CANADA'S OIL AND GAS SAFETY MAGAZINE

PIPELINE

FALL 2014

ON STABLE GROUND

Understanding the ABCs (and Ds) of fall protection

BEYOND TIRED

Guidelines target fatigue in the oil and gas sector

TAKING STOCK

Pipeline assessments crucial in the technological era

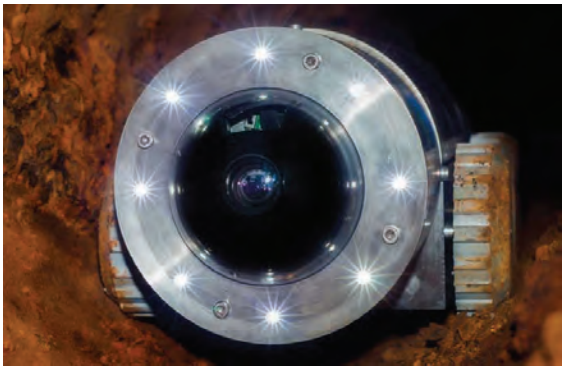
THE AFTERMATH

Moving past Lac-Mégantic

INSPECT before the UNEXPECTED

By Alyscia Sutch

With the pipeline industry booming and the technological era amidst us, it's best to keep up with the latest advances. Design and development engineers are at the forefront of non-destructive testing, CCTV and acoustic technologies that provide pipeline assessment, inspection and non-invasive rehabilitation solutions to renew pipes in place without removing the existing system. Together, regular assessment and rehabilitation helps to ensure pipe systems are functioning efficiently and safely.



Pipeline assessment, inspection and rehabilitation is ideal for those who want to be proactive and find the best way to prioritize for renewing systems and managing assets, while ensuring the health and safety of workers, as well as the general public. Pipelines span for miles and are constantly working to deliver natural resources to homes and businesses across the globe. Mismanaging a system can come with many repercussions, and ignoring the current state of pipelines is not an option.

This is where assessment, inspection and rehabili-

tation solutions come into play. On the inspection and assessment side, you can investigate pipe wall conditions, material validation, sediment issues, blockages, contamination and quality issues, and life expectancy of the pipe. With rehabilitation, if something interferes with the performance of the system, the option of renewing the existing system without digging or destruction is available.

An example of an assessment and inspection device is the Investigator Gas by JD7, commercially launched in 2013. The device can be inserted into live gas pipelines and incorporates not only high-resolution CCTV camera sensors, but also a highly sensitive hydrophone and high-powered sonar system. The hydrophone is used for precise leak detection and pinpointing purposes that are sensitive enough to detect the smallest of leaks within low-pressure gas distribution systems. Full leakage acoustic signatures can be displayed graphically, and with HD CCTV live images, the operator can validate the full survey.

Northern Gas Networks in the U.K. has had great success utilizing the JD7 Investigator Gas system, which has found at least one leak in 77 per cent of insertions. This proves that pipeline operations cannot be ignored.

Another system compatible with gas pipelines, as well as with water and industrial applications, is the JD7 Voyager. Capable of passing through small access points and navigating harsh environments, the Voyager has a long-range capability of one kilometre or five kilometres, depending on whether it is tethered or untethered. The Voyager offers fully automated reporting software with 3D imagery and full high-resolution laser profiling technology.

When a system is in need of repair for any number of reasons, including corrosion and pinhole leaks, Nu Line epoxy barrier coating is available to rehabilitate the system in place.

These coatings can be applied through existing access points, like the inspection devices. The process provides a strong barrier coating inside pressurized pipe systems with diameters ranging from 1/2" to 12." Epoxy lining is a long-term, preventative solution to leaks, breaks, blockages and erosion, and it maintains flow.

By developing a comprehensive plan with pipeline assessment and inspection technologies to ensure optimal performance, pipeline and utilities companies can rest assured that their systems are performing their best.

Alyscia Sutch works in marketing and PR for Aquam and Nu Flow.
Follow us on Twitter @PipelineOHS

Pipeline Assessment Technology Benefits

- Life expectancy through true measurements
- Leak detection (water and gas)
- Main renewal prioritization
- Justification and certification of fire mains
- GPS tracking and plotting
- Live video feed
- Location of services, defects and restrictions
- Accurate GIS mapping
- Material validation