Condition Assessment of Pipeline Systems within Power Generating Plants

Many cities depend on safe, reliable power delivered from power generating plants, which often have unique constraints that can affect the operation of their pipelines.

These facilities can have buried assets with complex configurations designed to support their operations. Regular maintenance and safe management is extremely important due to the high consequence of failure.

Pure Technologies understands this environment very well, and has a long proven history of providing non-destructive inspections to power generating operators throughout North America. Most condition assessment work is performed in coordination with shutdown periods for facility maintenance/upgrades while the pipelines are out of service.

For power generating plants, Pure Technologies provides condition assessment for the following systems:

- Fuel Pipelines
- Service Water Systems
- Cooling Water Pipelines (Intake and Discharge)
- Make Up Water Pipelines
- Condenser Piping
- Fire Water Pipeline Systems
- Storm Drain Pipelines

Throughout its history of protecting critical infrastructure necessary for everyday life, Pure Technologies has deployed its technologies to survey thousands of miles of pipeline. This includes prestressed concrete cylinder pipe (PCCP), reinforced concrete pipe (RCP), bar-wrapped pipe (BWP), steel, ductile iron pipe (DIP) and cast iron pipe (CIP).
Best-In-Class Technology Provides Actionable Data to Prolong Asset Life

Beyond simply offering technical solutions, Pure Technologies provides peace of mind by showing power plant operators the true condition of their infrastructure.

Our best-in-class technology and services portfolio provides actionable data and solutions that industrial and power plant managers need to cost effectively focus resources with precision, prolonging asset life, improving safety and increasing reliability.

“The technical expertise provided by Pure has allowed us to undertake an accurate condition assessment and have the appropriate data to make an informed decision on the current condition of the mains. This will allow us to plan cost-effective, timely upgrades to ensure the asset reaches its design life.”

Jonathan Farrell
Design Manager at Queensland Urban Utilities (QUU)

“Our relationship with Pure is almost as if they are a true extension of our staff. In describing them, the first word I can think of is “responsive”, and the second word is “very” responsive. I’m amazed at their response time and technical capabilities.”

Calvin D. Farr Jr.
Utility Management Group Leader at WSSC
Condition Assessment Tools and Platforms

To determine the condition of their critical lines, plant operators have utilized a variety of advanced inspection tools and technologies developed by Pure Technologies. These industry-recognized inspection platforms include:

**Sahara® Leak and Gas Pocket Detection**

The proprietary Sahara® inspection platform is a tethered, multi-sensor tool that can identify acoustic-based leaks, as well as provide a variety of pipeline condition information in real time, with no disruption to service. The Sahara tool features a small parachute that uses the product flow to draw the sensor through the pipeline while being controlled from the surface.

**SmartBall® Leak and Gas Pocket Detection**

SmartBall is a free-swimming, multi-sensor tool used to identify a variety of conditions in pressurized pipelines. The tool is easy to deploy through existing pipeline features, and travels untethered with the product flow, collecting information. The tool’s highly sensitive acoustic sensor can locate small leaks and gas pockets, with typical location accuracy within 6 feet (1.8 m).

**PipeWalker™ Condition Assessment**

The PipeWalker tool provides a viable option for pipeline condition assessment in situations where the pipe is dewatered or where the option to dewater is available. The tool is equipped with electromagnetic sensors for detecting wire wrap breaks on PCCP pipes and for detecting corrosion on metallic pipes.
PipeDiver® Condition Assessment

PipeDiver is a free-swimming condition assessment tool that operates while the pipeline remains in service. Originally designed for use in PCCP, the tool has electromagnetic sensors to identify and locate broken prestressing wire wraps. For metallic pipelines, the optimized PipeDiver has the ability to pinpoint localized areas of wall loss. The tool is also able to deliver video images from inside the pipe.

PureRobotics® Pipeline Inspection

PureRobotics is a depth-rated robotic pipeline inspection system that can be configured to inspect pipe applications 24-inches and larger. Tethered by a high-strength fiber optic cable, the crawler is capable of performing multi-sensor inspections in dewatered pipes or while submerged in depressurized pipes. The crawler features HD digital CCTV, and can be equipped with electromagnetic sensors, Inertial Mapping, 3-D LIDAR, LASER, SONAR and other tools upon request.

PureMFL™ Magnetic Flux Leakage Inline Inspection (ILI)

PureMFL™ is the most accurate non-destructive testing method for measuring remaining wall thickness for metallic pipes. The MFL tool scans the pipe through different liners (e.g. mortar, epoxy, coal tar) to locate metal wall loss and quantify the extent of corrosion.

For a list of client references, or for more information on condition assessment of pressurized pipelines, contact:

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