

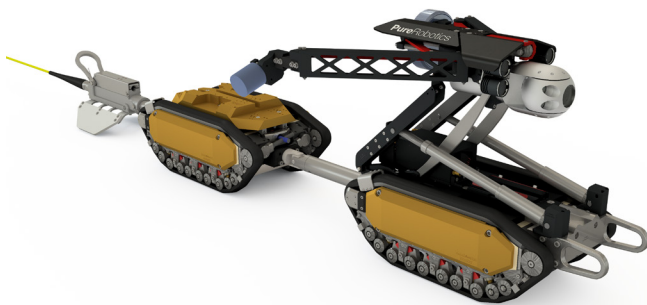
PureRobotics®

TETHERED ROBOTIC PIPELINE CONDITION ASSESSMENT PLATFORM

The PureRobotics® platform is a modular, multi-sensor condition assessment tool for depressurized water pipelines. Using accurate electromagnetic and other sensor data paired with live video, this platform provides utility owners with comprehensive pipe wall condition data used to make rehabilitation and management decisions on a pipe-by-pipe basis.

Why Choose PureRobotics?

- Tethered and fully controlled to ensure data quality and reliable extraction
- Accurately pinpoints areas of pipe wall distress in metallic and concrete pressure pipe
- Modular for quick and easy inspections using common and available access ports, without dewatering
- Easily equipped with additional sensors to map and profile a pipeline's internal geometry



PureRobotics

BY THE NUMBERS



600+

Miles of pipeline inspection data



10+

Years of experience across North America



5,000+

Damaged pipes identified

What You Can Expect

Many buried assets are replaced based on age, yet much of this costly spending is wasted replacing pipes with significant remaining useful life. The PureRobotics platform leverages more than a decade of inspection experience to reliably streamline pipe wall data collection. It provides pipeline owners with powerful insights that help prioritize investment in the pipes that need it most. With data visibility and interpretation, utilities can proactively manage their assets with greater confidence, reducing the risk of dangerous and expensive failures and unplanned operational expenses.



Operational Excellence

No other technology can provide the quantification and pinpoint location accuracy of the PureRobotics platform coupled with its ease of deployment. The robotic crawler's modular design accommodates an array of sensors that document the condition of internal pipe lining, joints, and connections while pinpointing areas of distress. Being unmanned, it is a significantly safer solution for inspecting critical pipelines. The platform can be used in dewatered pipes or while submerged in depressurized water pipelines. Traveling at a speed of up to 82 feet per minute (25 m/min), quick and accurate results accommodate repairs during the same pipeline shutdown. The PureRobotics platform can inspect nearly two miles (3 km) from a single access point across a wide range of pipeline diameters – from 16 inches (400 mm) to over 120 inches (3000 mm).

Delivery Experience

With over a decade of robotics experience, Xylem has collected more than 600 miles (966 km) of data from pipeline inspections around the world. This operational experience ensures quality project management and professional inspection delivery.

Actionable Information

The PureRobotics platform contributes to a complete proactive pipeline management program by providing utilities with actionable information for decision making. The tool delivers accurate pipe wall condition data, identifying and locating defects to inform short- and long-term asset management strategy. Data exported to a geographic information system (GIS) enables at-a-glance pipeline visualizations.

Get More from Xylem

Xylem is a world leader in the inspection of water and wastewater pressure pipelines and leverages a large database of comparable results to calculate remaining useful life and better understand the structural integrity of these assets. Complement the pipe wall condition data collected using PureRobotics with leak detection and long-term asset monitoring. Xylem's **SmartBall*** and **Sahara*** tools can identify leaks and gas pockets in pressurized pipelines without disrupting service. For continuous, remote monitoring of Prestressed Concrete Cylinder Pipe (PCCP), Xylem's **SoundPrint* Acoustic Fiber Optic (AFO)** platform detects and locates wire breaks to prevent pipe failure.

Related Case Studies

Louisville Water Company (LWC), Kentucky, United States

Project highlights

- Inspection of a 3.4-mile (5.5-km) PCCP water transmission main with the PureRobotics platform
- Electromagnetic data identified 17 anomalies warranting further investigation
- High-definition closed-circuit television (CCTV) identified longitudinal cracks consistent with overloading
- Inspection data informed LWC's rehabilitation program, enabling the utility to target only the pipes that needed attention while saving precious capital dollars

[Read the full case study](#)

City of Saint John, New Brunswick, Canada

Project highlights

- Inspection of a 5-mile (8.2-km) PCCP raw water transmission main spanning 1,732 pipes
- The PureRobotics platform identified 20 pipes with broken wire wraps, including three newly distressed since the initial baseline inspection conducted five years prior
- The City of Saint John now has actionable pipeline condition data

[Read the full case study](#)

For more information on how we can help you, contact us at: puretech@xylem.com



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