

NEW SALES & SERVICE CENTRE

Electro Scan (UK) Limited



New Address

Unit 15 Kembrey Trade Centre
Aspen Close, Swindon SN2 8AJ

Brad Weston, Company Director
Company Nr: 9211607
brad@electroscan.com
Mobile: +44 7739 358611

Location

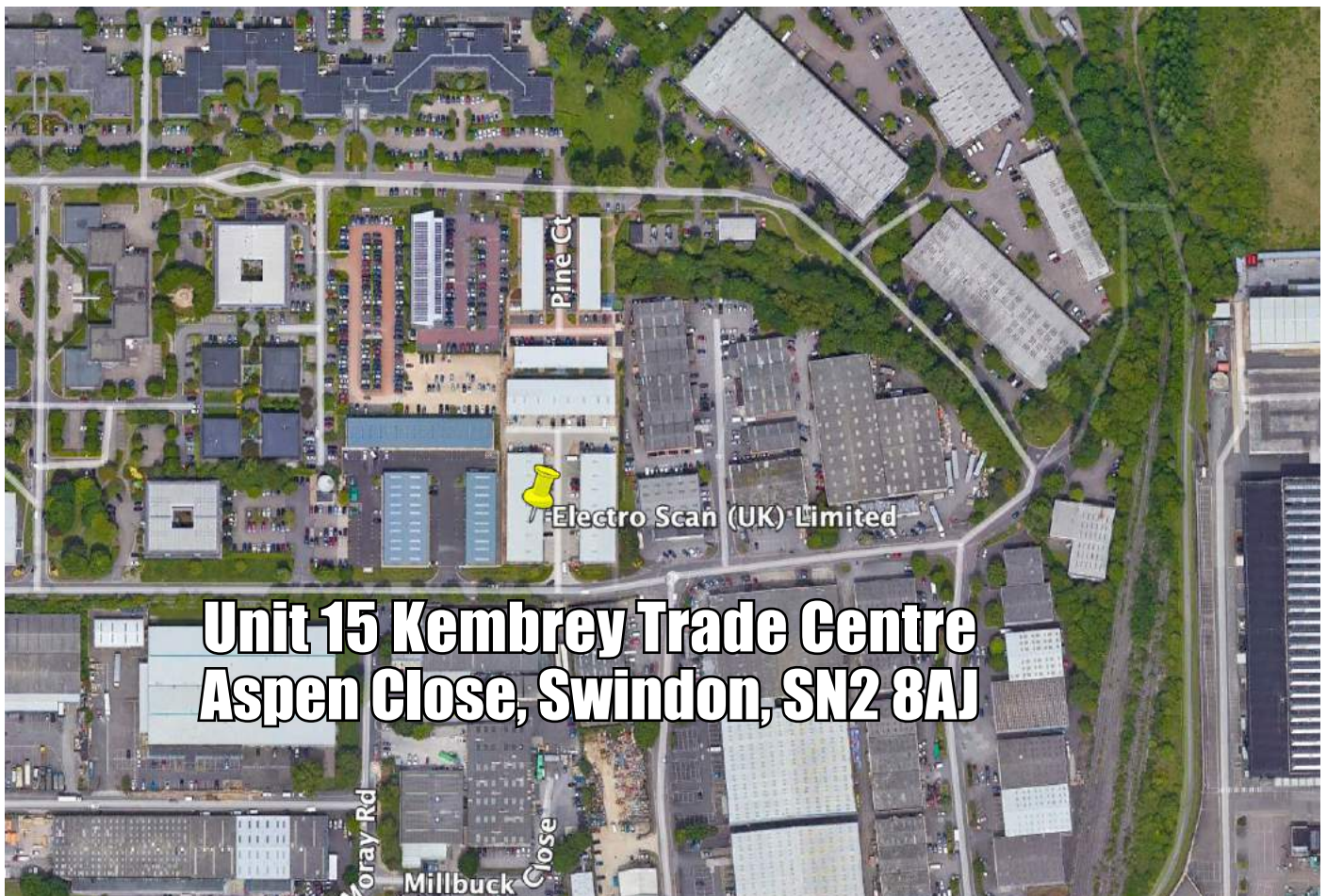
The Kembrey Trade Centre is situated off Kembrey Street, adjacent to the Elgin/Techno Industrial Estates. Access to Kembrey Street is just off the Great Western Way dual carriageway, which provides access to Junction 15 via the A419 and Junction 16 of the M4 motorway.

Local Map



Email or Call to Arrange a Visit

Brad Weston, brad@electroscan.com, Mobile: +44 7739 358611



DELTA



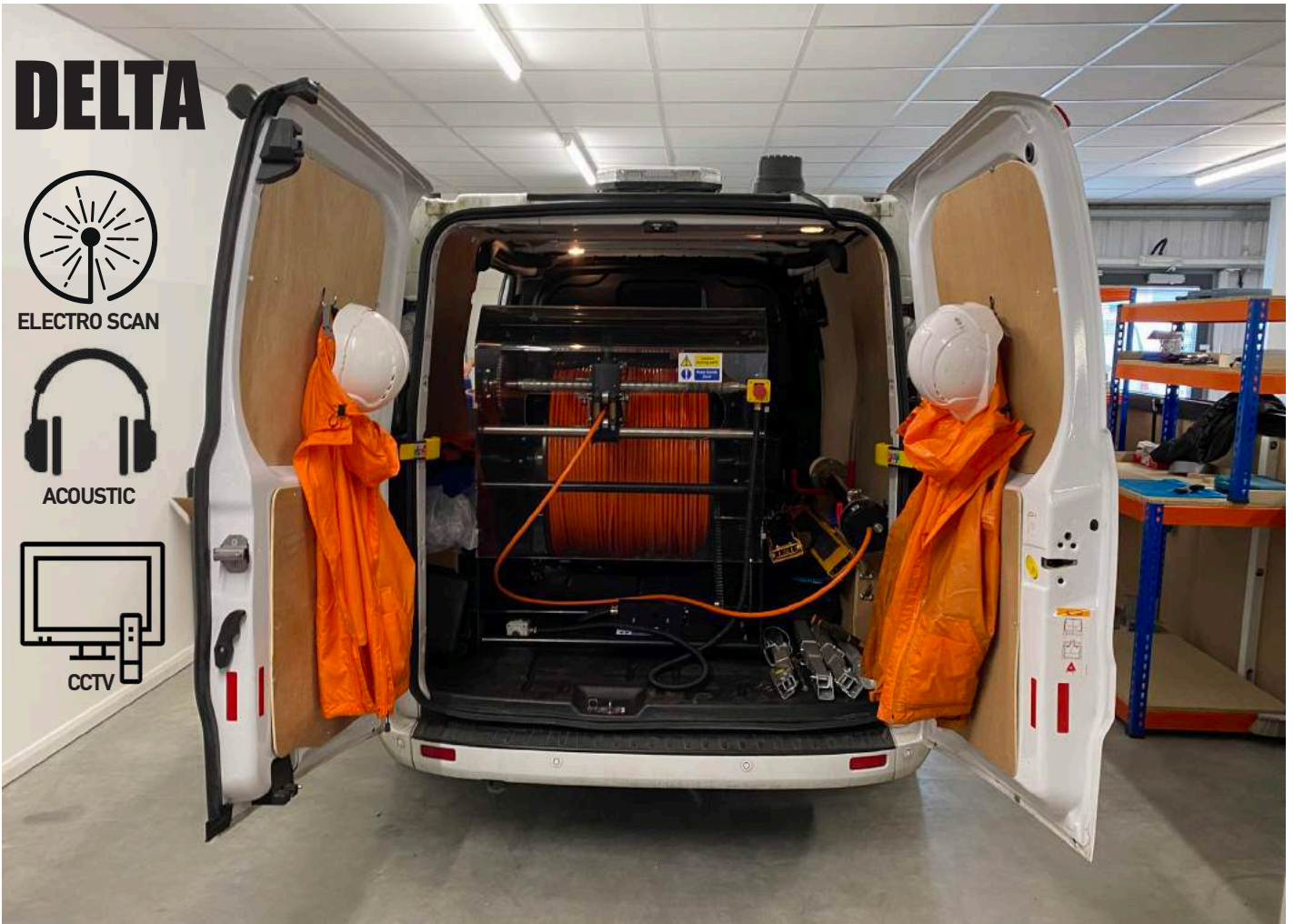
ELECTRO SCAN



ACOUSTIC



CCTV



New Pressurised Water Leak Detection Sales & Service

TRIDENT



ELECTRO SCAN



CCTV



ELECTRO SCAN DELTA



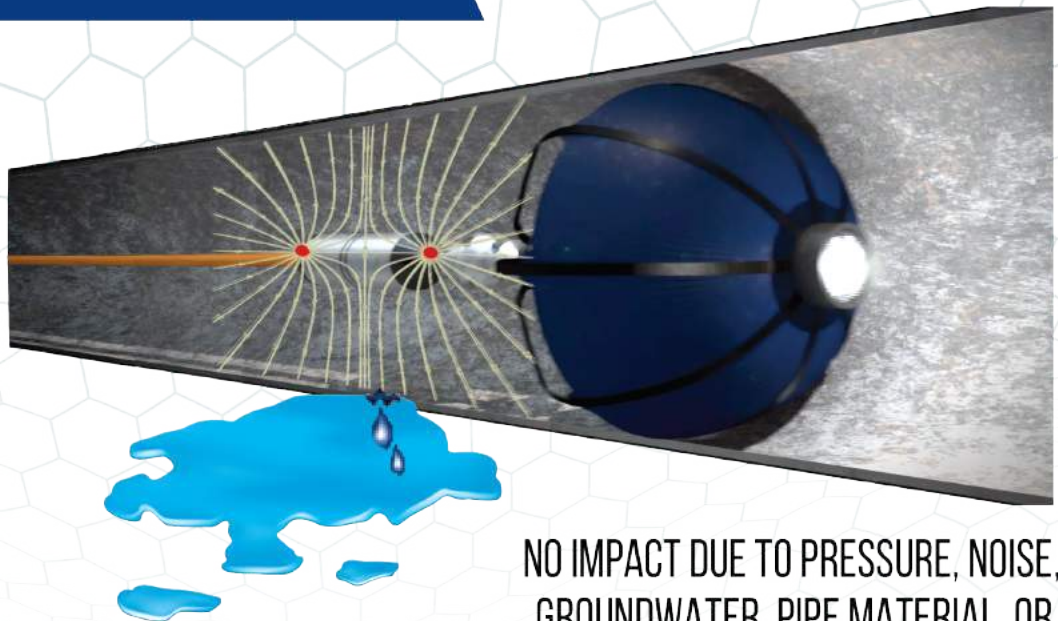
CONDUCTIVITY



CCTV

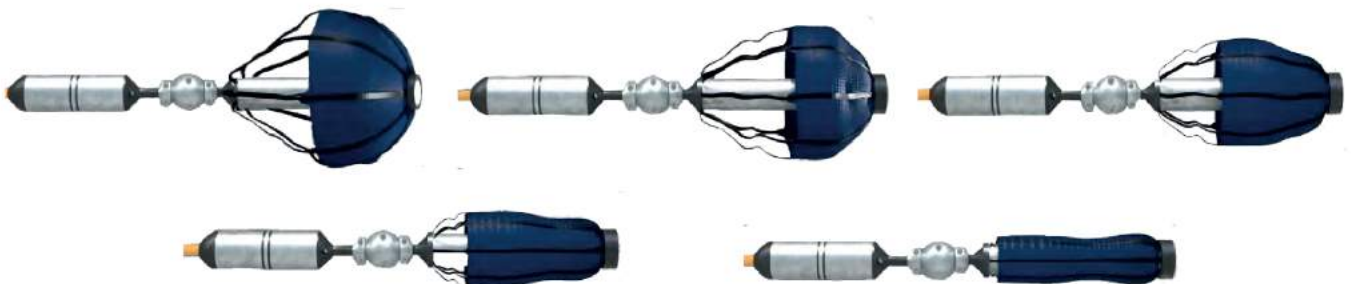


ACOUSTIC*



NO IMPACT DUE TO PRESSURE, NOISE,
GROUNDWATER, PIPE MATERIAL, OR
CUSTOMER USAGE.

Condition	Performance
Features	Low Voltage Conductivity FELL, CCTV, Acoustic Hydrophone, Pressure Sensor
Pipe Diameters	3-60 inches (76-1500mm)
Pressure	ZERO to 12 bar (174 psi)
Temperatures	41-86° F / 5-30° C
Common Launch Points	Air Release Valves, Blow Off Valves, Gate Valves, Hot Taps, Hydrants, and Meters
Flow Rate	Min. Flow Rate for Hydrochute Propulsion is 0.3m/sec. Pull-Through able to handle NO FLOW conditions.
Pricing	Per Day or Per Meter Based on Project Size, Access Difficulty, Insertion Points, Diameters, and Traffic Control
Pipe Lengths Per Survey	1km Recommended for CCTV. Up to 2km with specialised equipment.
Average Production	1-2 Pipe Sections per Day



* Integrated Acoustic lets utilities compare results with Conductivity, revealing what they are 'not' hearing

ELECTRO SCAN TRIDENT

Pressurized Water Main Leak Detection.
Finding & Measuring Leaks in GPM or LPS.



CONDUCTIVITY



CCTV



Condition	Performance
Probe Sensors	Low Voltage Conductivity FELL and CCTV
Pipe Diameters	4-10 inches (100-255mm)
Pressure	0 to 175 psi (12 bar)
Temperatures	5-30°C, 41-86°F
Flow Rate	Push Cable able to handle flow or no-flow conditions
Pricing	Per Day or Per Meter Based on Total Project Size
Launch Points	Hydrants, Air Release Valves, Blow Off Valves, Gate Valves, Hot Taps, Meters
Pipe Length Per Survey	Up to 400ft (120m) in either direction from access
Construction	High impact ABS & powder-coated, zinc-plated mild steel
Dimensions (Length x Width)	5 inches x 1.6 inches
Camera Features	Display: 10.1", 1280 x 800 HD color TFT Storage: Internal 128Gb, USB flash storage supported Power Options: Mains Input (100-240 VAC), DC Output (16 VDC) or Built-In Battery (4S2P) Focal Range: 10mm to ∞ Active Pixels: 768 x 492 (NTSC) / 765 x 582 (PAL) LED Luminance: ≥ 208 Lumens Resolution: ≥ 460 TVL

Upgrade Your Sewer CCTV Vans To Find Infiltration & Certify CIPP as Watertight

ES-600 CCTV TRUCK INTEGRATION ES-670, ES-660, ES-650, ES-400

Aries



Cues



IBAK



Ipek



Rausch



Custom



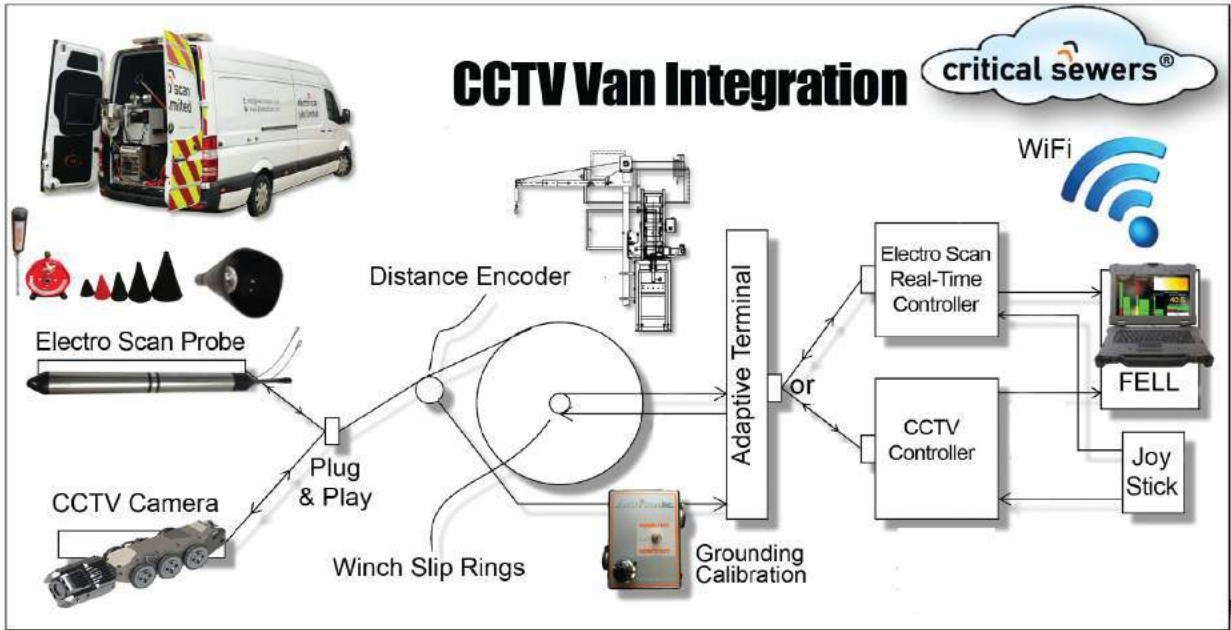
ES-670

ES-660

ES-650

ES-400 for Mechanical Reel

ES-400 for Push Rod Reel





FEATURED CASE STUDIES

Australia

Germany

United States

United Kingdom

United Arab Emirates

**WHY CCTV CAMERAS
CAN'T 'SEE' UNDERGROUND
LEAKS AND CAN'T CERTIFY
PIPES AS WATERTIGHT?**

BREAKING NEWS

Electro Scan Surpasses 2,500 Surveys of Cured-In-Place Pipe



1° 1°
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03:27p 01.23.201

CIPP Lined Pipe Surveyed By Electro Scan (UK) Ltd.



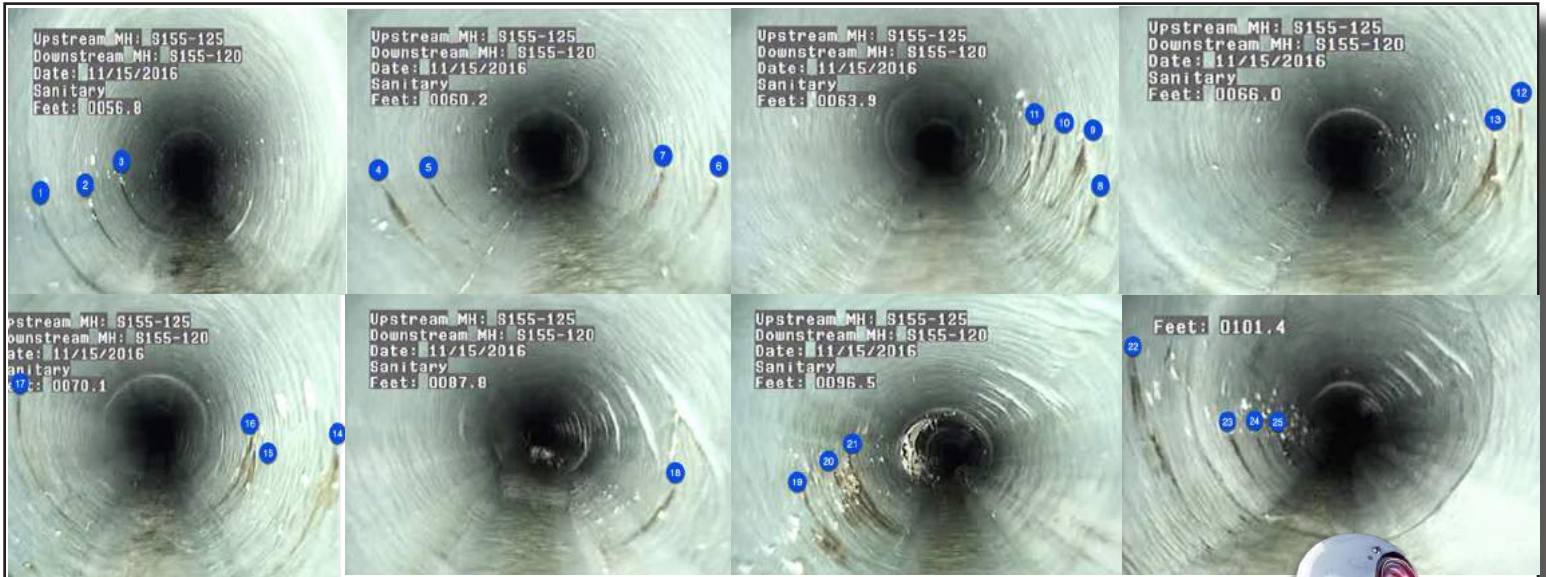
**APPROVED USING UK
CCTV STANDARDS**



UNFORTUNATE FINDINGS

CCTV ~~≠~~ WATERTIGHT!

Role of Visual Inspection Reduced. CCTV Found to Routinely Miss Leaks in Pipes.



Why Utilities Shift Away From CCTV* To Assess Underground Pipes?

**Solved
By AI?**



- | | |
|---|----|
| 1. CCTV Cameras Only Visually 'See' 20% of the Pipe. | NO |
| 2. CCTV Can't See Leaks Which Are Leading Cause of Sinkholes. | NO |
| 3. CCTV Can't Quantify Leaks in Industry Standard Gallons per Minute. | NO |
| 4. Other Technologies More Accurate, Better for Repair Selection. | NO |
| 5. CCTV Can't Tell Whether Cracks Go Through a Pipe Wall. | NO |
| 6. CCTV Can't Tell Whether Joints Are Watertight. | NO |
| 7. CCTV Can't Verify Trenchless Repairs or Relined Pipes Are Watertight. | NO |
| 8. CCTV Not Able to Measure Pipe Wall Thickness or Corrosion. | NO |
| 9. CCTV Can't Tell If Connections Are Watertight, Before or After Repair. | NO |
| 10. High Costs Incurred to Bypass Pump Pipe Before Able to CCTV. | NO |

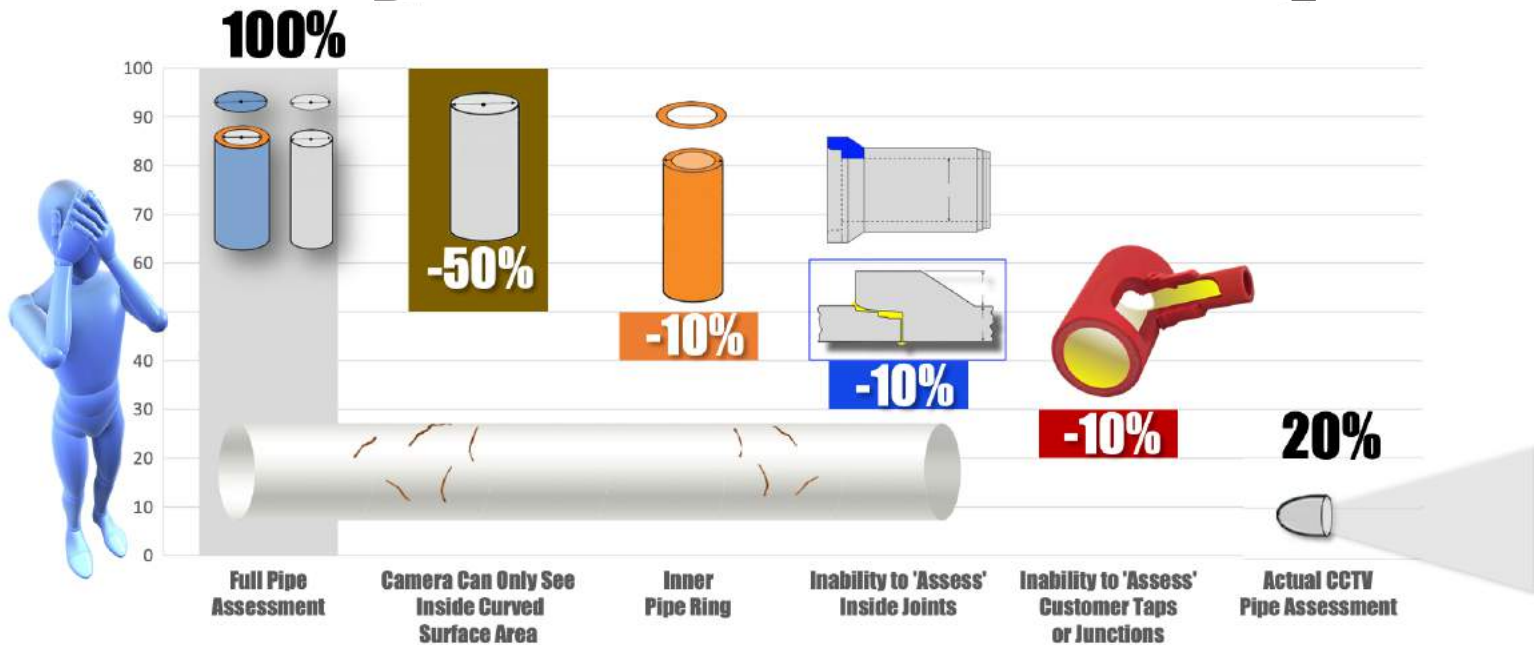


*** AI-CCTV unable to overcome weaknesses of visual inspection.**



What Prevents 'SEEING' Leaks to Locate & Quantify SEWER INFILTRATION?

10 VISUAL-BASED CCTV CAMERAS & AI ALGORITHMS Only 'Sees' 20% of a Pipe

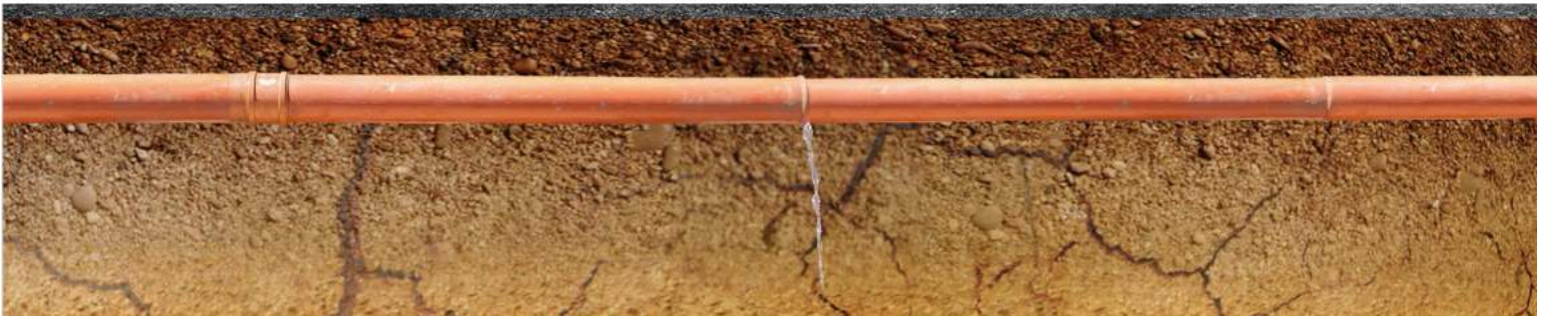


9 FALSE-POSITIVE CCTV READINGS MAY CONTRIBUTE TO Missed Sinkholes & Voids



8 CURRENT WRC & NASSCO STANDARDS MAKE NO ATTEMPT TO Identify or Measure Leaks

C CRACK 6-1 CL Longitudinal 6-2 CC Circumferential 6-2 CM Multiple 6-2 CS Spiral 6-2	F FRACTURE 6-7 FL Longitudinal 6-7 FC Circumferential 6-7 FM Multiple 6-7 FS Spiral 6-7	B BROKEN 6-14 BV Solid Visible 6-14 BVV Solid Visible Beyond Defect 6-14 BVV - Void Visible 6-14 BVV - Void Visible Beyond Defect 6-14	H HOLE 6-16 HV Solid Visible 6-16 HV - Void Visible 6-16 HV - Void Visible Beyond Defect 6-16	D DEFORMED 6-18 DV Deformed 6-18 DV - Vertically (DRA) 6-18 DH Deformed 6-18 DH - Horizontally (chick) 6-18	X COLLAPSE 6-22 XP Pipe Collapse 6-22 XB Brick Collapse 6-22	J JOINT 6-25 J0 Joint Offset 6-25 (Open)	D DEPOSITS 6-1 DA Attached 6-1 DA - Flange 6-1 DCA Clean 6-1 DAB - Raging 6-2 DAD - Other 6-2	D DEPOSITS 6-1 DB Settled 6-1 DB - Fine Material 6-2 DBV - Void 6-2 DNC - Hard/Impacted 6-2 DNZ - Other 6-2	D DEPOSITS 6-1 (continued) DN Degraded 6-1 DN - Fine Material 6-2 DN - (H & J) 6-2 DNZ - Other 6-2	R ROOTS 6-7 RF Fine 6-7 RF - Root 6-7 RF - Lateral 6-7 RCC - Corrosion 6-7	R ROOTS 6-7 (continued) RM Medium 6-7 RM - Root 6-7 RM - Lateral 6-7 RCC - Corrosion 6-7	R ROOTS 6-7 (continued) RR Bad 6-7 RR - Root 6-7 RR - Lateral 6-7 RCC - Corrosion 6-7	R ROOTS 6-7 (continued) RT Tap 6-7 RT - Root 6-7 RT - Lateral 6-7 RCC - Corrosion 6-7
S SURFACE DAMAGE 6-30 SM Roughness 6-30 SM - Increased 6-30 SM - Mechanical 6-31 SMC - Chemical Attack 6-31 SMZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SMV Aggregate 6-30 SMV - Visible 6-30 SMVM - Mechanical 6-31 SMVC - Chemical Attack 6-31 SMZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SAP Aggregate 6-30 SAP - Projecting 6-30 SAPM - Mechanical 6-31 SAPVC - Chemical Attack 6-31 SAPZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SAM Aggregate 6-30 SAM - Missing 6-30 SAMM - Mechanical 6-31 SAMVC - Chemical Attack 6-31 SAMZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SMY Reinforcement 6-30 SMY - Visible 6-30 SMYM - Mechanical 6-31 SMYVC - Chemical Attack 6-31 SMYZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SMP Reinforcement 6-30 SMP - Projecting 6-30 SMPM - Mechanical 6-31 SMPVC - Chemical Attack 6-31 SMPZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SRC Reinforcement 6-30 SRC - Corroded 6-31 SRMC - Mechanical 6-31 SRVC - Chemical Attack 6-31 SRZ - Not Friction 6-31	I INFILTRATION 6-13 IW Wrapper 6-13 ID Draper 6-13 IR Rubber 6-13 IG Gasket 6-13	OB OBSTACLES/ OBSTRUCTIONS 6-19 OOB Rock or Masses 6-19 OOB Pipe Material is loose 6-19	OB OBSTACLES/ OBSTRUCTIONS 6-19 OOB Object protruding through wall 6-19 OOB Object wedged in joint 6-19	OB OBSTACLES/ OBSTRUCTIONS 6-19 OOB Object through 6-19 OOB Joint between connection/junction 6-19 OOB Formed Pipe 6-19 OOB C&S 6-20	OB OBSTACLES/ OBSTRUCTIONS 6-19 OOB Joint between connection 6-19 OOB Construction 6-20 OOB Rock 6-20 OOB Other 6-20	V VERMIN 6-31 VR Rat 6-31 VC Cockroach 6-31 VZ Other 6-31	
S SURFACE DAMAGE 6-30 SMW Missing Wall 6-31 SMWC - Mechanical 6-31 SMVC - Chemical Attack 6-31 SMWZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SSS Surface Spalling 6-31 SSM - Mechanical 6-31 SSVC - Chemical Attack 6-31 SSWZ - Not Friction 6-31	S SURFACE DAMAGE 6-30 SZ Other 6-31 SZM - Mechanical 6-31 SZVC - Chemical Attack 6-31 SZWZ - Not Friction 6-31	LE LINING FAILURE 6-30 LFL Insulated Lining 6-30 LFLV Defective Coat 6-30 LFLM Blurred Lining 6-30 LFLS Spurred Co-Thickness 6-30 LFLA Abandoned Lining 6-30 LFLZ Other 6-30	LE LINING FAILURE 6-30 (continued) LFLC Coated Service 6-30 LFLK Coated Service 6-30 LFLM Blurred Lining 6-30 LFLS Spurred Co-Thickness 6-30 LFLA Abandoned Lining 6-30 LFLZ Other 6-30	WV WELL FAILURE 6-36 WV1 Longitudinal 6-36 WV2 Circumferential 6-36 WV3 Multiple 6-36 WV4 Spiral 6-36 WV5 Laminated 6-36	RP POINT REPAIR 6-42 RPF Pipe Repair 6-42 RPF - Obstructive 6-42 RPF Patch Repair 6-42 RPF - Obstructive 6-42	RP POINT (end) REPAIR 6-42 RPL Localized Lining 6-42 RPL - Obstructive 6-42 RPLD - Obstructive 6-42 RPLZ - Obstructive 6-42	BRICKWORK 6-48 BR - Displaced 6-48 BR - Missing 6-48 BR - Dropped Invert 6-48	BRICKWORK 6-48 (continued) BRM Missing Mortar 6-48 BR - Invert 6-48 BR - Structure 6-48 BR - Lining 6-48				

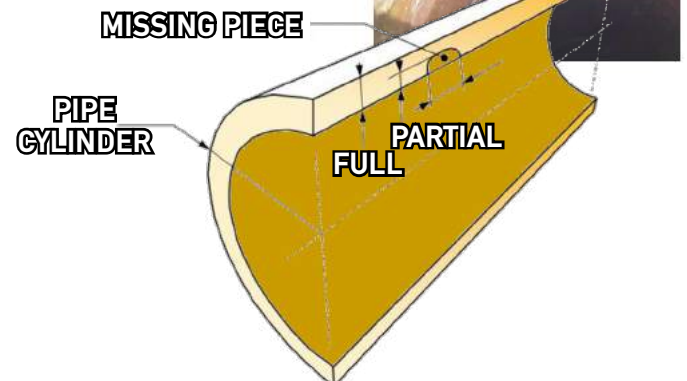
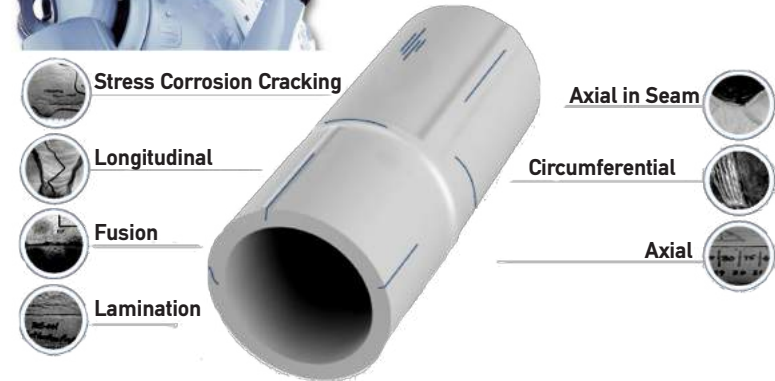


7 SUPERFICIAL CRACKS CALLED OUT BY CCTV, CANNOT CONFIRM IF Cracks Go Through Wall



CCTV Cameras Can't Tell if Cracks or Bad Joints Leak Through Pipe Wall Leading to Poor Repair Decisions.

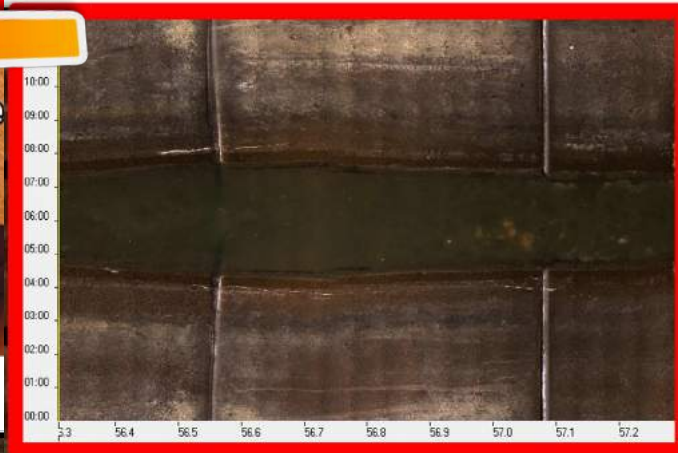
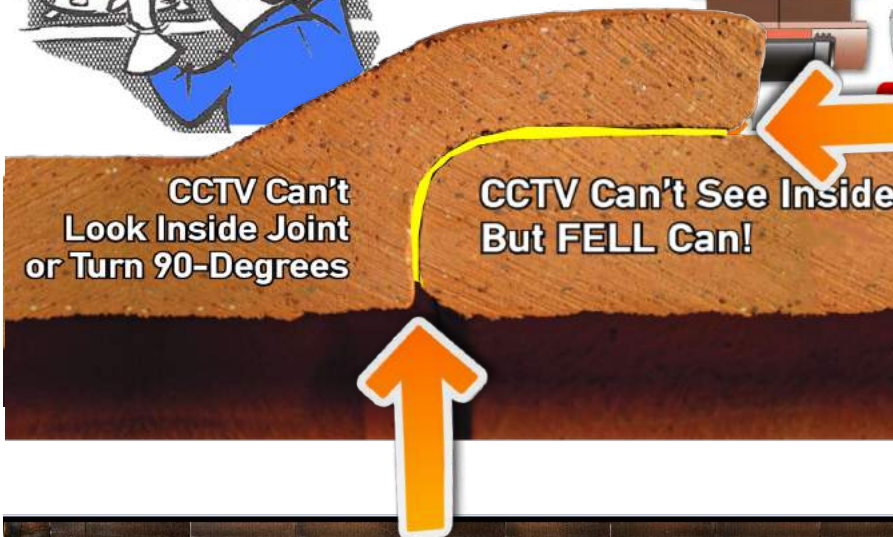
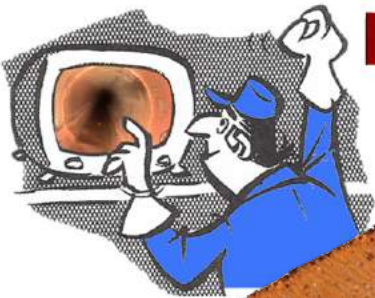
AI CAN'T SEE WHAT CCTV CAN'T SEE!



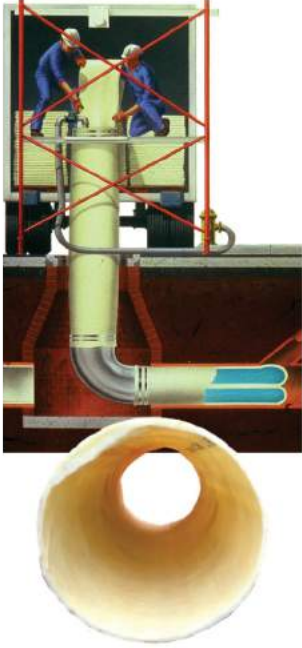
6 CAMERAS ARE NOT RECOMMENDED TO ACCEPT OR CERTIFY Post-Rehabilitation



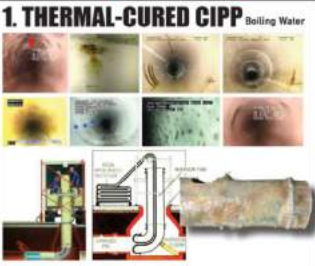


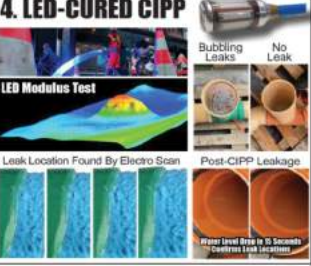
5 CCTV, VISUAL, OR AI INSPECTIONS CANNOT TELL WHETHER Joints Are Watertight?



4 CCTV, VISUAL, OR AI INSPECTIONS CANNOT TELL WATER TIGHTNESS OF CURED-IN-PLACE PIPE LINER



CIPP By Curing Method

1. THERMAL-CURED CIPP Boiling Water 	3. UV-CURED CIPP  Missed By Acoustic Sensors & CCTV Cameras. Leaks Found & Measured by Electro Scan. UV-Cured Fiberglass CIPP
2. STEAM-CURED CIPP  Defective CIPP	4. LED-CURED CIPP  LED Modulus Test Leak Location Found By Electro Scan Bubbling Leaks No Leak Post-CIPP Leakage Water Level Rise In 10 Seconds Confirms Leak Location



3 CCTV CANNOT BE USED TO ASSESS THE INSIDE OF SEWER MAINS WHEN PIPES ARE Full of Water or Surcharged



2 FALSE-POSITIVE CCTV MAY INADVERTANTLY APPROVE Leaks in Plastic Pipe



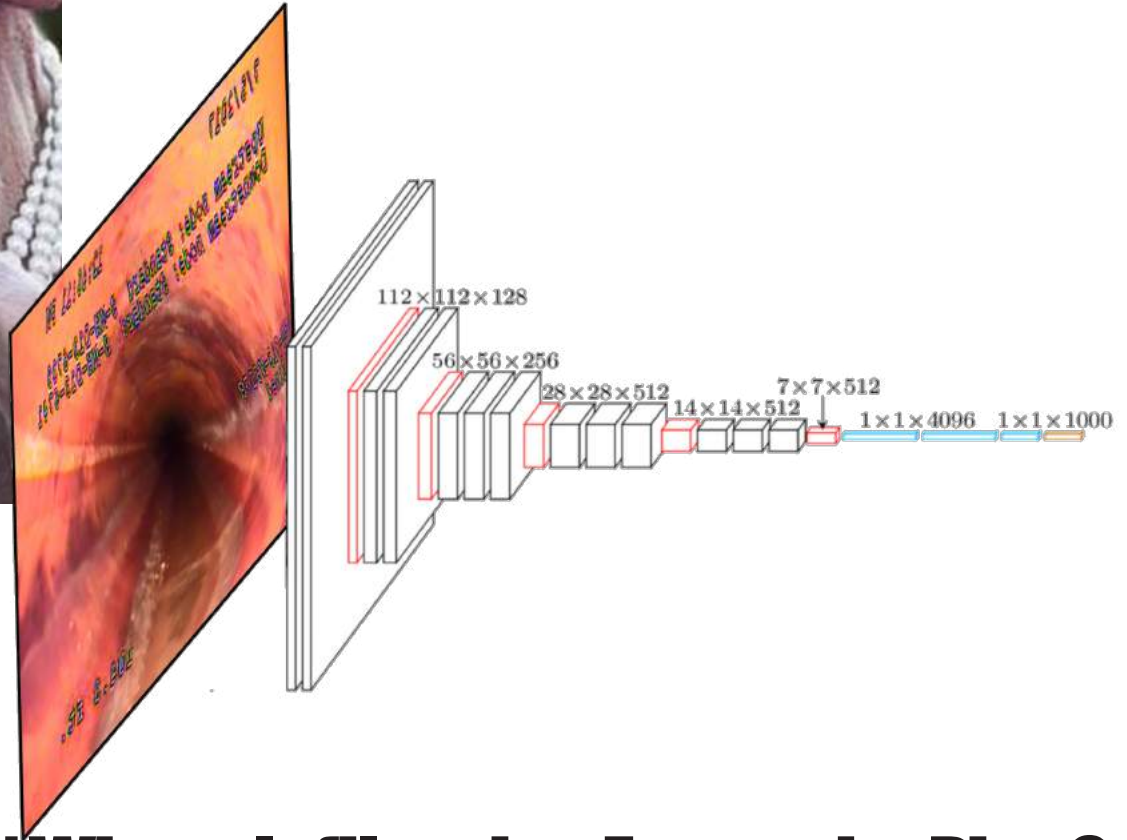
1 NOT POSSIBLE FOR CCTV OR AI TO TELL WHETHER Laterals Are Watertight?



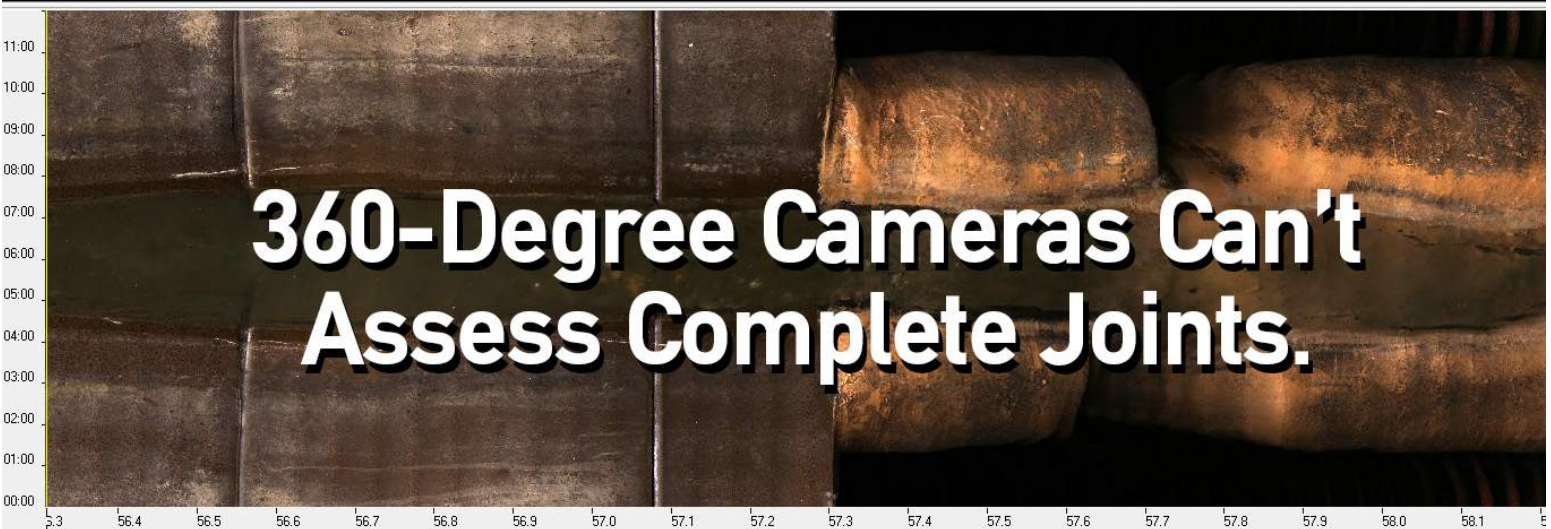
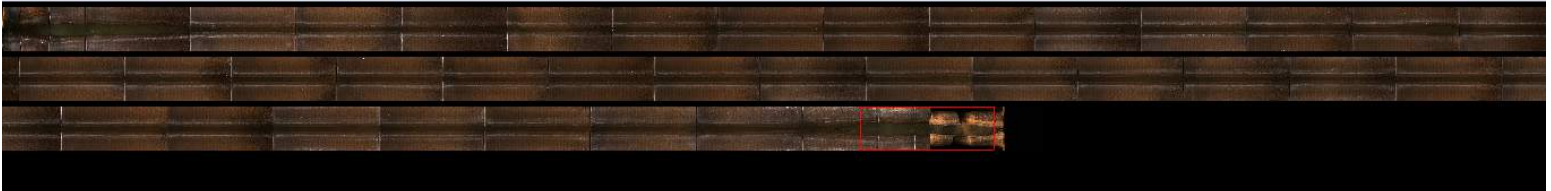
Cameras Can't Assess What They Can't See.

AI-CCTV Now Viewed as Lipstick on a Pig.

IF CCTV CAN'T TELL IF A CRACK GOES THRU A PIPE WALL, AI-CCTV CAN'T EITHER.



**Can You 'See' Where Infiltration Enters the Pipe?
Neither Can High Resolution Cameras or AI!**



Manual-Based CCTV

Inaccurate, Error-Prone, Inconsistent, Not Repeatable, No Leakage Measurements, Can't 'See' Defects in CIPP Liners

**FALSE-POSITIVE
READINGS CALL
'BAD CIPP' AS
'GOOD.'**



Machine-Based FELL



Each defect width & intensity is measured in the field according to Ohm's Law.



Area of each defect is point cloud defined & processed to eliminate redundant data.



Area under the curve determined as part of final post-processing in the Cloud.

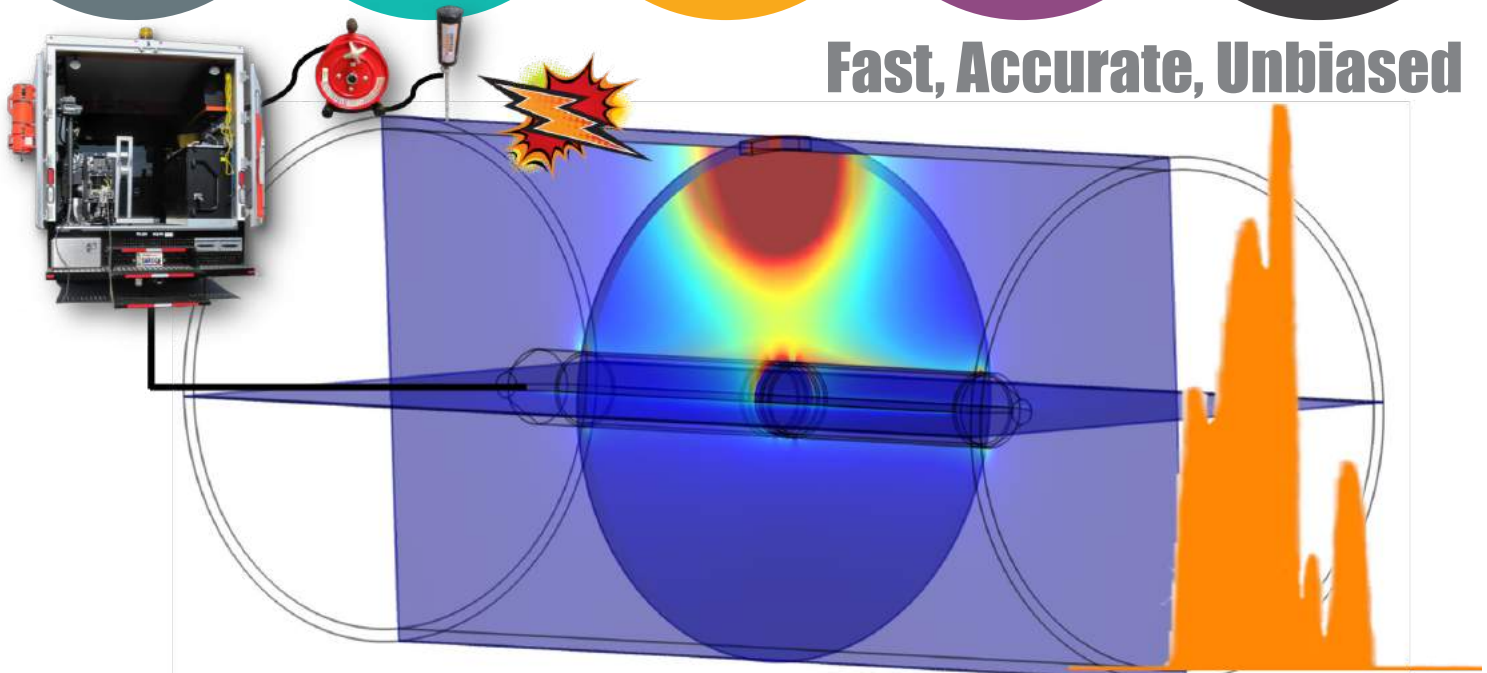


Torricelli's Law assumes One Foot of Head Pressure & One Percent Pipe Gradient.



GPM derived & displayed in Critical Sewers[®] cloud, including GPD/IDM.

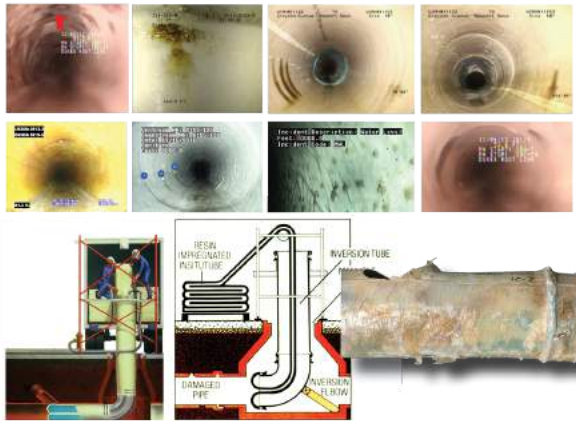
Fast, Accurate, Unbiased



BEWARE

CCTV Tends to Approve All CIPP Regardless of Curing Method!

1. THERMAL-CURED CIPP Boiling Water



2. STEAM-CURED CIPP



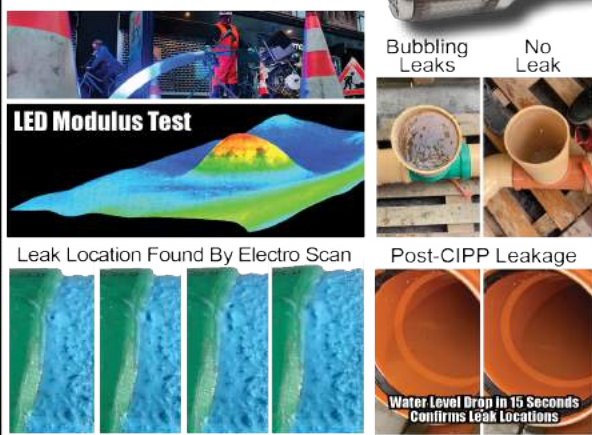
3. UV-CURED CIPP



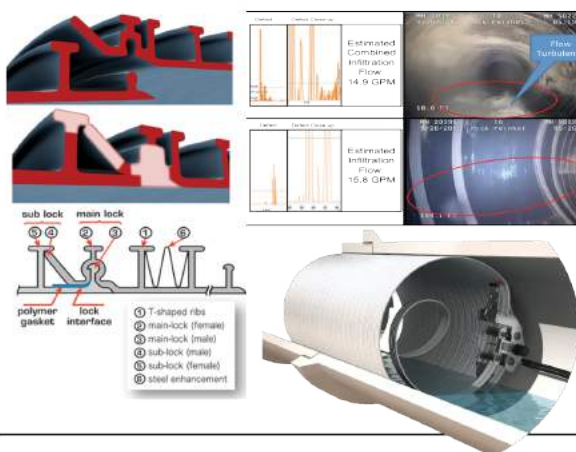
Missed By Acoustic Sensors & CCTV Cameras.
Leaks Found & Measured by Electro Scan.



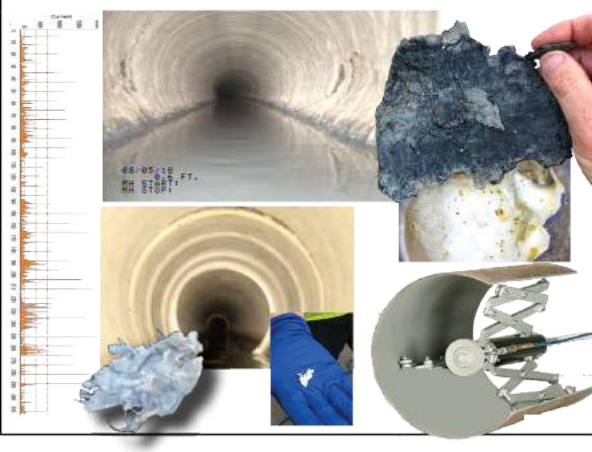
4. LED-CURED CIPP



5. SPIRAL WOUND PIPE



6. SPRAY-IN-PLACE PIPE





Measure the Size of Hole



electro³scaninc.

Distributed Leaks



Localised Leaks



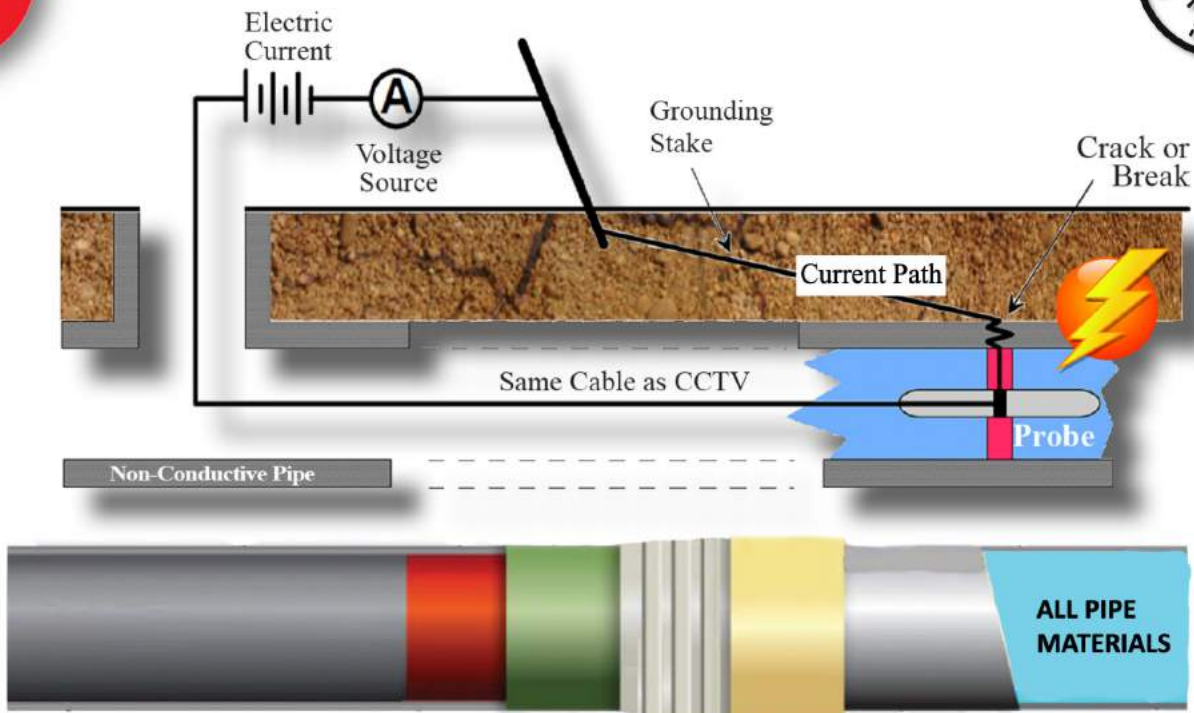
NO IMPACT FROM...

- GROUNDWATER
- PIPE SHAPE
- GROUT
- TRENCH BEDDING
- DIAMETER
- SOIL RESISTIVITY
- CUSTOMER USE
- EQUIPMENT BIAS
- SOIL TYPES
- LEAK LOCATION(s)
- PIPE MATERIALS
- FALSE READINGS

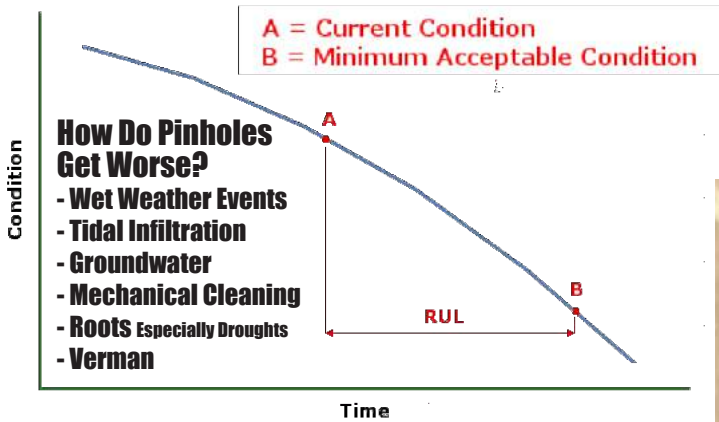
NO MORE VISUAL GUESSWORK.



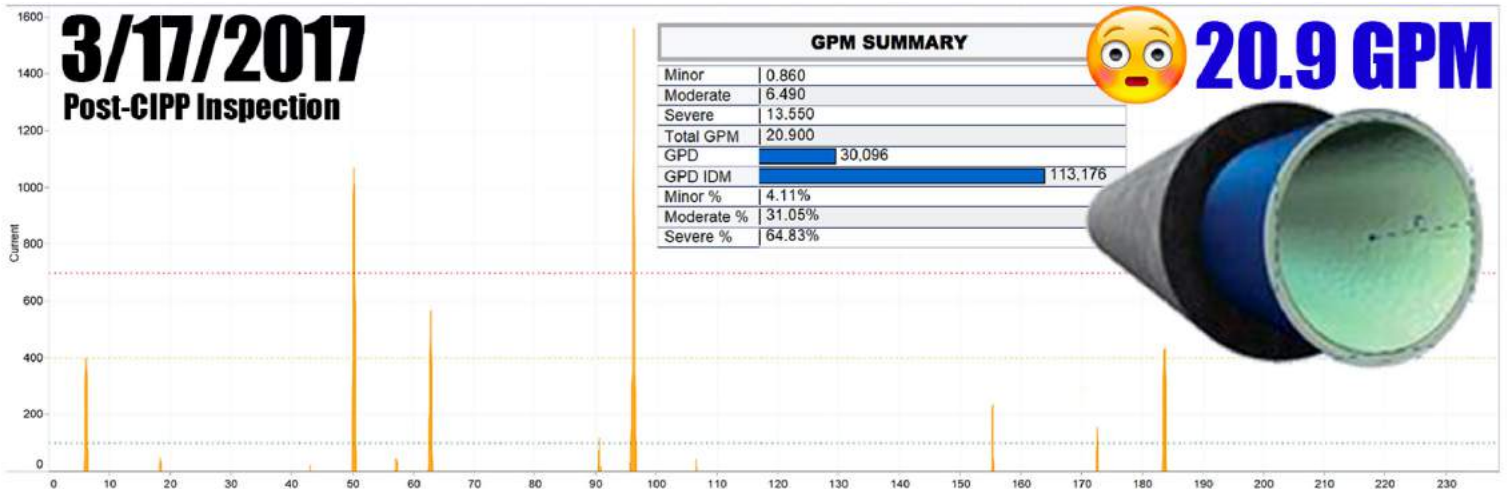
Science of Low Voltage Conductivity



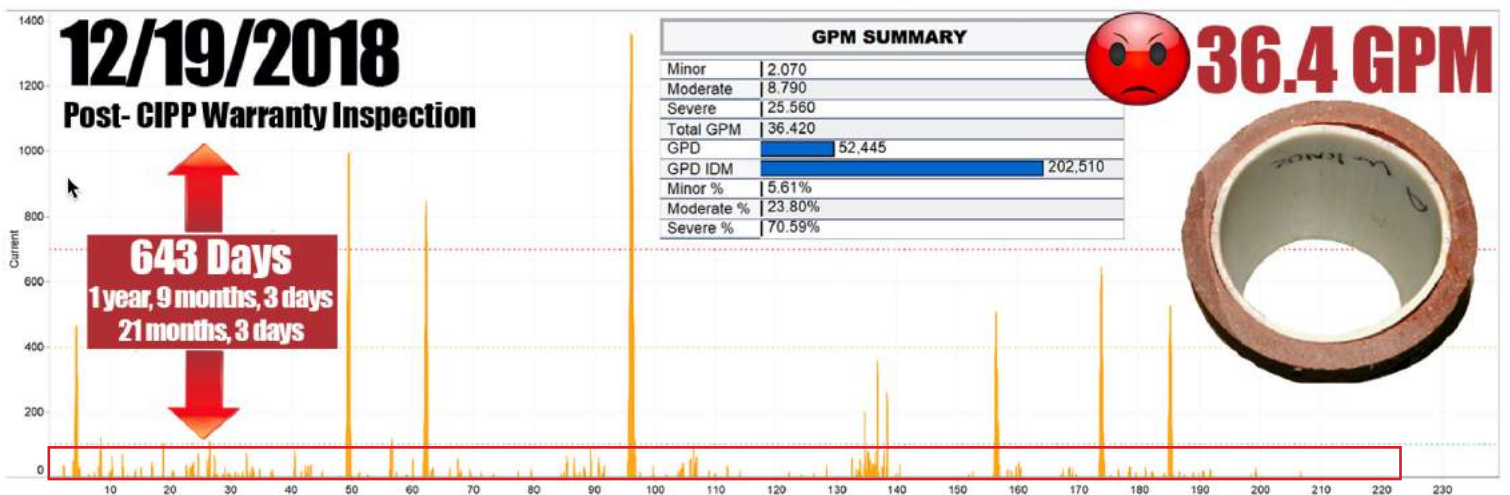
Pinholes Get Worse, Not Better.



POST-CIPP DAY 1



POST-CIPP DAY 643





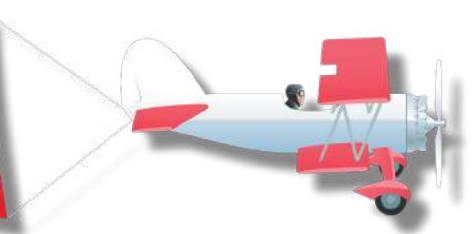
Chuck Hansen



HIGHLIGHTS

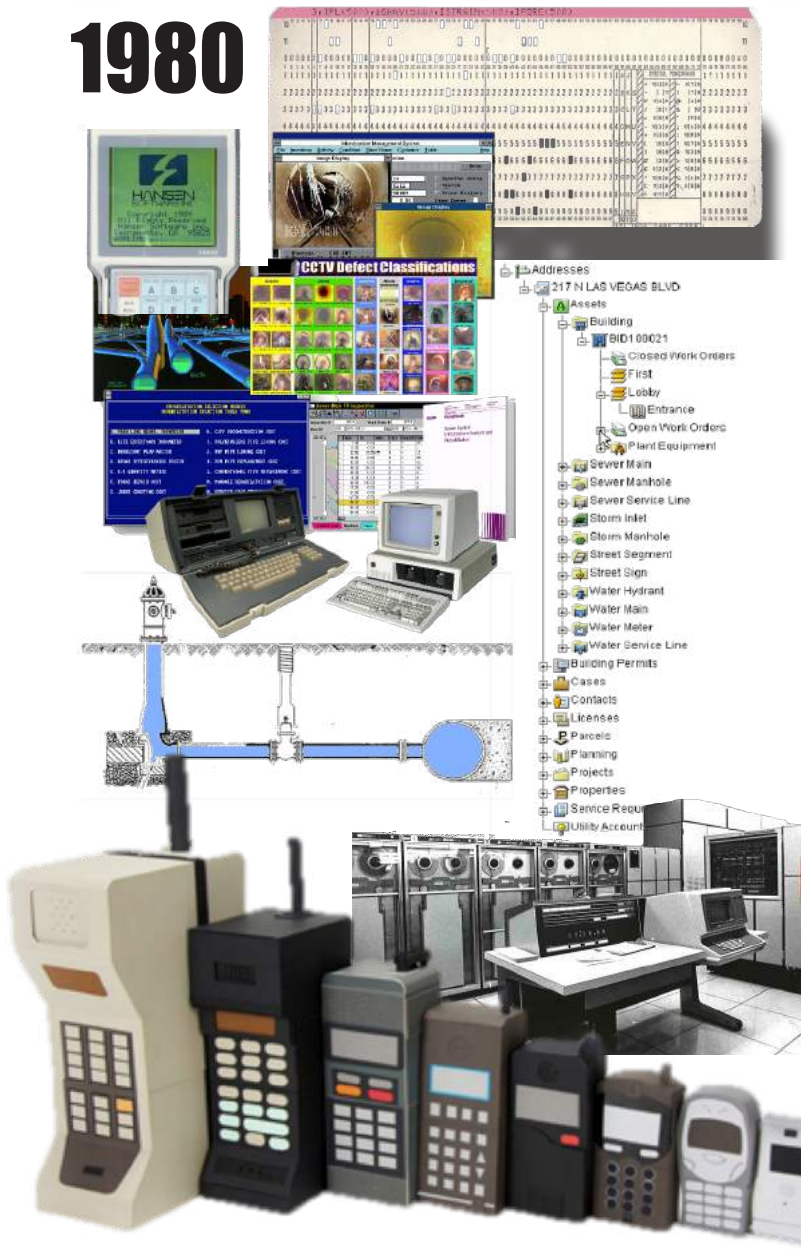
- +40 years in Water & Sewer Condition Assessment.
- Former Owner, HANSEN SOFTWARE (1980-2007).
- Multi-Patent Holder Condition Assessment Technology.
- Former Chair ASTM F36.2, Water & Sewer Inspection.
- ESG / Cleantech Private Equity Investor.
- Only Leak Detection Provider Able to Test Pipes in Pressurized & Gravity Pipelines.
- Current Member, AWWA Water Distribution Committee.

+40TH ANNIVERSARY

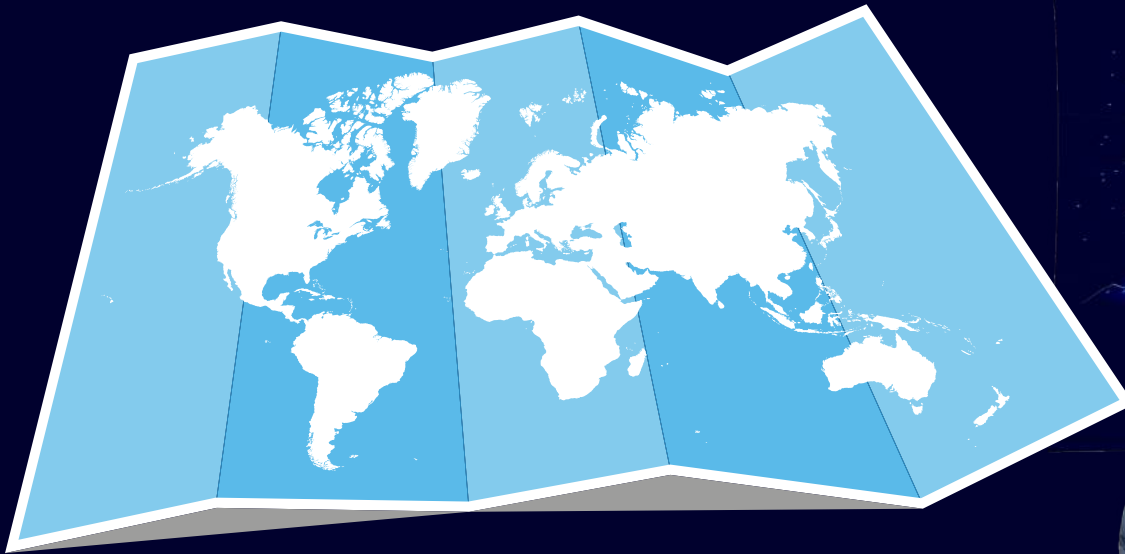


1980

2023



Accurate, Fast, Repeatable



SALES

North America

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Mobile: +1 917 817 0090

SERVICES

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