

20 SEPTEMBER 2022

UKSTT Winner!

2022 UK Society of Trenchless Technologies (UKSTT) Detection, Location & Inspection Award

Congratulations!



Brad Weston

Managing Director, Electro Scan (UK) Ltd.



electro scan

Total Survey Electro Scan 63km*



Southern Water Service Area

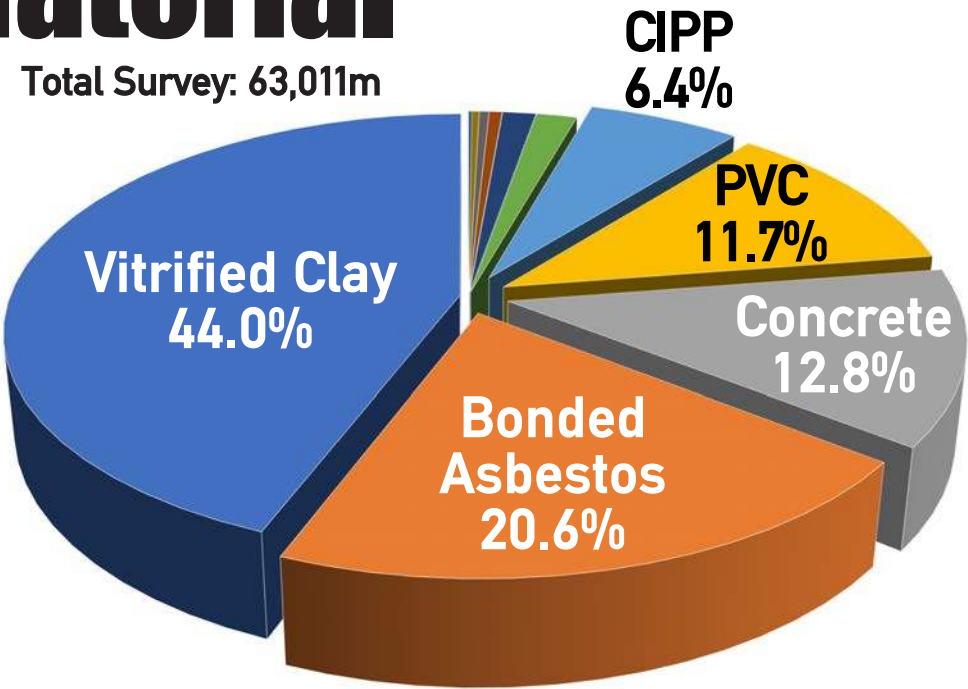
[illegible]

* Total of 51km at time of award submission. Life-to Date 63km.

What Was Suveyed & What Electro Scan Found? By Pipe Material

Total Survey: 63,011m

Pipe Material	Meters	Percent
Asbestos Cement	340	0.5%
Bonded Asbestos	12,971	20.6%
Cast Iron	1,071	1.7%
Cured In Place	4,044	6.4%
Concrete	8,074	12.8%
Polyethuleme	256	0.4%
Pitch Fiber	190	0.3%
Polypropylene	872	1.4%
Polyvinyl Chloride	7,374	11.7%
Spur Iron	88	0.1%
Vitrified Clay	27,731	44.0%
TOTAL	63,011	100%



Source: CriticalSewers® Cloud Application





FEATURED CASE STUDIES

Australia

Germany

United States

United Kingdom

United Arab Emirates

HOW ELECTRO SCAN 'SEES' ALL SEWER & RISING MAIN LEAKS & CERTIFIES REPAIRS AS WATERTIGHT?

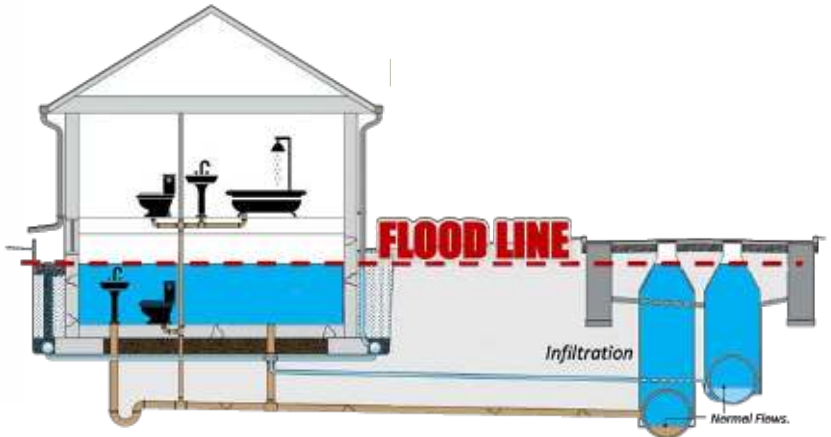


**Missed By CCTV & AI-CCTV
and Multi-Sensor Probes.**

New Standard for Targeting High Risk Flood Locations

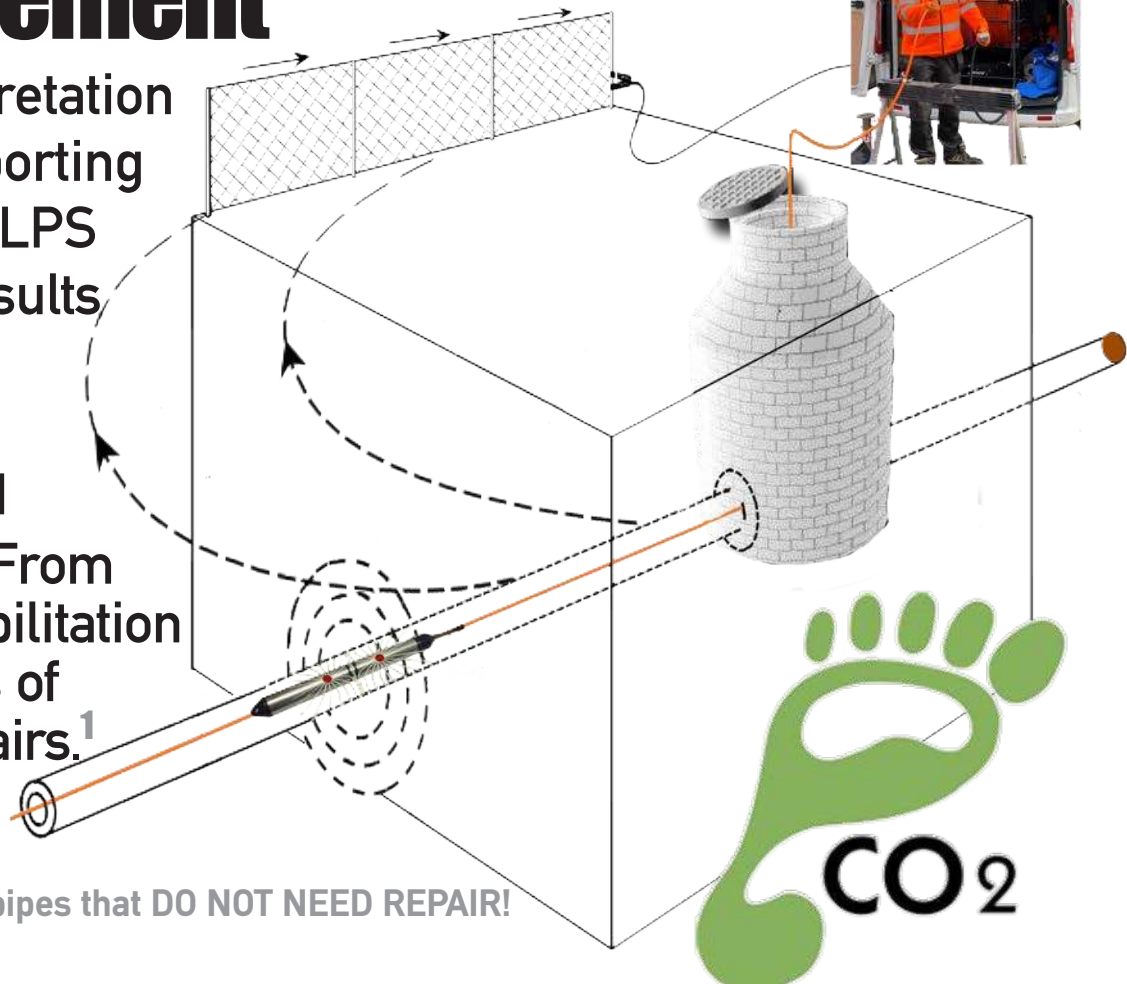
Top 3 Causes of Flooding

1. Wet-Weather Infiltration into Sewers
2. Pipe Blockages
3. Equipment Failure



Science-Based Leak Location & Measurement

- No Data Interpretation
- Real-Time Reporting
- Leaks in GPM/LPS
- Repeatable Results
- Unambiguous
- Unbiased
- Unprecedented
- CO₂ Reduction From Targeted Rehabilitation & Certifications of Watertight Repairs.¹



¹. Know right away which pipes that DO NOT NEED REPAIR!

Struggling With Satellite Data?



Satellite & Aerial Drones v. Terrestrial & Close-Range Photogrammetry

Don't 'STOP' Using Satellite Just Because You Can't Find Any Leaks Using Acoustic Devices.









Example Satellite Imagery & Aerial Drone Water Leak Screening Suppliers
APEM, Orbital Eye, Orbital Sidekick, Parrot, Rezatec, Satelytics, Utilis, WADI, Workswell

'Points of Interest'

Don't Find Actual Leak Locations, But Good to Pre-Screen for 'Boots-on-the-Ground' Survey Using Electro Scan.



Standard Electro Scan Reporting on Satellite Points of Interest

<div>electroscaninc.</div>										<div>Satellite</div>				
PIPE-SPECIFIC LEAK QUANTIFICATION										② HITS		③ MISSES		
Pipe Material	Pipe Diameter	① LITRES PER SECOND or GPM	Pipe Length	Number of Leaks					Matching Severe Leaks	Matching Moderate Leaks	Matching Small Leaks	Missed Small Leaks	Missed Moderate Leaks	Missed Severe Leaks
				Pinhole	Small	Medium	Large	Total						

- ① Electro Scan locates all leaks with 1cm accuracy and machine-driven LPS or GPM for each leak.
- ② Cross-reference all matching leaks from satellite.
- ③ Cross-reference all leaks missed by satellite.

Random Pipe Selection Found Similar to CCTV

2020 Study By Major Engineering Firm Finds WRC/NASSCO Codes Fail to Prioritize Pipes To Reduce Infiltration



74,000LF Benchmark Test Compares CCTV and FELL

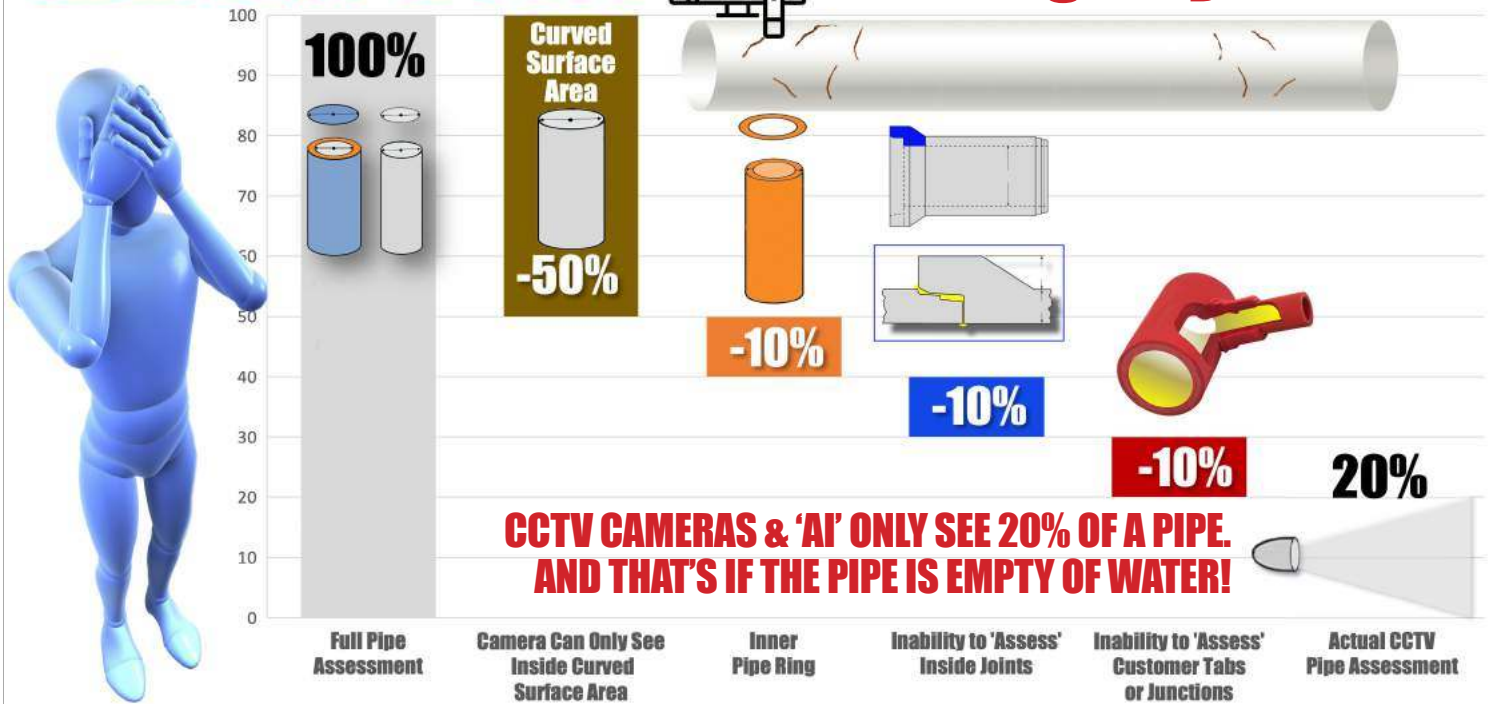
North American Study Finds CCTV



- **Unable to Detect Infiltration**
- **Unreliable Selecting Repairs**
- **Can't Assess Joints for Leaks**
- **Can't Assess Taps for Leaks**
- **Can't Assess CIPP for Leaks**
- **Can't Assess New Pipes**

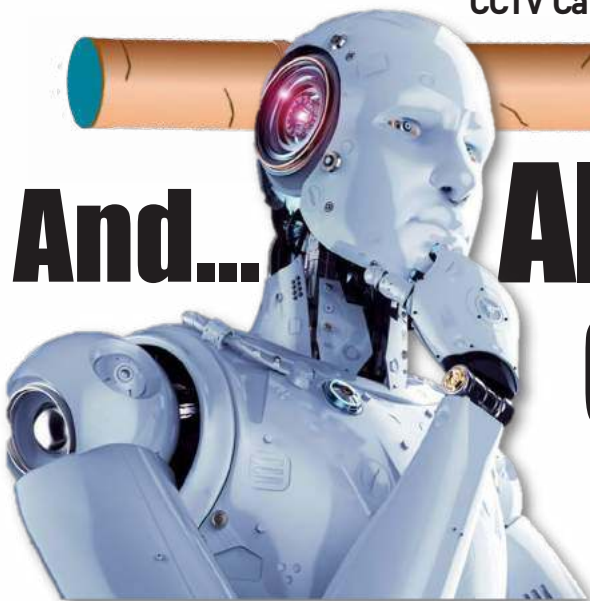
Worldwide Testing Confirms That CCTV Cameras Miss 80-100% of Leaks

Challenge of CCTV Missing Key Defects



CCTV Can't Tell if Cracks or Bad Joints Leak Through Outer Wall of Pipe.

And...



AI CAN'T SEE WHAT CCTV CAN'T SEE!

New Tech Was Needed to Evaluate 100% of Pipe Wall.



NOTE:
CIPP Liners Below
are NOT Installed
at Southern Water.

British Sewers CIPP Lined Pipe Survey

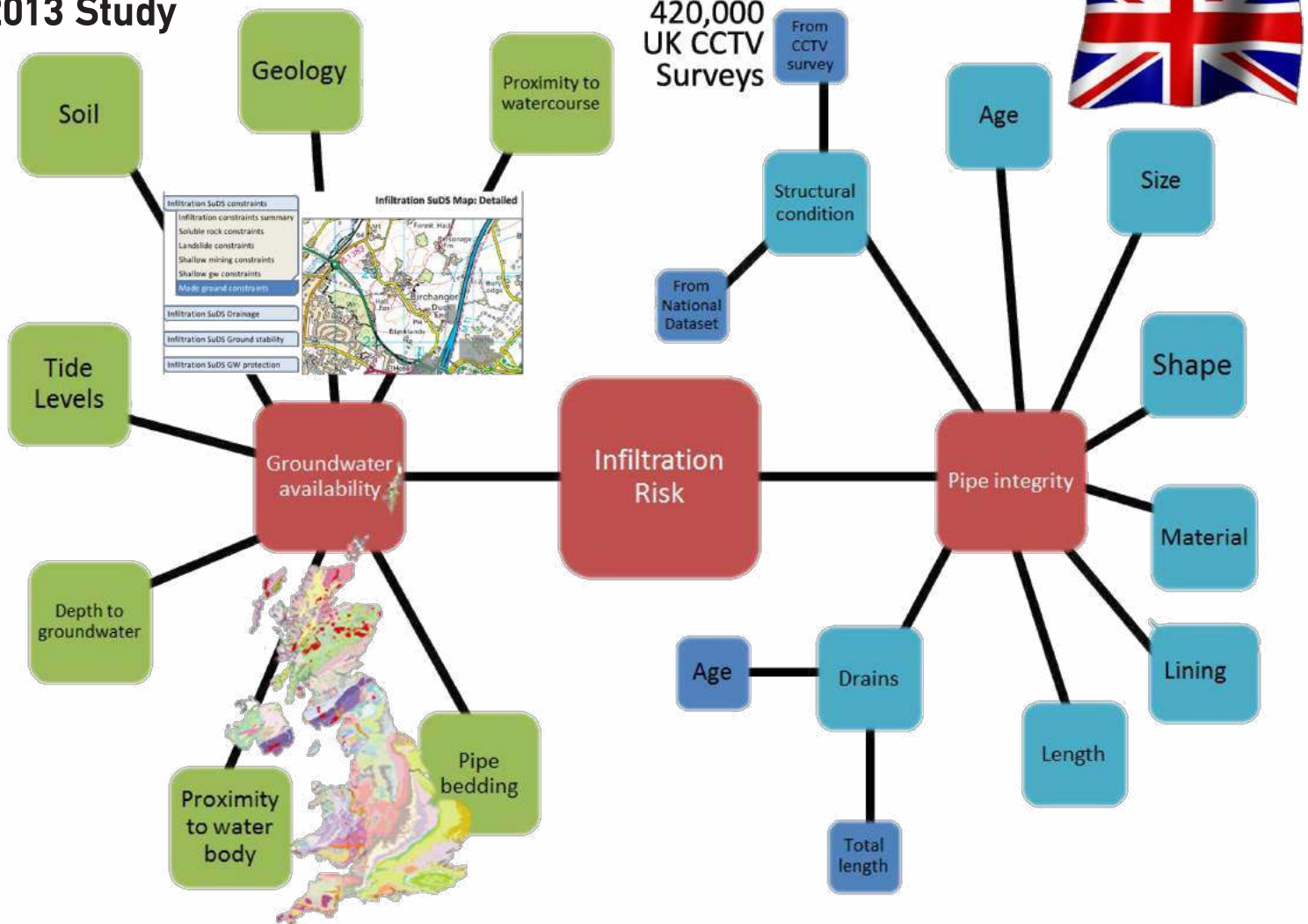


**APPROVED USING UK CCTV
VISUAL STANDARDS**



UK Has Been A Leader in Infiltration Research Without a Breakthrough.. Until Now!

2013 Study



CCTV

- May highlight faults with the pipe
- but not necessarily key infiltrations points

In-situ flowmeter

- May provide a good data set over a range of flow conditions
- Flow meter likely to get ragged up – risk of flooding
- Limited number of locations

Portable flowmeters

Tracer study

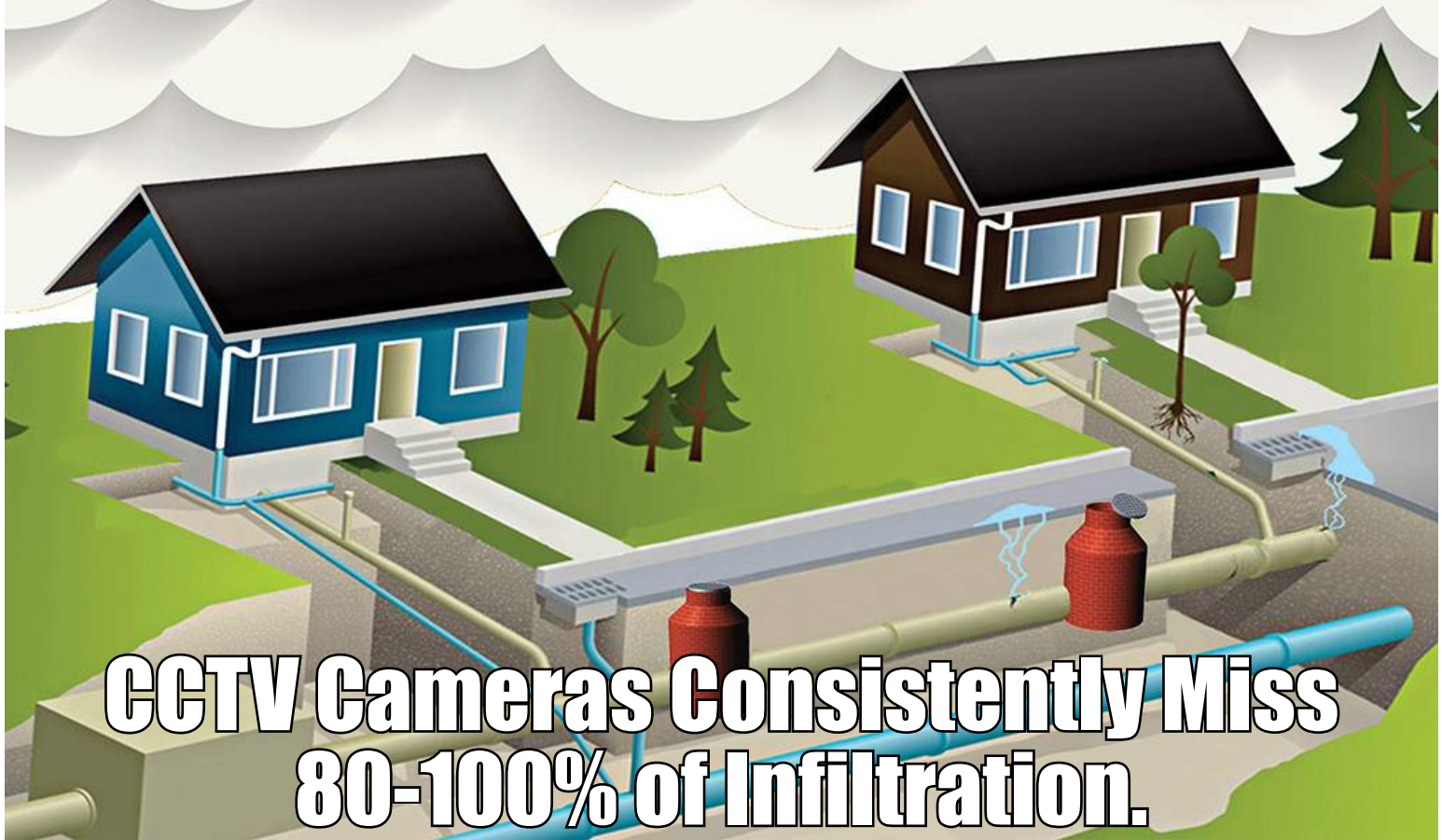
Source:

Dr. John Grimm

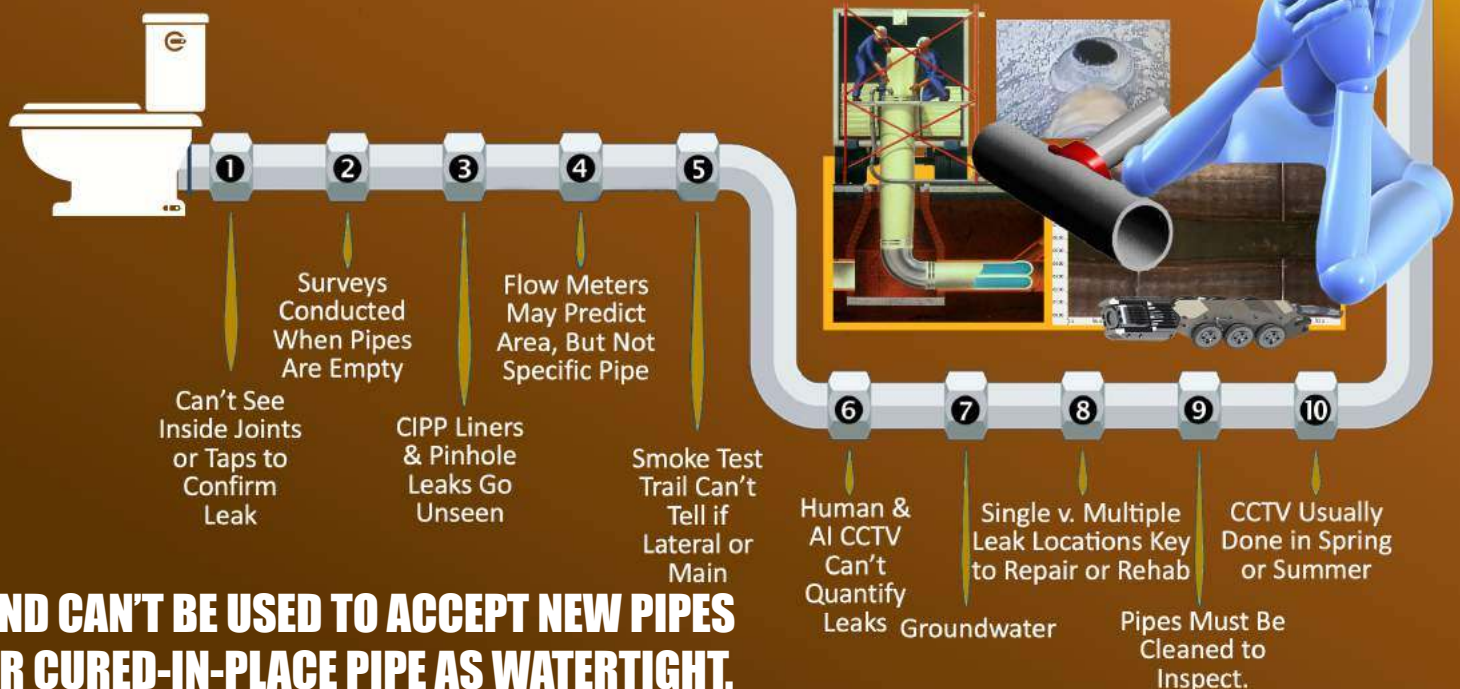
Anglian Water

Flow Surveys in Sewer Networks and at WwTW

Sewer Infiltration



WHY CCTV CAMERAS MISS SO MANY LEAKS?



ASTM F2550

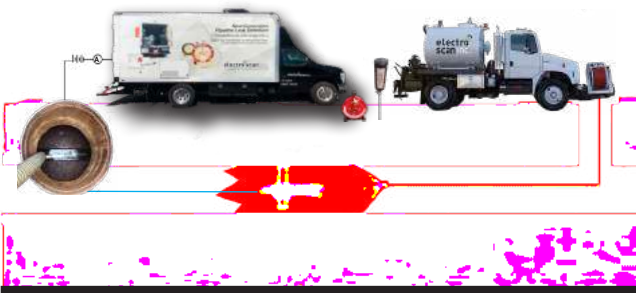
Standard Practice for Locating Leaks By Measuring the Variation of Electric Current Flow Through the Pipe Wall 2018, 2013, and 2006



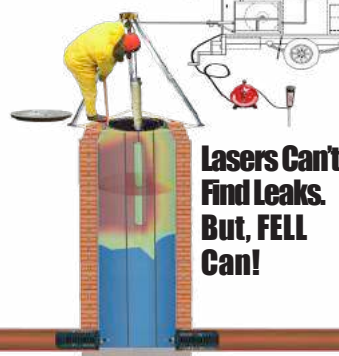
Infiltration of groundwater into a sewer through defects in the pipe can considerably increase the operation and capital costs of a sewer system. Exfiltration of sewage out of a sewer pipe may cause degradation of aquifers and shoreline waters. Accurate location, measurement, and characterization of all potential pipe leak defects are essential inputs for cost-effective design, testing, and certification of pipe repairs, renewal, and new construction.

Pre- and Post-Rehabilitation Condition Assessment

Sewer Mains

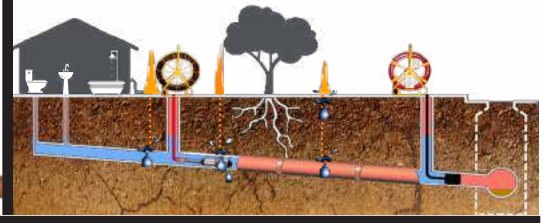


Manholes



Service Laterals

**Infiltration is not being found in laterals, but at the Customer Connections!!!!!!
Leaks missed by CCTV Inspection.**



CCTV Cameras or Lasers Miss 80-100% of Leaks in Pipe or Manhole Walls.

**Electro Scan Finds All Sources of Infiltration
Whether Pipes Are Empty or Fully Surcharged**



AI-CCTV Helps Bring Badly Needed Standards to Visual Inspection. But, Still **Does Not** Provide Needed Condition-Based Assessment to Drive Repairs or Rehabilitation Selection or Approval as Watertight

Top Drawbacks of Manual CCTV Inspection

1 Requires No or Low Flow

2 Cracks

3 Fats, Oil & Grease

4 Encrustation

5 Different Codes Used For Same Defect

6 Some Codes Used For Different Defects

7 Different Callouts By Same Operator

8 Joints

9 Silt

10 Repeatability

11 Roots

12 Cleaning

13 Fittings & Ferncos

14 Cured-In-Place Pipe

15 Point Repairs

16 Infiltration

17 Pre-Rehabilitation Selection

18 Post-Rehabilitation Certification

19 Missed Defects

20 Dark Colored Pipes

21 Camera Breakdown

Source: WRc Master Class, Peter Henley, 2016, Peterborough, UK.

Drawbacks of Manual-Based CCTV		CCTV
1	Automatically Finds Potential Sources of Infiltration 360° of Pipe Wall	No
2	Automatically Finds Leaks Inside Joints Through Bell and Spigot	No
3	Automatically Finds Leaks at Service Connections	No
4	Automatically Finds Sources of Infiltration at Cracks	No
5	Automatically Finds Leak Locations (within 1cm)	No
6	Automatically Measures Size of Leaks - Estimated in GPM	No
7	Automatically Finds Defects That Leak from Bad Couplings	No
8	Automatically Finds Defects That May Still Leak After Repairs	No
9	Automatically Finds Defects That Leak in CIPP Lining Projects	No
10	Automatically Finds Defects After Service Re-Connections	No
11	Automatically Finds Leaks, if Hidden by Silt or Debris on Bottom of Pipe	No
12	Able to Conduct Inspections, When Sewer Pipe is Full of Water	No
13	Able to Determine Size of Potential Leak, if Roots are Present	No
14	Automatically Finds Leaks, if Hidden by Fats, Oils or Grease (FOG)	No
15	Able to Determine Size of Leaks, if Pipe Has Encrustation	No
16	Requires Active Infiltration to Identify Infiltration	Yes
17	Contains Moving Parts That Can Clog from Excess Debris or Silt	Yes
18	Requires Bypass Pumping During Inspection, if Pipe is Full	Yes
19	Requires Special Training and Certification to Identify Defects	Yes
20	Relies on Visual Observations to Record Defects	Yes
21	Avg. Speed of Inspection - Depends on Camera Type & Speed	3m/min

Top Drawbacks That Remain With 'AI CCTV'

1 Requires No or Low Flow

2 Cracks

3 Fats, Oil & Grease

4 Encrustation

5 Different Codes Used For Same Defect

6 Some Codes Used For Different Defects

7 Different Callouts By Same Operator

8 Joints

9 Silt

10 Repeatability

11 Roots

12 Cleaning

13 Fittings & Ferncos

14 Cured-In-Place Pipe

15 Point Repairs

16 Infiltration

17 Pre-Rehabilitation Selection

18 Post-Rehabilitation Certification

19 Missed Defects

20 Dark Colored Pipes

21 Camera Breakdown

#1

#2

#3

#4

Drawbacks of Machine-Based AI CCTV		CCTV
1	Automatically Finds Potential Sources of Infiltration 360° of Pipe Wall	No
2	Automatically Finds Leaks Inside Joints Through Bell and Spigot	No
3	Automatically Finds Leaks at Service Connections	No
4	Automatically Finds Sources of Infiltration at Cracks	No
5	Automatically Finds Leak Locations (within 1cm)	No
6	Automatically Measures Size of Leaks - Estimated in GPM	No
7	Automatically Finds Defects That Leak from Bad Couplings	No
8	Automatically Finds Defects That May Still Leak After Repairs	No
9	Automatically Finds Defects That Leak in CIPP Lining Projects	No
10	Automatically Finds Defects After Service Re-Connections	No
11	Automatically Finds Leaks, if Hidden by Silt or Debris on Bottom of Pipe	No
12	Able to Conduct Inspections, When Sewer Pipe is Full of Water	No
13	Able to Determine Size of Potential Leak, if Roots are Present	No
14	Automatically Finds Leaks, if Hidden by Fats, Oils or Grease (FOG)	No
15	Able to Determine Size of Leaks, if Pipe Has Encrustation	No
16	Requires Active Infiltration to Identify Infiltration	Yes
17	Contains Moving Parts That Can Clog from Excess Debris or Silt	Yes
18	Requires Bypass Pumping During Inspection, if Pipe is Full	Yes
19	Requires Special Training and Certification to Identify Defects	Yes
20	Relies on Visual Observations to Record Defects	Yes
21	Avg. Speed of Inspection - Depends on Camera Type & Speed	3m/min

CCTV vs. FELL		CCTV	FELL
1	Automatically Finds Potential Sources of Infiltration	NO	YES
2	Automatically Finds Leaks Inside Joints	NO	YES
3	Automatically Finds Leaks at Service Connections	NO	YES
4	Automatically Finds Sources of Infiltration at Cracks	NO	YES
5	Automatically Finds Leak Locations (within 0.4 in or 1 cm)	NO	YES
6	Automatically Measures Size of Leaks (Estimated in GPM)	NO	YES
7	Automatically Finds Defects That Leak from Bad Couplings	NO	YES
8	Automatically Finds Defects That May Still Leak After Repairs	NO	YES
9	Automatically Finds Defects That Leak in CIPP Lining Projects	NO	YES
10	Automatically Finds Defects After CIPP Service Re-Connections	NO	YES
11	Automatically Finds Leaks, If Silt or Debris on Bottom of Pipe	NO	YES
12	Able to Conduct Inspections, If Sewer Pipe Is Full of Water	NO	YES
13	Able to Determine Size of Potential Leak, If Roots Are Present	NO	YES
14	Automatically Finds Leaks at Joints, If Grease Is Present	NO	YES
15	Able to Determine Size of Leaks, If Pipe Has Encrustation	NO	YES
16	Requires Active Infiltration to Identify Defect at Source	YES	NO
17	Contains Moving Parts That Could Clog from Debris or Silt	YES	NO
18	Requires Bypass During Inspection, If Pipe Full	YES	NO
19	Requires Special Training and Certification to Identify Defects	YES	NO
20	Relies on Visual Observations to Record Defects	YES	NO
21	Ave. Speed of Inspection (6-30" Sewer Main Diameters)	3ft/min	50ft/min



Adding FELL to CCTV Trucks & Start Finding Infiltration

Aries

Cues

IBAK

Ipek

Rausch

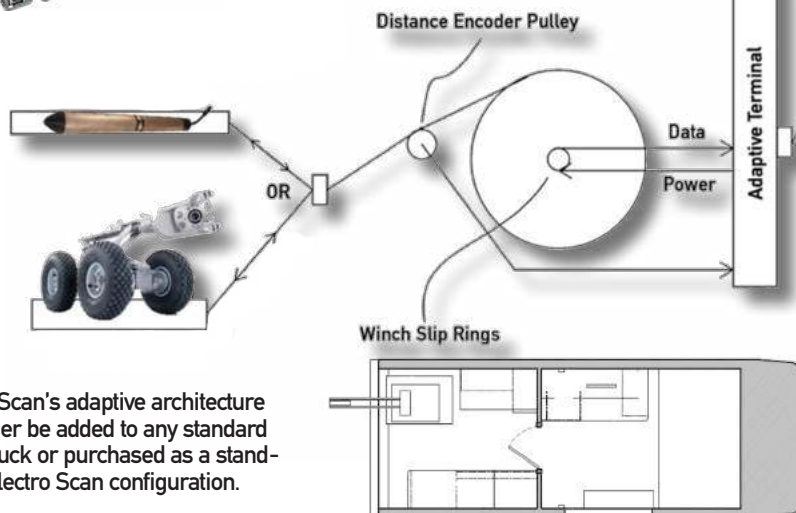
Custom



How We Add Electro Scan to CCTV Trucks



**Convert from
CCTV to FELL &
Back Again In
Minutes.**



Electro Scan's adaptive architecture can either be added to any standard CCTV truck or purchased as a stand-alone Electro Scan configuration.

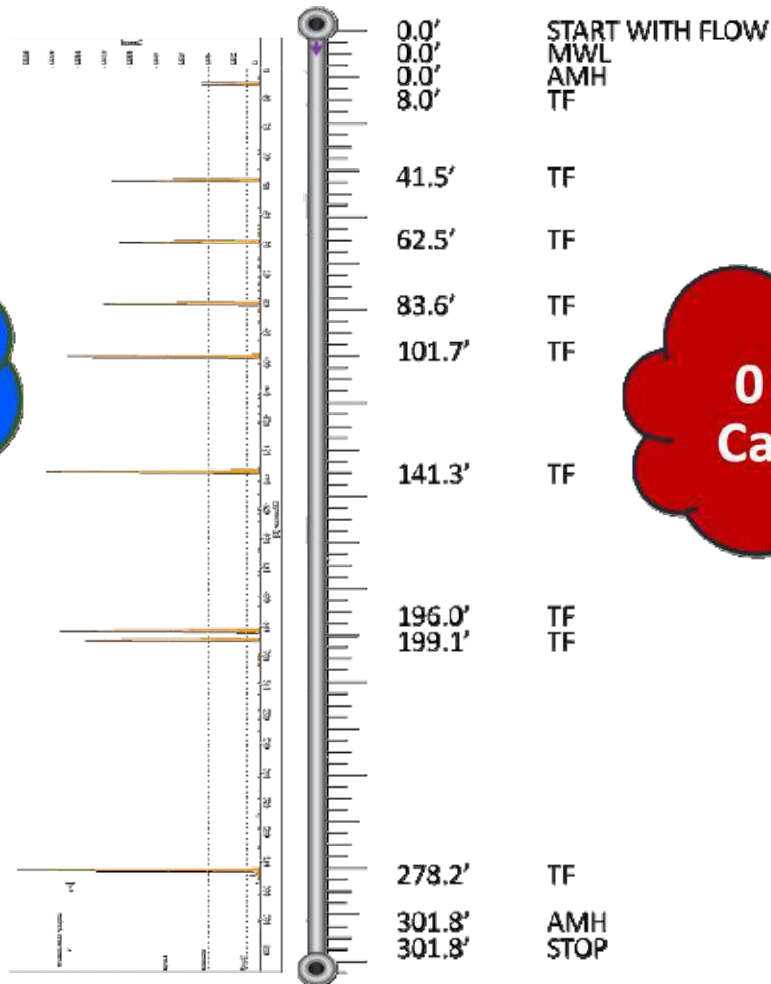
**Electro Scan Replaces CCTV
Using Same Footage Encoder
& Reel for FELL Testing.**

ELECTRO SCAN

v.

CCTV

FELL
20 Defects
82.22 GPM



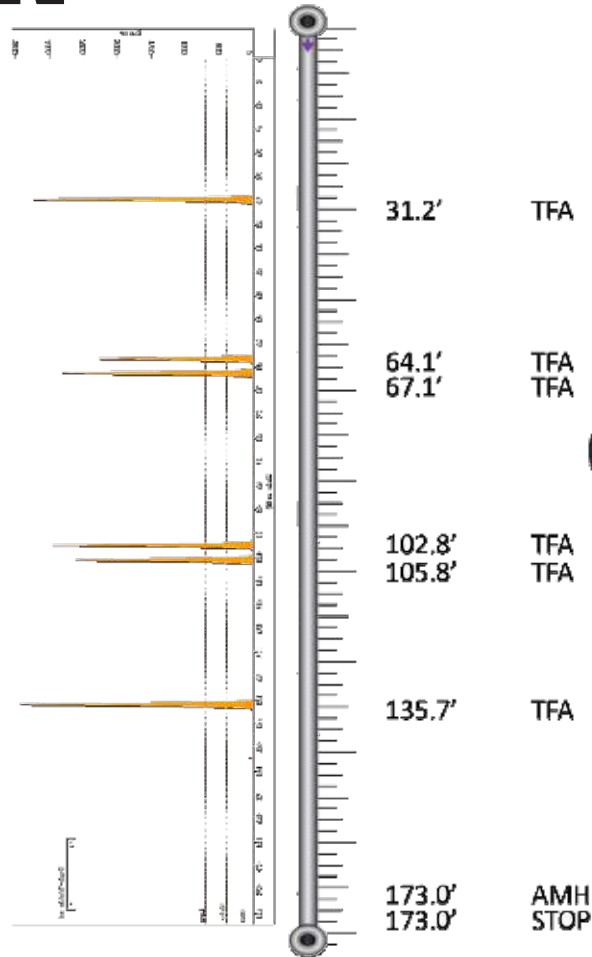
CCTV
0 Callouts
Causing I&I

Electro Scan Testing Performed Independent from CCTV
With All Data Machine-Generated Without Modification.

ELECTRO SCAN

V.

CCTV



FELL
8 Defects
60.14 GPM

CCTV
0 Callouts
Causing I&I

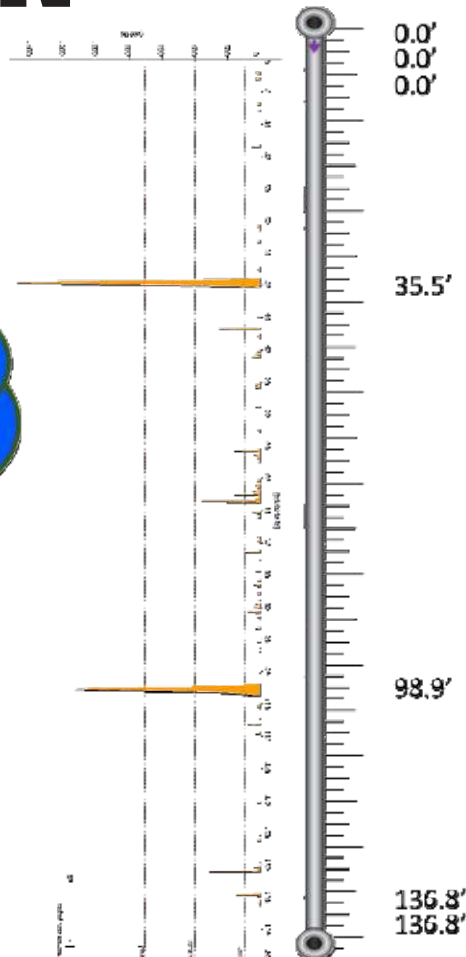
Electro Scan Testing Performed Independent from CCTV
With All Data Machine-Generated Without Modification.

ELECTRO SCAN

V.

CCTV

FELL
46 Defects
24.96 GPM



START WITH FLOW
MWL
AMH

TF

TF

AMH
STOP

CCTV
0 Callouts
Causing I&I

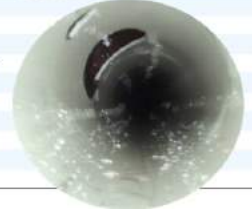
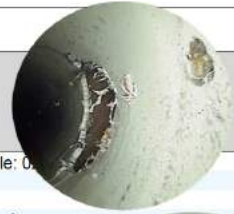
Electro Scan Testing Performed Independent from CCTV
With All Data Machine-Generated Without Modification.

POKE & HOPE: How CIPP Suppliers Make Millions While Utility CAPEX Suffer & Raise Rates

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height		
	5			Sanitary	Downstream	D	8		
Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Year Laid	Year Rehabilitated	Tape / Media Number
	Circular	VCP	CP			391.7			
Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information				
C		Jetting		Dry					

Distance (Feet)	Code		Continuous defect	Value			Joint	Circumferential Location		Image Ref.	Struct. Grade	O&M Grade	Remarks
	Group/ Descriptor	Modifier/ severity		S/M/L	Inches			At / From	To				
					1st	2nd							
0.0	AMH												Starting Manhole: 0
0.0	MWL					10							
11.3	TF	A			6			9		CCTV Video Showed Leaks at Every Mis- cut. This is frequently called 'Poke & Hope.'			grouted 3 Mis-cuts
11.6	MGO												
12.9	TF	A			6			3					
74.8	TF	A			6			3					
101.2	MGO												
106.9	TF	A			6			9					grouted 2 Tears in liner
233.1	MGO												grouted 2 mis-cuts
233.9	TF	A			6			3					
251.2	TF	A			6			9					
377.2	TF	A			6			3					
391.7	AMH												0297MH019

**CCTV Video Showed
Leaks at Every Mis-
cut. This is frequently
called 'Poke & Hope.'**



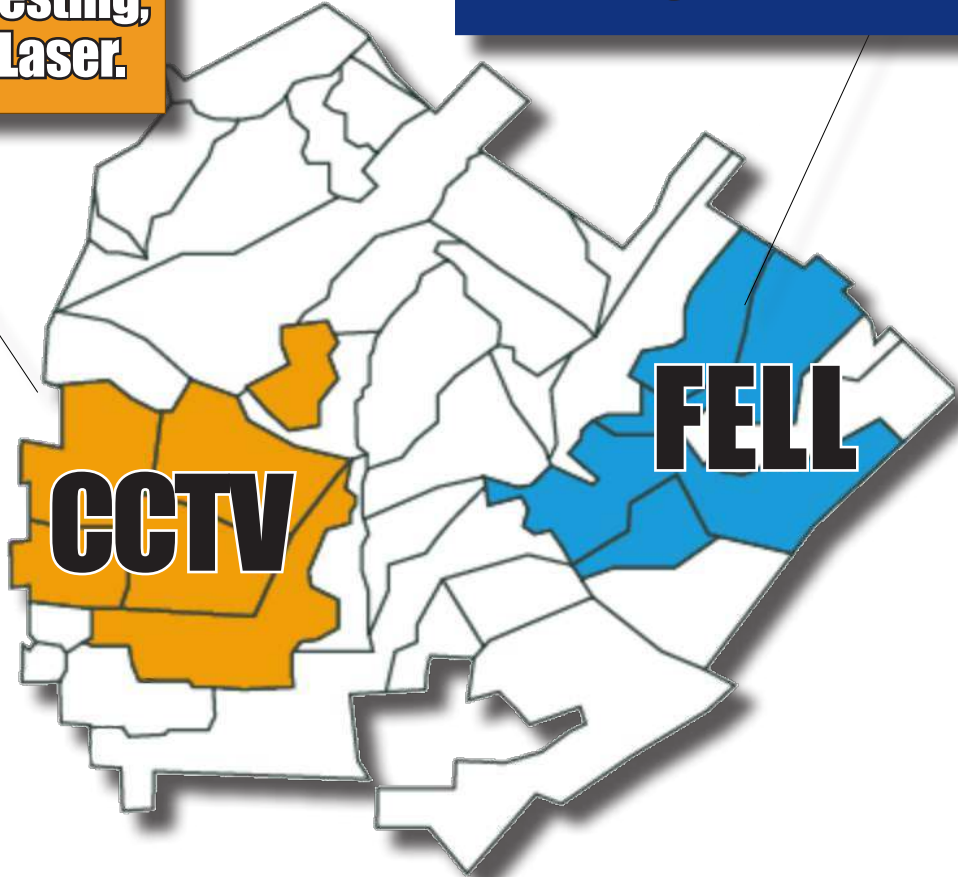
**NO CCTV
DEFECTS**

Structural								O & M								Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0	0000		0	0	0	0	0	0	0000		0	0	0	0	0	0	0000	

**OLD WAY TO FIND LEAKS.
CCTV, Smoke & Dye Testing,
Acoustic, Sonar, and Laser.**

**NEW WAY TO FIND LEAKS.
Machine-Intelligent FELL
Low Voltage Leak Detection.**

**Studies
Find CCTV
Misses
Majority of
Infiltration.**

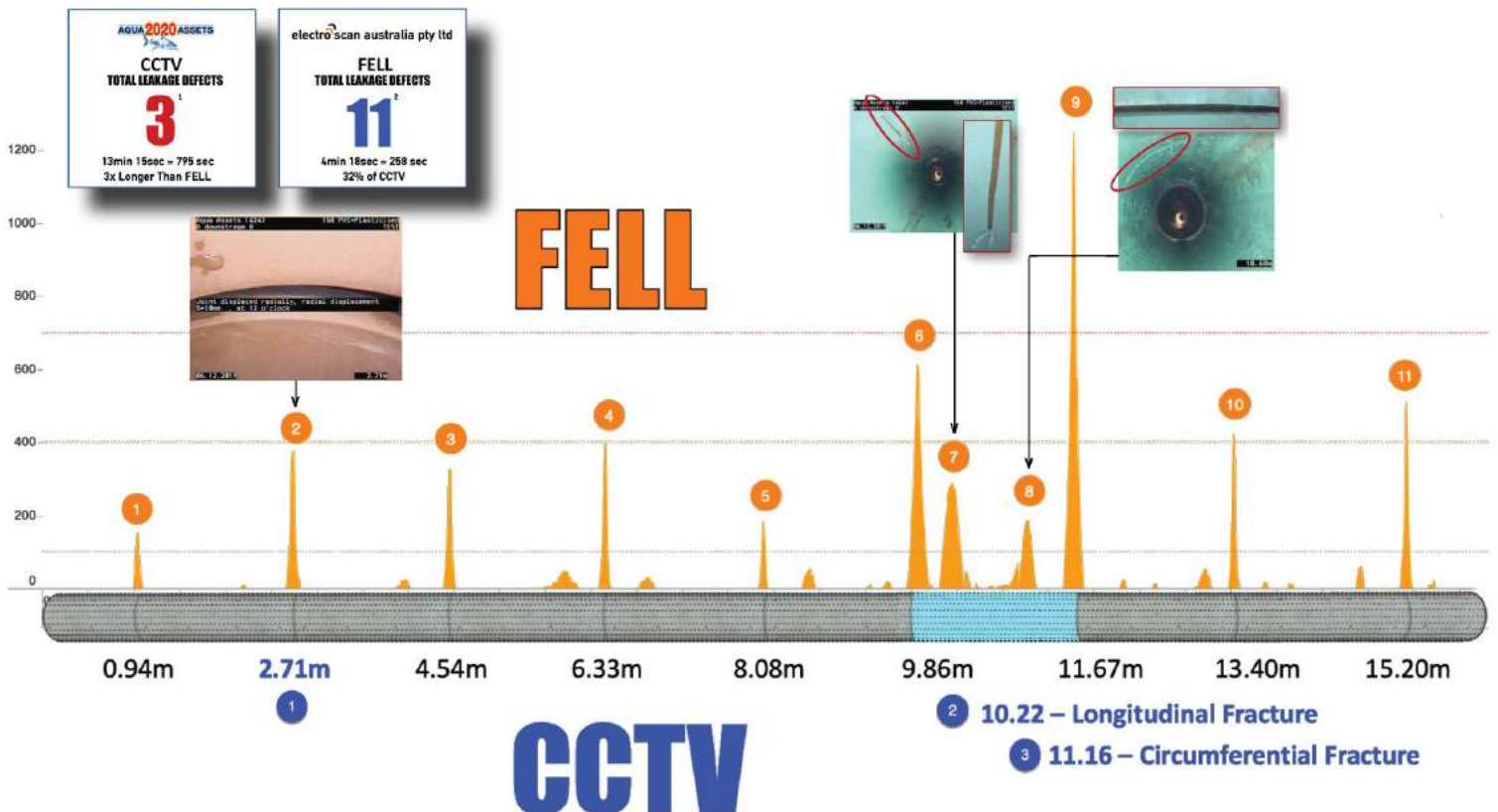




CCTV & FELL Found Same Utility-Planted Defects But, CCTV Missed Leakage at Every Pipe Joints

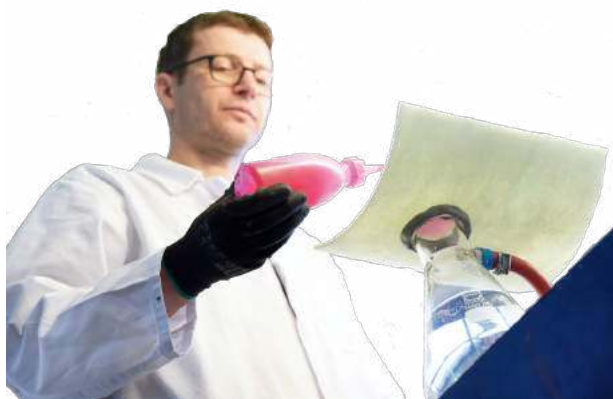


FELL = FOCUSED ELECTRODE LEAK LOCATION

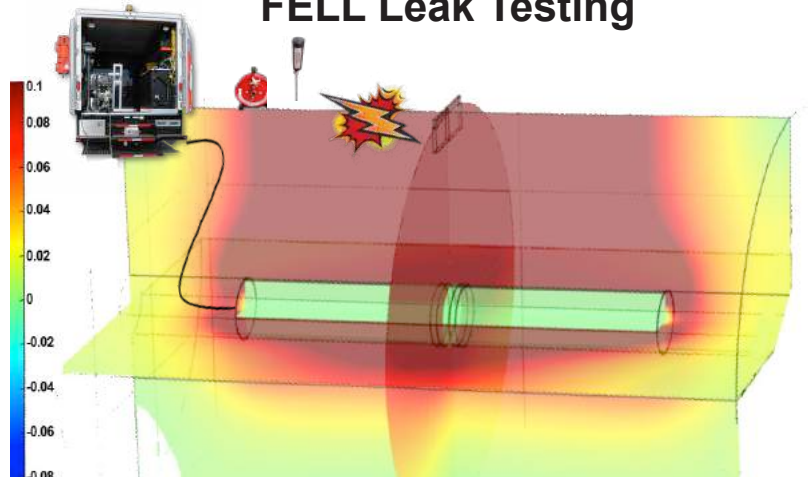


IKT FELL Tests of CIPP Liners

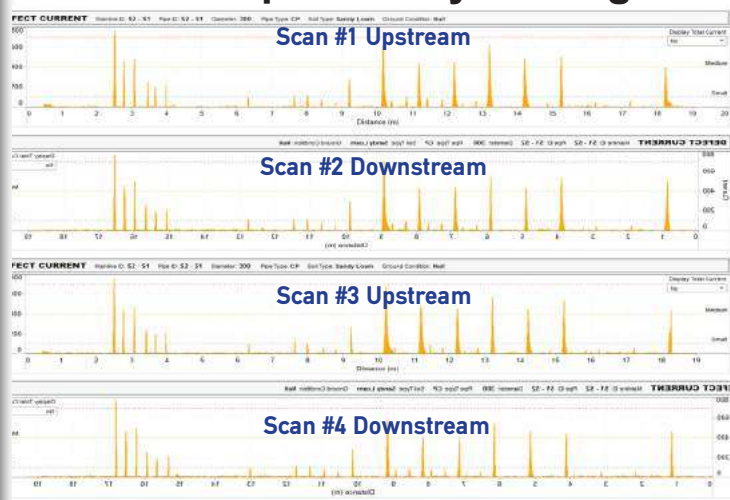
IKT Leak Testing



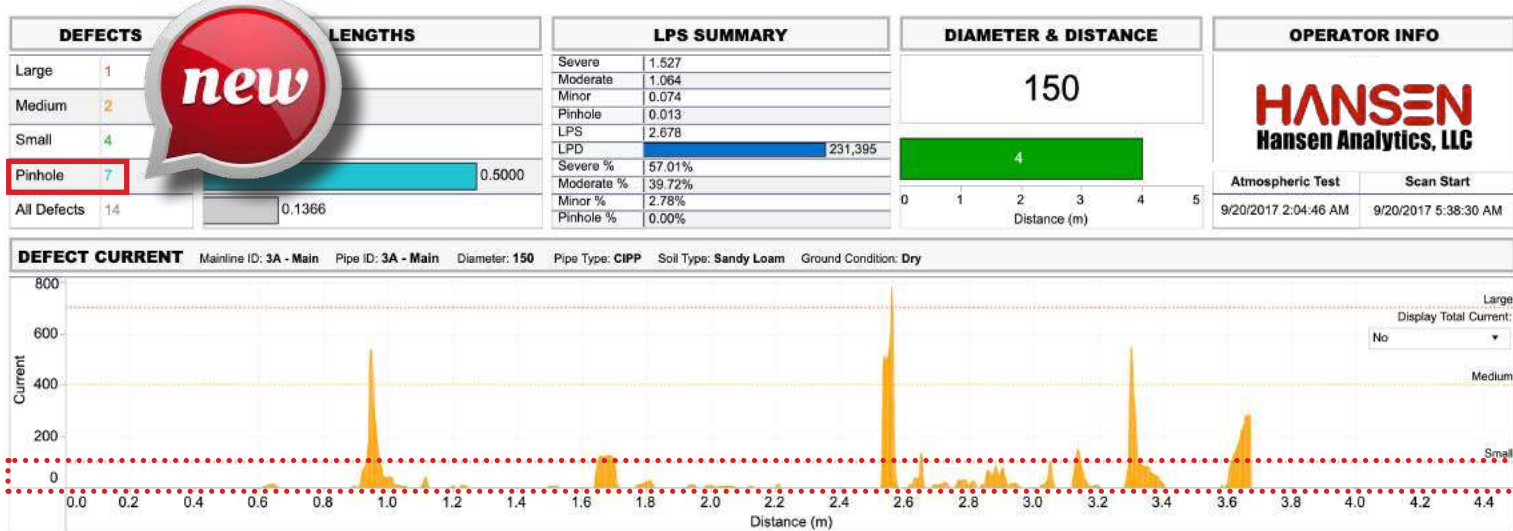
FELL Leak Testing



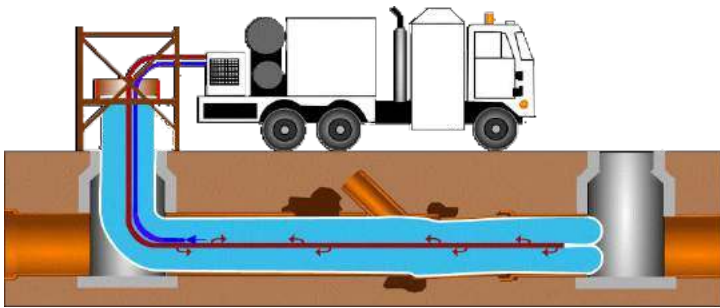
IKT Repeatability Testing



New Release of Cloud-Based CIPP Leak Assessment Application



After 50-Years, CIPP Can Finally Be Tested For Water Tightness



CCTV and Visual Inspection Is NOT ABLE To Test CIPP Liners



Common CIPP Defects, Missed By CCTV

- Accelerant Burns
- Accidental Cuts
- Bad Service Reconnections
- Bad Lateral Liners
- Blisters
- Delamination
- Defective Epoxy
- Equipment Damage
- Foreign Objects
- Improper impregnation
- Lower than Recommended Resin-to-Felt Ratios
- Pinholes
- Peeling
- Poor, Incomplete, or Uneven Curing
- Overheating
- Stretching
- Top-Hat Defects
- Wet-Out Failures
- Wrinkles, including Buckling, Fins, Folds, Lifts, & Ridges

CIPP Lining Process



1. CIPP Lining



2. Lateral

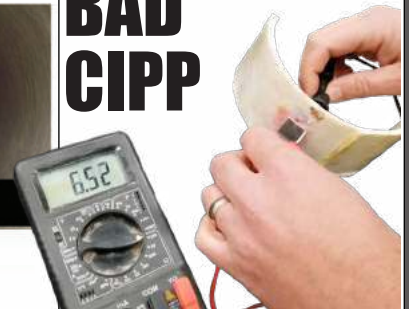


3. Rotary Cutter

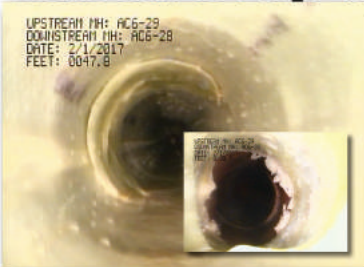


4. CCTV

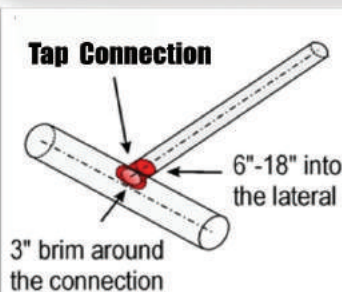
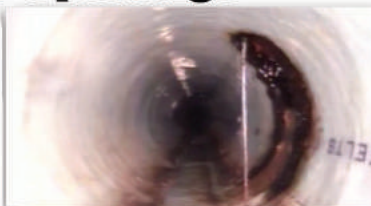
BAD CIPP



Defective Tap Re-Openings



CIPP May Leak More After Lining Due To Poorly Restored Tap Connections.



GOOD CIPP



Electro Scan Ground-Truths CIPP Watertight Condition.

CCTV vs. FELL Benchmark

WRc-Electro Scan U.S. Field Test



Monterey, California

(Below). The Lone Pine, Pebble Beach, Calif.

SOURCE: NASSCO CERTIFIED CCTV OPERATOR

A. POST-CIPP NASSCO CCTV REPORT – February 2, 2015

P/O No. 14277	Pipeline Segment Reference Shot 12 CITY ID L12	Date 20150205	Time 06:18	Location (Street Name and number) LA VINA AVENUE	Locality
Further Location details		Upstream Manhole Number D08-019	Rim to Invert	Grade to Invert	Rim to Grade
Downstream Manhole Number D08-020	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer Sanitary	Direction Downstream
Width	Shape Circular	Material VCI*	Ln. Method CI*	Pipe Joint Length	Total Length 512
					Length Surveyed 505.7
Purpose C	Sewer Category	Pre-Cleaning Jelling	Cleaned	Weather	Additional Information
					Year Laid
					Year Rehabilitated
					Tape / Media Number
					Height 8

Distance (Feet)	Code		Continuous defect	Value				Joint	Circumferential Location	
	Group/ Descriptor	Modifier/ severity		S/M/L	Inches		%		At / From	To
					1st	2nd				
0.0	AMH									
0.0	MWL						0			
33.6	TB	A			6				2	
37.8	TF	A			6				2	
117.4	TF	A			6				2	
123.4	TB	A			6				2	
140.7	TB	A			4				10	
255.3	TF	A			6				10	
286.5	TF	A			6				12	
332.3	TB	A			4				10	
358.3	TB	A			4				10	
390.6	TB	A			6				2	
506.7	AMH									

WRc U.S. Field Demonstration included a California Post-CIPP Sewer Evaluation.

A CCTV RATING **ZERO NASSCO OPRI SCORE**
B ELECTRO SCAN **15,998 GPD DEFECT FLOW RATE**

Zero CCTV Defects

End Inspection MH D08-020

Segment	Structural								O & M								Overall							
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
14077 D08-019 D08-020 20150205 06:18	0	0	0	0	0	0	0000		0	0	0	0	0	0	0000		0	0	0	0	0	0	0000	

Electro Scan Found & Measured All Leaks, Missed by U.S. CCTV

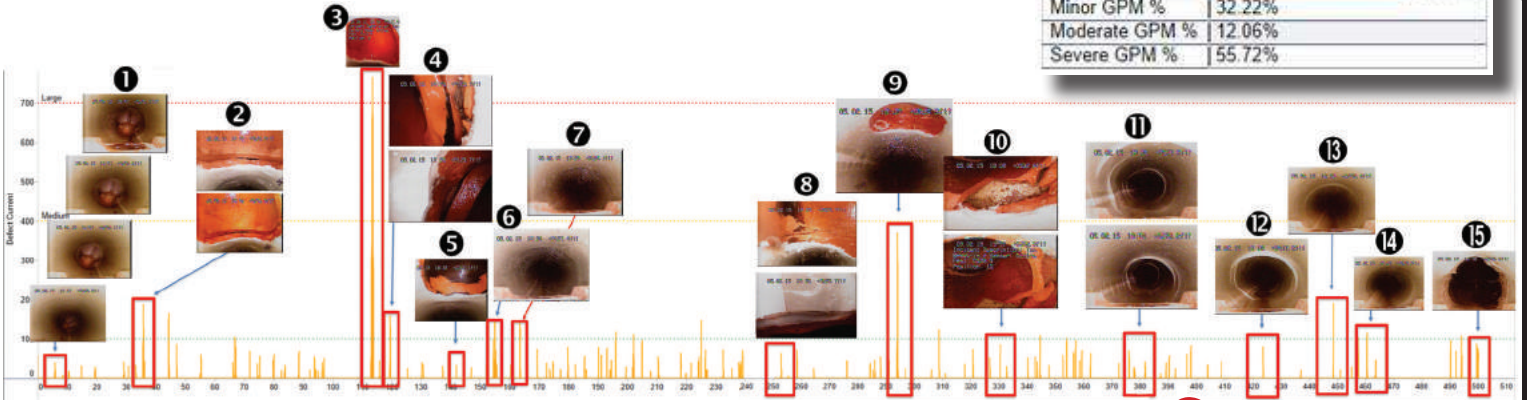


Post-CIPP Assessment

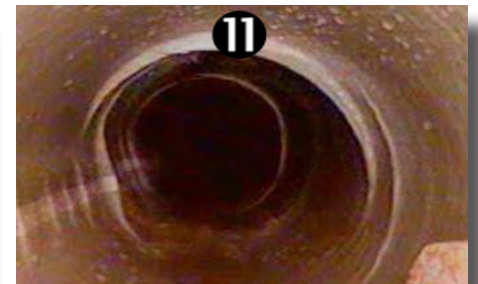
GPM SUMMARY	
Minor GPM	3.580
Moderate GPM	1.340
Severe GPM	6.190
Total GPM	11.110
GPD	15,998
GPD10M	21,101
Minor GPM %	32.22%
Moderate GPM %	12.06%
Severe GPM %	55.72%

SOURCE: ELECTRO SCAN CERTIFIED FELL OPERATOR

B. ELECTRO SCAN INSPECTION – July 8, 2015

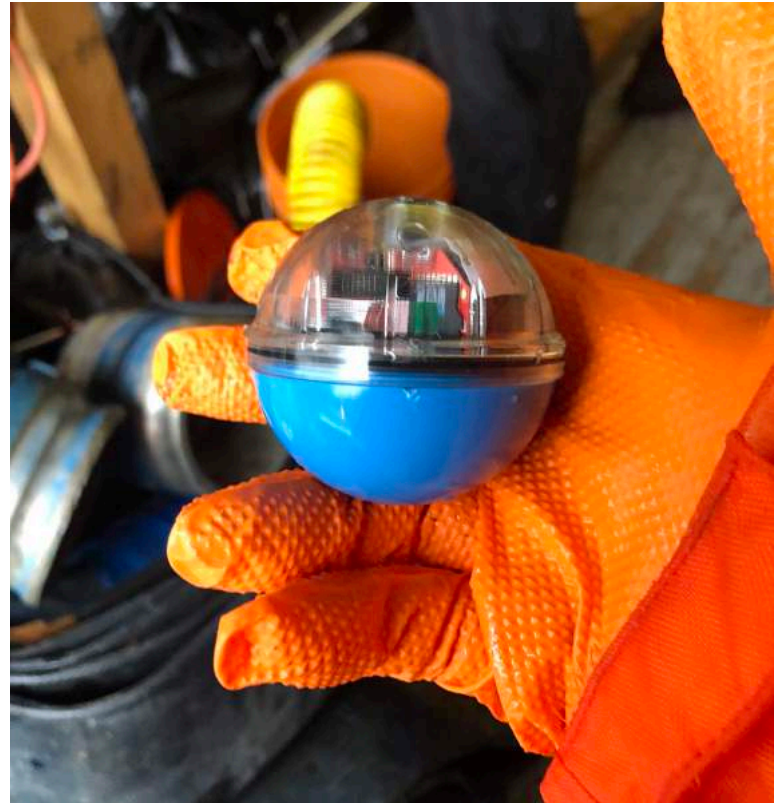


+20 Electro Scan Defects





ELECTRO SCAN v. ACOUSTIC BALL



SAME DAY. SAME PIPES.

		# Leaks
ELECTRO SCAN	REPORT IN MINUTES	55
ACOUSTIC BALL	REPORT TOOK WEEKS	0

Electro Scan – By Pipe Material

ABS
ACP
BRK
CMLSP
CON
CIPP
DIP
FRP
FRPM
GRP
HDPE
ORP
PB

Acrylonitrile-butadiene-styrene
Asbestos Cement Pipe
Brick
Cement Mortar Lined Steel
Concrete
Cured-In-Place Pipe
Ductile Iron (w/Protector 401)
Fiberglass Reinforced Pipe
Fiberglass Reinforced Polymer
Glass Reinforced Pipe
High Density Polyethylene
Orangeburg Pipe
Polybutylene

PCCP
PE
PEP
PP
PVC
RCP
RPM
RTR
SIPP
SPR
TC
VCP

Prestressed Concrete Cylinder Pipe
Polyethylene
Pitch Fiber Pipe
Plastic Pipe
Polyvinyl Chloride
Reinforced Concrete Pipe
Reinforced Plastic Mortar
Reinforced Thermosetting Resin
Spray-in-Place Pipe
Spiral Wound Pipe
Terracotta or Clay Pipe
Vitrified Clay Pipe



PRE-REHABILITATION



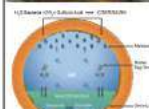
Asbestos Cement Pipe

Electro Scan FELL is unique in its ability to geometrically map the remaining wall, i.e. corrosion of ACP.

Finding & Measuring Pipe Corrosion Using Electro Scan's Patented Data Analytics

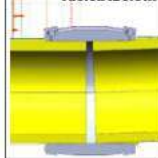
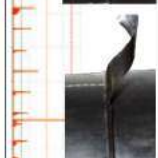
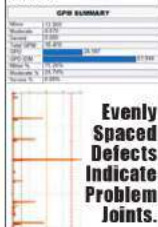


As demonstrated by independent benchmarks, since acoustic and transient pressure sensors are unable to provide detail geometric assessments of pipe walls, and therefore unable to estimate remaining pipe walls, Electro Scan represents a game changing solution to assess & prioritize ACP.



High Density Polyethylene Pipe

Poor mechanical or fused joints are the Achilles heel of HDPE, and not seen by CCTV cameras or heard by acoustic data loggers or sensors. But, found & quantified by FELL in accordance with ASTM F2550.



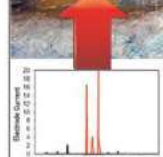
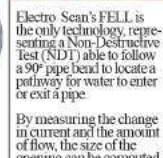
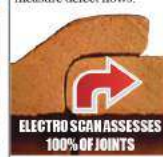
Prestressed Concrete Cylinder Pipe

Electro Scan represents the only technology able to reliably & consistently find & measure leaks in GPM. While other devices may attempt to locate corroded wire mesh that may or may not indicate a weakness in the pipe wall, Low Voltage Conductivity represents a game-changing solution to provide unbiased leak locations & severity for each defect.



Vitrified Clay Pipe

It doesn't matter whether you evaluate VCP from the outside or inside of a pipe, CCTV, Laser, LIDAR, Sonar, GPR, or Acoustic, are not able to detect or measure defect flows.

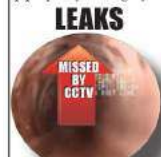


POST-REHABILITATION



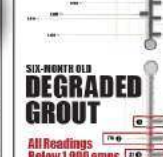
Cured-In-Place Pipe

CIPP liners may not be watertight and defects not seen by certified operators using CCTV cameras. As a result, ASTM F2550 should be added to CIPP specifications to ensure pipe quality & integrity.



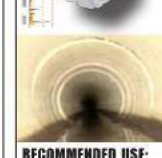
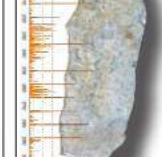
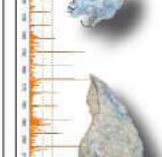
Grout

FELL is now preferred over using traditional packers to test joints for water tightness, due to FELL's Non-Destructive Testing (NDT) of joints, laterals, and cracks.



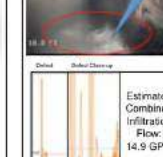
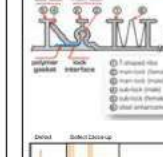
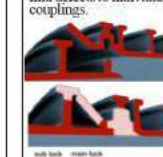
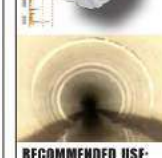
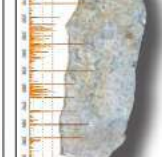
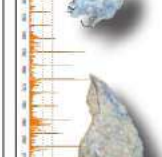
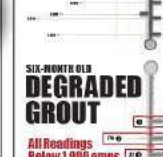
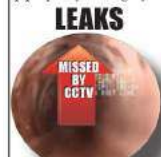
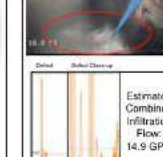
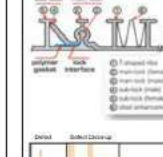
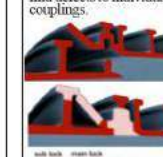
Spray-In-Place Pipe

Locking individual wraps is key to any successful Spiral Wrap Pipe project, with problems not identified by CCTV.



Spiral Wrap Pipe

In contrast, Electro Scan FELL inspection can find defects to individual couplings.



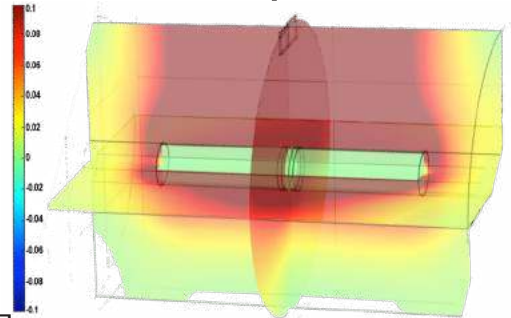
Technology

“Electro Scan’s Focused Electrode Leak Location, is a Game Changing Technology”

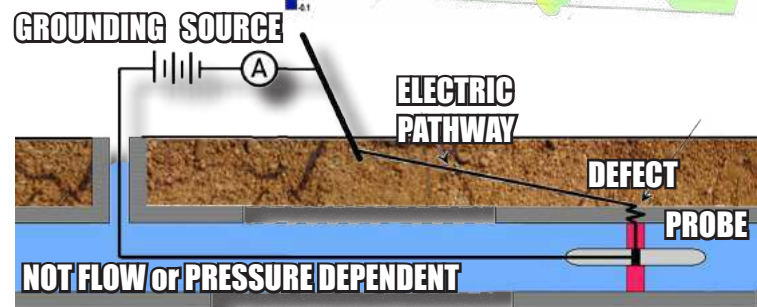


HOW DO WE FIND EVERY LEAK?

If a pipe leaks electricity, it leaks water. And can be measured in gallons per minute or litres per second.



Completing The Circuit Finds Every Leak!



FELL FINDS LEAKS MISSED BY OTHERS



Acoustic Sensors



Dye Flood Testing



Conductivity



Sonar

Results independently calibrated using COMSOL Multiphysics®.

COMSOL

“Electro Scan’s Machine-Intelligent Data Replaces Time Consuming, Often Inaccurate Acoustic & Visual Guesswork.”



SSIP

SAFETY
SCHEMES IN
PROCUREMENT

Services

Contract Services

Direct Services By Electro Scan
(UK) Limited Staff

Technology Licensing

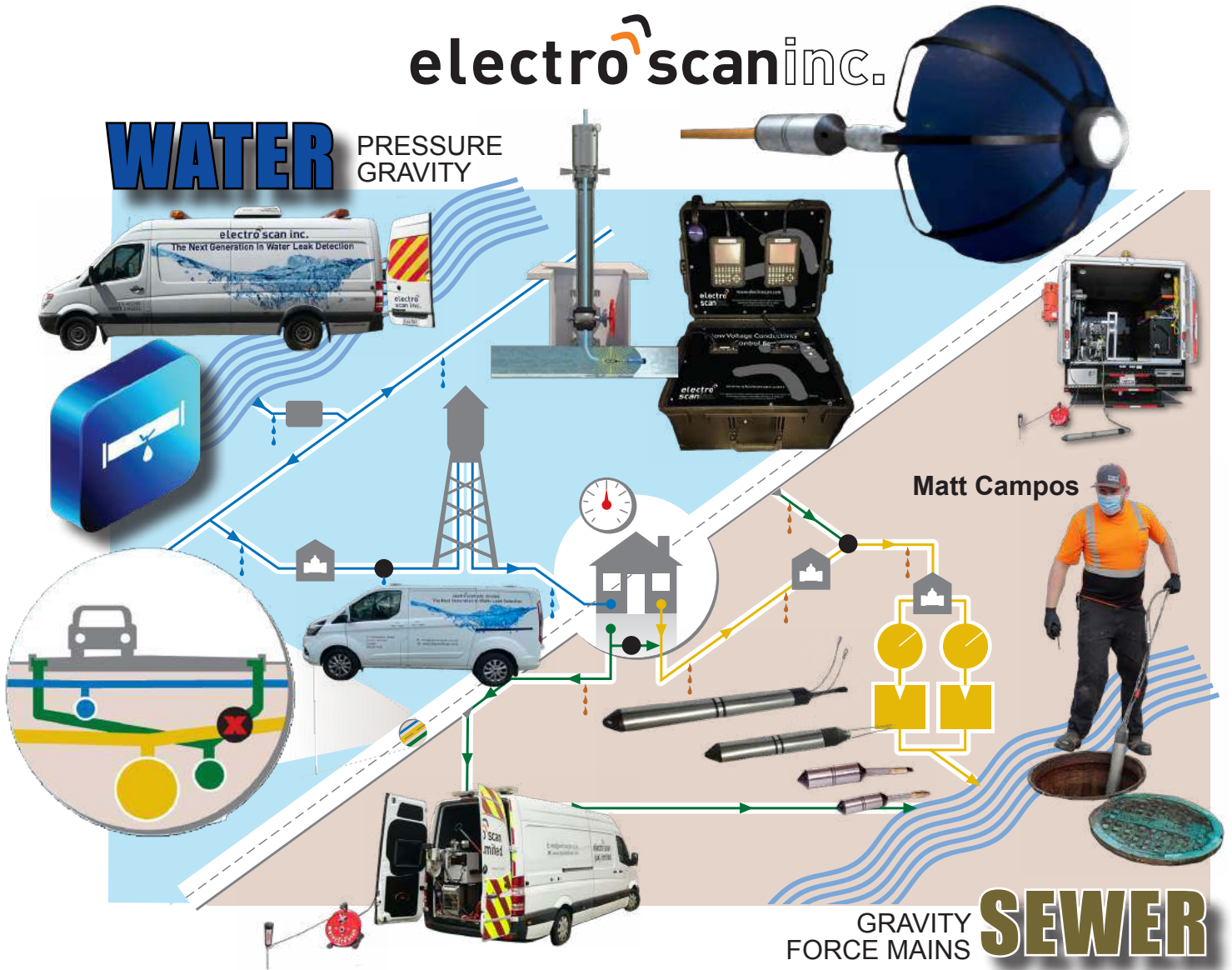
Licensing to 3rd Party Contractors
Equipment Provided, But Not Sold
to Perform Large Scale Projects



electro scan inc.

WATER

PRESSURE
GRAVITY



**BEST
IN
CLASS**



Accurate, Fast, Repeatable

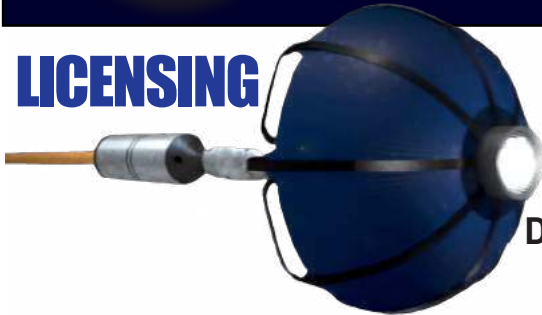


**Field Data
5-Minutes
or Less.**



**BEST
PRACTICE**

LICENSING



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