New Standard for Sewer Lateral Condition Assessment

Find Infiltration & Certify Cured-In-Place Pipe
EPA-Referenced 7th EDITION, VOLUME 1, OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEMS manual.

Focused Electrode Leak Location (FELL)
Repsents the industry’s first reliable, proven, and measurable way to provide unbiased pipe condition assessment without third party data interpretation or operator coding.

Most Sewer Leaks Can’t Be Seen or Measured Without FELL

Measure Same-Day Pre- & Post-Rehabilitation Defect Flows in Gallons Per Minute (GPM)

Services Available From Electro Scan Inc.
1745 Markston Road, Sacramento, California 95825-4026, USA | 916.779.0660 | info@electroscan.com | www.electroscan.com
In this project, 40 service laterals were inspected finding that only eight (8) laterals showed any leaks, with one (1) lateral representing seventy-one percent (71%) of the total infiltration and only two (2) laterals requiring lining. Despite the popular belief 'that laterals contribute the majority of infiltration in this area' it was found that sewer mains were not properly evaluated since previous assessments had been based on visual inspection.

<table>
<thead>
<tr>
<th>Date</th>
<th>Address</th>
<th>Material</th>
<th>Diameter</th>
<th>Distance</th>
<th>Small Defects</th>
<th>Med. Defects</th>
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Measuring Pre- and Post-Rehabilitation Defect Flows Using Electro Scan’s FELL

PROBLEM
Traditionally, cities and consulting engineers collected flow data from strategically positioned flow meters, lift stations, and treatment plants, to determine general areas where the greatest amount of Rain-Dependent Infiltration (RDI) entered the sewer network during wet weather events.

Often using multi-year readings to calibrate flow data, even longer periods may be needed to quantify reductions from rehabilitation. Requiring similar-sized wet weather events to occur, after completing repairs, rehabilitation, and replacement programs, engineers have routinely waited 3-5 years to report on rehabilitation effectiveness.

Not to mention flow data being thrown off by flow meters that go offline due to poor maintenance or battery issues, residential households using sump pumps, and other anomalies.

SOLUTION
Calibrated by consulting engineering firms, Electro Scan can now be used to provide a Baseline Gallon Per Minute (GPM) Defect Flow Analysis, before and after rehabilitation.

Agencies may now use Focused Electrode Leak Location (FELL) to provide same-day post-rehabilitation flow analysis that can be immediately compared to baseline readings in order to estimate reductions achieved from rehabilitation.

Cities can now identify and quantify sources of infiltration using machine-intelligent precision, helping decide whether laterals or sewer mains are contributing more infiltration, and allowing engineers to plan & execute targeted repair and rehabilitation programs on their most Critical Sewers®.

3 inches or 76.2mm Pipe Diameter

Bends & Tees are easily navigated with the Electro Scan ES-38 Probe.

90° Angle
The Electro Scan System is a fully automated system that provides measurable, unbiased reporting of lateral conditions. It locates and measures leaks in gallons per minute (GPM) or liters per second (LPS). The Electro Scan System provides an unambiguous evaluation of lateral conditions and the location of potential defects.

**Advantages**

1. No manual coding required.
2. Finds 90-100% of leaks missed by CCTV.
3. Locates and measures leaks in GPM or LPS.
4. Tracks pre- and post-rehabilitation I/I reduction.
5. Use in field either rain or shine.
6. Finds defects inside joints not seen by CCTV.
7. Differentiates superficial cracks from cracks through pipe.
8. Find & measure defects hidden by grease, silt, and encrustation.
10. Determines water tightness of service laterals.
11. Fewer breakdowns. No moving parts.
12. Recommended by WRc, developers of NASSCO CCTV Codes.
13. Reports available in minutes, not hours, days, or weeks.

**Limitations**

1. Does not provide a clock position of defect location inside the pipe, but location is accurate to within 0.4 inches (1 cm).
2. Does not scan metallic pipes or fittings, unless there is a coating or liner (minimum of 1-2mm).
3. Air Push Rod

**ASTM F2550**

Committee F36 Approved

**Surface Electrode**

电位源 (Voltage Source)

**Low Resistance Path Through Ground**

电导电流 (Electric Current)

**Probing Cable**

**HIGH Resistance Path Through Pipe Wall, Except Where There is a Pathway for Leakage**

**Probe**

- **Pipe Full of Water at Probe**
- **Focused Tri-Electrode Array**

**ES-38 for Sewer Laterals**

Electro Scan provides an unambiguous evaluation of lateral conditions and the location of potential defects.

**Melissa Mecker, CEO**

WE&RF, August 2017

**Legacy Solutions**

Legacy Solutions

Chuck Hansen, Founder

Hansen Software Inc.

Founder, Hansen Software Inc.

**7532 Rolling River Drive - FELL Sewer Lateral Assessment**

<table>
<thead>
<tr>
<th>Address</th>
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<th>Length</th>
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**Pre-CIPP Assessment**

11 Defects - 3.71 GPM Defect Flow

**Post-CIPP Assessment**

ZERO INFILTRATION