



Buried Infrastructure Pipe Evaluation

Powertech's Applied Materials Group offers engineering solutions related to the current condition, potential failure, and estimated remaining service life of buried potable water and wastewater infrastructure.

Failure of infrastructure components and systems can be costly and inconvenient for municipalities and dangerous to the public. Condition assessment is the cornerstone to an asset management program effective in preventing such failures. Our materials engineers and technicians have skills and experience with all pipe materials to provide testing, analysis, inspection, and consulting to solve complex materials issues involving buried infrastructure to ensure safe and reliable operation.

Services include:

- Condition assessment services—characterize current condition, using in-house technologies and resources, including Scanning Electron Microscope (SEM) fitted with X-Ray Energy Diffraction Spectroscopy (EDS), comprehensive applied chemistry and polymers laboratory, and team of experienced, certified, non-destructive testing technicians.
- Soil evaluation—remove soil samples from the pipe trench zone, identify key soil parameters associated with corrosion or degradation of buried components, and determine Soil Aggressivity Indexes, to provide insight into condition and future viability of buried infrastructure.
- Statistical reliability analysis—using inputs of remaining life estimates for Weibull or life-data analysis, quantify the probability of failure throughout your system to validate highest-priority repairs or replacements.

- Microbiologically influenced corrosion (MIC)—use specialized test kits to detect presence of micro-organisms associated with MIC, which can lead to extremely rapid degeneration of infrastructure components, and develop mitigation strategies, which could include chemical treatments, application of barrier coatings, or replacement with alternate material.
- Replacement strategies for buried pipe and metallic infrastructure components—determining the current condition of ductile iron, polyvinyl chloride (PVC), or asbestos cement (AC) pipe and related infrastructure, characterizing the exposure environment, and estimating the additional remaining service life, which allows asset owners to plan ahead and develop the most cost-effective replacement strategies.

Applied Materials Group

The Powertech Applied Materials Group serves a wide range of industries, including electric utilities, municipalities, oil and gas suppliers, welding companies, and material suppliers. Offerings include failure analysis, flaw tolerance and fitness-for-service ("run/repair/replace") evaluation, coatings and corrosion inspections and testing, welding engineering, material selection, and a full suite of material characterization testing.

ABOUT POWERTECH LABS:

Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.

Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.

www.powertechlabs.com



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