SAUDI ARAMCO Approves the Use of Electro Scan for Leak Detection of Buried Non-Metallic Piping

Electro Scan's Electrical Resistance Testing Finds Leaks Missed By Acoustic Sensors and Visual Inspection

The Kingdom of Saudi Arabia is home to 36.4 million people and home to SAUDI ARAMCO.

RIYADH, SAUDI ARABIA, April 2, 2024 /EINPresswire.com/ -- SAUDI ARAMCO has approved the use of Electro Scan Inc.'s electrical resistance technology for leak detection of buried non-metallic piping, in accordance with SAUDI ARAMCO ENGINEERING REQUIREMENTS (SAER-12366).

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>
> *Brad Weston, Managing Director, Electro Scan (UK) Ltd.*

In February 2024, Weston led a UK-based Electro Scan team that arrived at an undisclosed location in Saudi Arabia where benchmark challenge testing was conducted.

By measuring the change in electrical resistance of a pipe wall, Electro Scan is unique in its ability to precisely locate leaks, including the assessment of pipe wall integrity, and estimated leakage rates in gallons per minute or liters per second.

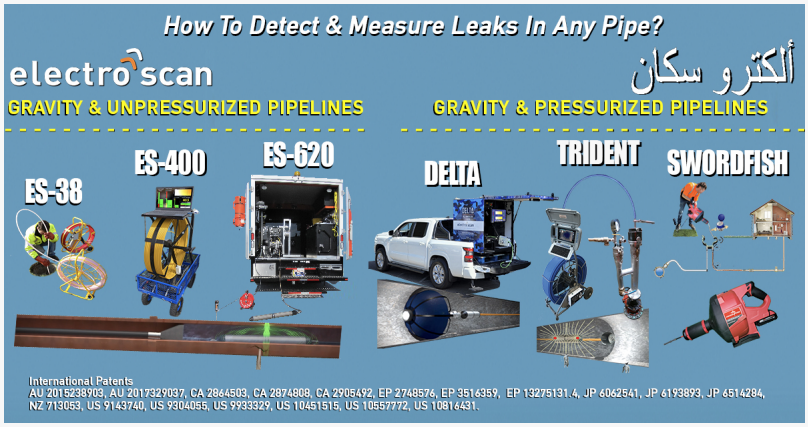
Electro Scan's use of low voltage, high frequency based sensors automatically locates and maps each defect opening, thereby helping to better locate pipe defects.

While many international utilities have traditionally relied on acoustic sensors, data loggers, and

correlators to listen for leaks, the consistent lack of locational accuracy, inability to locate multiple leaks in the same pipe, interference from high noise levels traditionally found in industrial plants, and requirement for testing to take place under high pressures, often has resulted in missed leaks and poor CAPEX decision support.

Likewise, for unpressurized pipelines such as sanitary sewers & stormwater pipelines, where legacy Closed Circuit Television (CCTV) cameras have long been known as unreliable in assessing current pipe conditions and unable to certify new pipe installations as watertight.

Despite periodic upgrades of visual inspection guidelines and recent use of image recognition & artificial intelligence (AI) to assess visual pipe defects, CCTV cameras are still unable to accurately identify key defects needed to address the effects of climate change and sustainability challenges.



Electro Scan provides a comprehensive suite of machine-intelligent tools to assess pressurized and unpressurized pipelines.


Oil and gas refineries have become a new market for Electro Scan's non-acoustic technology, especially as customers have found that acoustic sensors are unable to overcome high noise levels at plants and unable to accurately locate or quantify leaks in fiberglass pipes.

CCTV continues to be unable to tell the difference between superficial cracks and cracks that go through a pipe wall, if pipe joints are watertight, or whether service connections are property attached to sewer mains especially if sealed by gaskets that are external to the pipe.

As a result, both manual and automated interpretation of CCTV images routinely results in incorrectly applying CAPEX to prevent residential flooding, sewer overflows, and sinkholes.

In contrast, California-based Electro Scan's machine-intelligent sensors utilize a Focused Electrode Leak Location (FELL) technology that emits a measured electric current inside the pipe to automatically locate and estimate leakage rates.

FELL has also been shown to be superior in mapping pipe wall conditions of cement-based

pipelines, including Asbestos Cement Pipes and Cement Mortar-Lined Steel Pipes, in addition to certifying new pipe installations as watertight.

Unaffected by ambient noise, flow velocities, groundwater levels, pipe pressures, or soil types, Electro Scan has re-purposed the use of high-resolution underwater CCTV cameras to first identify defective pipe locations using Electro Scan FELL technology; then reposition in-pipe cameras at Electro Scan defect locations to conduct AI particulate tracing to confirm exit locations by clock position of a pipe.

In 2023, Electro Scan was recognized as one of the Top 50 Infrastructure Solution Providers by BUILTWORDS and selected Best Sensor CleanTech/Sustainability at the Annual Sensors Converge Conference held in Santa Clara, California.

In 2022, Electro Scan introduced its SWORDFISH Buried Lead Pipe Detection Solution to automatically detect individual pipe materials, including copper, galvanized, plastic, and lead pipes.

Pipes buried in sand easily allows Electro Scan emissions to exit out of pipe defects and return to above ground receivers to precisely locate and quantify the size of each leak in a pipe.

Electro Scan's ES-400 at work for a Middle East client that no longer uses CCTV images to prioritize repairs and rehabilitation decisions.

And, in 2021 Electro Scan won the highly-coveted PETRONAS Technology Challenge where Malaysian-based Petroliam Nasional Berhad (PETRONAS) selected the Company as 'Best Inspection Technique of Non-Metallic Underground Piping.'

ABOUT ELECTRO SCAN INC.

Electro Scan Inc. is headquartered in Sacramento, California, USA, and is a leading international supplier of machine-intelligent pipeline assessment and quality assurance products and services for the water, sewer, and oil & gas markets. The company designs, develops, and markets proprietary equipment and delivers technical field services using its SaaS-based cloud

application that automatically locates, measures, and reports leaks and water service line pipe materials, including lead pipes. The company's products and professional services detect buried lead water services on a house-by-house basis; typically not found by legacy inspection methods.

HASHTAGS
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