



Pigging Industry News

the newsletter of the Pigging Products & Services Association

THE PRESIDENT'S LETTER

By Chuck Harris, T.D. Williamson, USA

We are excited to announce that the new PPSA website has launched! Our site has been updated with a more modern look and feel, is more intuitive, and information is more readily accessible. You can access the new site at the usual address: www.ppsa-online.com. Please take the opportunity to peruse and let us know what you think. Feedback can be sent directly to Diane at diane@ppsa-online.com. The PPSA is also working on other online tools that will create value for its members and the industry alike. We look forward to future communications about these exciting web-based educational activities.

Our Member Directory & Buyers' Guide has also been updated and sent out in our worldwide mailing. Contact Diane if you would like a complimentary copy sent to you.

PPSA continues to be actively involved and engaged in the industry. This past June we exhibited at the Unpigging Pipelines Solutions Forum organized by Clarion and Tiratsoo Technical. Sessions included innovations in utility pigging, challenging inspection projects, new and emerging technologies, and others. Thank you to our technical adviser Mark Elliott for manning the exhibition and to John Tiratsoo and BJ Lowe for putting on another great event.

As I mentioned in our June newsletter the PPSA is exploring options to better engage young pipeline professionals.

In late September we had the opportunity to do exactly that when the Young Pipeline Professionals (YPP) USA held its first symposium in The Woodlands, TX., USA. This was an opportunity for young professionals to learn from industry leaders, network with peers, gain broader understanding of the pipeline industry, connect with other energy sector organizations, and prepare to accept the duty and care of the pipeline industry. The agenda was filled with excellent topics and speakers such as Alan Mayberry, Associate Administrator for Policy and Programs, Office of Pipeline Safety; Andy Drake, Vice President - Operations and EHS, Enbridge; Mark L. Hereth, Principal, P-PIC, and many others. This first event sold out completely with over 100 young professionals in attendance, and PPSA was honored to invest in the future of the next generation of leaders.

I do also want to remind everyone that PPSA will be holding its annual pigging seminar in Aberdeen, UK on

NEW Members

Individual

**Siavash M. Pirsiavash,
Sultanate of Oman**

November 8th. Ten technical papers will be presented, along with an exhibition and pre-seminar evening reception. Please see www.ppsa-online.com/seminar for more details.



Molly Laughlin - YPP, USA Chair



PIGGING PRODUCTS & SERVICES ASSOCIATION

Commissioning and Operational Pipeline Pigging Seminar

Pigging tutorials and annual seminar
7th / 8th November 2017
Aberdeen, UK

for Operators, Contractors and Engineers

www.ppsa-online.com

3X Engineering repairs 70m depth line

In August 2017 3X ENGINEERING (3X) and its local distributor TAVANA sealed 2 cracks and reinforced the pipe integrity at a 70m depth for their client. The pipeline is a 32" diameter gas line in the Middle East. There were two defects in the pipeline – a leaking crack and a non-leaking crack. The pipeline has a maximum operating temperature of 20°C and operating pressure of 1160 psi (80 bar).

According to ASME PCC-2 and 3X repair calculations, it was decided to make 2 different repairs. Eighty-eight composite layers of REINFORCEKIT 4D SUBSEA (R4D-S) product were determined to repair the external crack with through wall section and 20 layers for the non-opened crack. Underwater, several preliminary operations were performed prior to surface preparation to get a good surface roughness. 3X wrapping reinforcements were performed following several stages. It is important to note that working at 70-meter depth requires saturation dive.

1. For both defects, F3XUW9 filler was applicated to fill the cracks and reshape the pipe geometry.
2. P3X32 primer was applied under the composite plates and over the damaged areas (previously delimited on the pipe) to ensure good bonding.
3. Composite plates application on both defects recovered with F3XSS filler and strongly maintained with ratchet belts for curing.
4. P3X32 primer was applied on the whole surface of the repair before wrapping.
5. Kevlar® tape pre-impregnated with R3X1050-S resin (using special devices developed by 3X) was wrapped around the pipe as calculate above.

The pipeline was repressurized a few days after repair without any problems. This job was a challenge because of the 70m depth. 3X is experienced in subsea repairs but this was the first performed at this depth.



BOBIPREG - 3X specific machine for Kevlar® tape impregnation ●

The importance of river-bottom profiles for pipeline integrity management

When conducting ongoing pipeline integrity management programs, it is vital for operators to have access to as much information regarding potential corrosive activity on their pipeline as possible. The data provided from river-bottom profiles (RBP) offers a more in-depth look at anomalies in a pipeline that occurred because of corrosion.

An ultrasonic inline inspection (ILI) reliably detects and sizes corrosion anomalies in pipelines. The recorded ultrasonic technology (UT) inspection data provides a solid basis for a RBP, as this data directly extracts into a RBP. RBPs, i.e. the plot of remaining wall thickness versus distance, provides a detailed description of the actual shape of a corrosion anomaly (see image), at an axial resolution down to 0.75 mm. In contrast, magnetic flux leakage (MFL) data does not typically offer such detailed data, nor the same data accuracy.

Following an inspection run, NDT Global's experienced data analysis team analyzes the recorded inspection data to detect, classify and size anomalies. For metal loss anomalies, this sizing procedure determines:

- The peak depth of the anomaly present
- Minimum remaining wall thickness
- Total length of the anomaly

Corrosion that goes unchecked leads to potentially calamitous impacts on an operator's integrity management program, which underlines the integral role that accurate data – such as the data provided by high-resolution ultrasonic ILI tools – plays in a proactive pipeline management program. The proliferation of RBP comparisons increases the accessibility of accurate data regarding the presence and location of corrosion. Knowing the presence of corrosion in their pipelines, as well as the growth rate of such defects, enables pipeline operators to proactively and intelligently plan their maintenance, operate their pipelines and manage costs, all of which greatly aid long-term planning and safety. ●



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