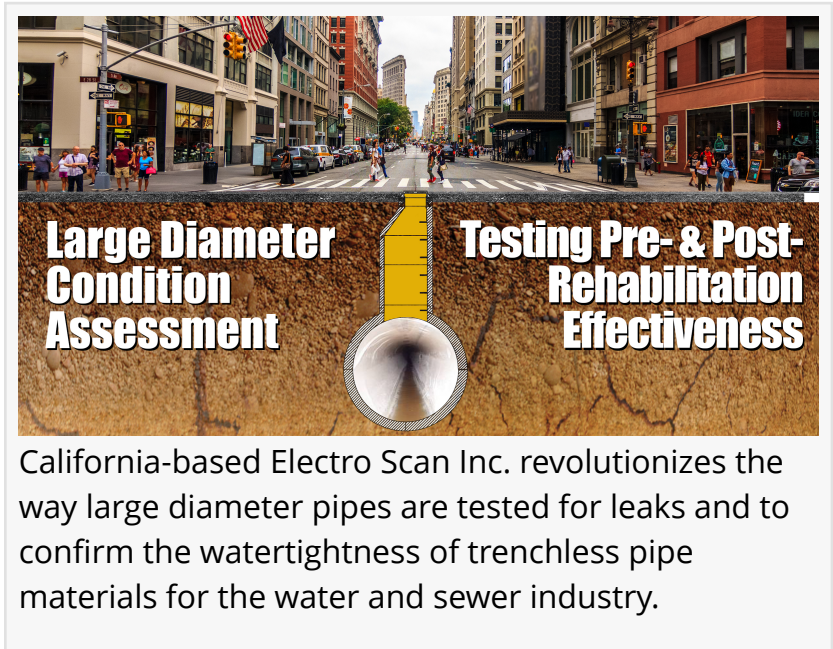


Electro Scan Completes Pipe Assessment of 54-Inch Diameter Cured-In-Place Pipe Using Its New Advanced ES-660 X-Probe

Ground Subsidence Alerted Utility of Potential Issue With Underground Large Diameter Pipe Relined 10-Years Ago Using CIPP

SACRAMENTO, CALIF., USA, August 13, 2020 /EINPresswire.com/ -- [Electro Scan Inc.](https://www.einpresswire.com/2020/08/13/electro-scan-inc-completes-a-comprehensive-focused-electrode-leak-location-fell-inspection-of-a-54-inch-diameter-gravity-sewer-trunk-line-using-the-company-s-newly-released-and-more-powerful-machine-intelligent-es-660-x-probe/) has completed a comprehensive Focused Electrode Leak Location (FELL) inspection of a 54-inch diameter gravity sewer trunk line using the company's newly-released and more powerful machine-intelligent ES-660 X-Probe. Located 25 feet below grade and nearly 800 feet in length, neither confined space access nor bypass pumping were required to complete the pipe inspection.



California-based Electro Scan Inc. revolutionizes the way large diameter pipes are tested for leaks and to confirm the watertightness of trenchless pipe materials for the water and sewer industry.

The company's new ES-660 X-Probe, capable of assessing rehabilitated & existing pipe diameters up to 72 inches (1800 millimeters) in diameter, was used to precisely locate defects within 1/2 of an inch and estimate infiltration potential from each defect stated in Gallons per Minute.

“

Electro Scan has revolutionized how leaks can be detected in large diameter pipes and how newly rehabilitated pipes can be certified as watertight.”

Chuck Hansen, Chairman & CEO, Electro Scan Inc.

Electro Scan was contracted to investigate the large diameter pipe in an area prone to frequent ground subsidence in a roadway. Previous inspection work conducted by a national inspection contractor used closed-circuit television (CCTV) and sonar techniques, both of which were unsuccessful in making a determination regarding the possible connection between the sewer

trunk line and the surface subsidence.

The Company's FELL technology was sought by the Owner to evaluate pipe conditions for the entire 360 degrees of the inside pipe wall, not just what could be observed above the water line. In fact, working closely with the Owner's operations team, the master pump station was temporarily shut down to allow the pipe to fully surcharge to allow FELL inspection for the entire pipe.

The 54-inch diameter reinforced concrete pipe had been previously rehabilitated with a cured-in-place pipe (CIPP) liner, using a standard resin-impregnated felt liner system.

Detailed survey results were available in minutes using the Company's cloud-based application, allowing the Electro Scan field team to highlight areas of concern related to known ground subsidence.

Results of the survey showed notable defects in the CIPP liner, including two areas where the liner was failing.

"Electro Scan is delighted to share the results of this project as it revolutionizes how leaks can be detected in large diameter pipes,"

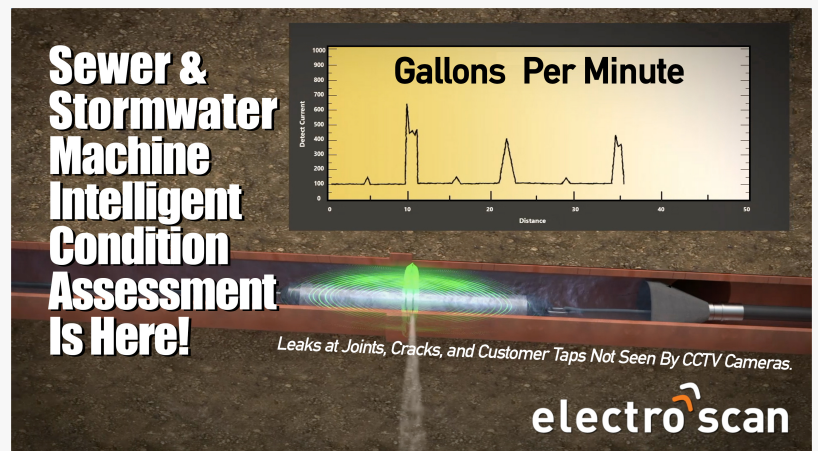
stated Chuck Hansen, Chairman, Electro Scan Inc. and former Chair ASTM Subcommittee F36.20 on Inspection and Renewal of Water and Wastewater Infrastructure.

"More importantly, the industry now has a reliable, safe, and low-cost way to test and certify that newly rehabilitated pipes are watertight – from small diameter laterals to large diameter trunk lines," stated Hansen.

Previously, utilities and consulting engineers have been limited to visually inspecting large diameter pipes either using remote CCTV cameras or manned-entry physical inspections.



Electro Scan ruggedized machine-intelligent pipeline assessment probe.



As illustrated, the Electro Scan intelligent probe automatically finds & measures leaks in Gallons per Minute as it passes by defective joints, cracks, and badly installed customer connections.

Preferred by suppliers and contractors, CCTV is not only unable to dependably locate or quantify leaks, but oftentimes pipes must be emptied through expensive bypass pumping or by temporarily restricting flow to allow robotic cameras to enter a pipe or to allow challenging confined-space manned entry.

Other inspection approaches using instrumentation mounted on flotation devices have included sonar, lasers, electromagnetic, and acoustic sensors – all of which are unable to provide accurate or reliable leak locations or measurements of leak severity.

By contrast, the Company's breakthrough technology uses electric current emitted from a tethered probe that measures any pipe wall defect, including cracks, bad joints, poorly connected pipes, or degraded liners. If the electrical current escapes the pipe through a defect, it will reach a grounding system, allowing the intensity and duration of this current to be measured. If a pipe leaks electricity, it leaks water, and the measured current is converted into a flow rate in GPM or Liters per Second (LPS), both of which are common measurements used to manage water and sewer networks.

Utility customers had been requesting Electro Scan technology to assess large diameter pipes for some time.

In 2013, the Company used its standard probe system to inspect a 1,740 feet (530 meters) of a 66-inch diameter sewer interceptor that had been relined with a spiral-wrap rib-loc liner. Since the pipe was only running at approximately 1/3 of full flow, Electro Scan's existing probe was able to precisely detect leak locations below the water line that nearly a dozen previous CCTV inspections had failed to properly inspect.



Electro Scan field crews match internal pipe defects with above ground subsidence to identify pre-sinkhole risk assessments.



Surcharged pipes often seep effluent through defective joints outside of the pipe. Liquified soil then re-enters the pipe through joints causing silt to accumulate at the bottom of the pipe and a creating a void above the pipe's crown.

Representing over 1 million gallons per day leakage into an underground aquifer, minor repairs were then made at the precise locations identified by Electro Scan. Eliminating the leak was subsequently confirmed by flow meters.

Development of the Company's ES-660 X-Probe began in 2015. Since then, the company offered its solution selectively by completing a number of large diameter condition assessments ranging from 30-inch (750 millimeters) to 66-inch (1650 millimeters) diameter pipes, using its new technology.

"Today, utilities are ill-advised to use CCTV cameras to accept CIPP liners or repairs," stated Michael Condran, P.E., Vice President, Electro Scan Inc. and member of the American Water Works Association (AWWA) M77 Water Main Condition Assessment Committee.

"Since over 80% of the CIPP we have inspected with FELL technology has estimated leakage rates of 20 GPM or more, visual inspection clearly does not provide the long-term assurance of watertightness or asset sustainability desired by smart cities," stated Condran.

Closed-circuit television has been considered a great inspection tool for decades, and still remains a key solution to visually record pipe alignment issues, fats, oils & grease (FOG), obstructions, and roots.

"By using [low voltage current](#) inspection technology, housed in a rugged stainless steel probe, utilities can now automatically and unambiguously find pipe defects not visible by the naked eye," stated Condran.

Now adapted for use in [pressurized potable water pipes](#) and sewer force mains, also called rising mains, Electro Scan's patented and patent-pending multi-sensor low voltage conductivity technology also overcomes the countless number of shortcomings faced when using acoustic listening sticks, data correlators, and free-flowing foam encased sensors, to accurately and reliably find leaks.

ABOUT ELECTRO SCAN

Headquartered in Sacramento, Calif., the company designs, develops, and markets proprietary pipe condition assessment equipment, delivers field services, and offers cloud-based data processing and reporting applications that automatically locate, measure, and report defects typically not found using legacy inspection methods. In 2020, the company was named to Government Technology's esteemed GovTech 100 list for the second year in row. Electro Scan field crews and its authorized partners have been designated 'essential workers' adopting Coronavirus Health & Safety Standards, including appropriate use of Personal Protective Equipment (PPE) and Social Distancing standards, in accordance with state mandates and CDC recommendations. Electro Scan is Safe Contractor Approved.

#ai, #aicctv, #artificialintelligence, #apwa, #asce, #askchuck, #assetmanagement, #awwa, #cipp, #cctv, #clay, #claypipe, #conditionassessment, #concrete, #construction, #deeplearning, #drainage, #digitaltwin, #f2550, #fell, #forcemain, #gotstructure, #infrastructure, #Infrastructuresolutions, #inspection, #leakdetection, #linkedinlive, #millennialconstruction, #nassco, #nastt, #ncpa, #pacp, #pipeline, #pipelineauthority, #piperepair, #precast, #rehabilitation, #resilient, #resilientInfrastructure, #resiliency, #risingmain, #sewerai, #sewer, #sustainability, #sustainableInfrastructure, #trenchless, #ukstt, #wastewater, #water, wef,

Carissa Boudwin

Electro Scan Inc.

+1 916-779-0660

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/523762357>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2022 Newsmatics Inc. All Right Reserved.