATS consolidates position as leader in Emergency Pipeline Repair Systems

STATS Group has consolidated its reputation in the Emergency Pipeline Repair System (EPRS) market with an award in excess of \$10 million (£6.5 million) for a ten year contract by a major LNG operator in the Middle East.

The EPRS and pre-planned isolation contract follows the completion of a similar multi-million pound contract on behalf of the world's largest LNG producer **Qatargas**.

STATS Group will design, manufacture and test pipeline isolation and intervention equipment for a range of pipeline sizes from 16" to 38".

The equipment will be stored in Qatar in a state of readiness, for pre-planned and emergency situations, at the client's offshore gas production facilities located in Qatar's North Field and onshore LNG plant at Ras Laffan industrial city.

The contract includes the supply of double block and bleed isolation tools including Remote Tecno Plugs[™] from 16" to 38", subsea monitoring and communication systems and 32" and 38" BISEP[™] intervention tools and hot tapping equipment. The installation of the isolation and intervention tooling suites will provide positive isolation at the required location and a safe environment to carry out quick and effective repair on subsea and onshore pipelines in the event of a damage incident.

STATS' Middle East regional director, Angus Bowie, said the company was now well established as a



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An international trade association serving the pipeline industry

global leader in EPRS development and implementation.

Mr Bowie said: "Our focus on establishing our credentials in the Middle East EPRS sector has paid off and our original contract with Qatargas has now been followed with this significant award by another major operator in the Middle East. STATS' ability to tailor the mature isolation technology to meet client expectations has allowed the EPRS systems to accommodate complex operations while maintaining the core well proven fail-safe features.



Tecno Plug and BISEP isolate pipeline damage while production continues through bypass.

"Our technologies are all designed, manufactured and tested in-house and have become the industry standard for some of the leading operators in the Middle East who require peace of mind when being able to respond to pipeline integrity and repair issues.

STATS Middle East business development manager, Vikas Shangari, added: "STATS has executed in excess of 40 isolation projects in the Middle East, ranging from 2" to 48" on oil, gas and utility pipeline systems.