

THE SEWER & STORM CHRONICLES



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ELECTRO SCAN INC. OPENS NEW FRONTIER

Dealers Add Electro Scan To Old & New CCTV Trucks

Owners Pledge To Find All Sewer Leaks, "Beer For Everyone"

The Wild, Wild, Sewer & Storm Industry will never be the same, now that Electro Scan can find every defect in sewer & storm pipes that cause leaks. More importantly, Electro Scan quantifies leaks in Gallons per Minute, re-writing decades old approaches to locating sources of infiltration.

*continued on
page 2*



Right. Electro Scan's new add-on product for CCTV rigs finds all defects that cause leaks in sewer & storm pipes. Pipes from 6-60 inches or 150-1500mm in diameter can be evaluated at the rate of 30ft or 10m per minute. Applauded by civil engineers, the new technology is capable of certifying new pipe construction and pipe lining projects as "LEAK FREE" -- never before possible with the use of legacy television inspection cameras.



NEW SHERIFFS LAY DOWN THE LAW ON SEWER & STORM INVESTIGATIONS

Electro Scan Becomes Law of the Land

It didn't take long for Sheriff Chuck Hansen to round up an acclaimed posse to lay down the law on sewer and stormwater field investigations.

After selling his software company that shared his famous last name, Sheriff Chuck Hansen took some time off to see the world. Recently, he came across the next 'BIG' thing in Sewers and immediately found the right Sheriffs to uphold the new law of finding leaks.



Sheriff Giles Poulson,
Faris Machinery,
Electro Scan Dealer

Lots of folks might or might not remember Chuck back in the days when he helped set CCTV standards used by over 250 TV trucks in the citywide Houston, Texas sanitary sewer assessment EPA project in 1990.

"Sewer contractors have been getting away with murder for years," says Chuck, "laying new sewer pipes and relining old ones, each time running a CCTV camera down the pipe to 'certify' that the job was done right. Of course the pipe 'looks' OK because the Contractor just put it in the ground!"

Using Electro Scan, agencies can once and for all, know that their new pipe construction or relining projects are installed leak-free. Using Electro Scan, leaks are shown like blips on an EKG monitor, allowing operators to locate all leaks by size, and even compute a Gallons Per Minute of Infiltration -- an industry first.

If contractors deliver a leak-free project, Electro Scan displays a flat-line showing that all leaks have been fixed.

Electro Scan measures the variation of electrical current inside sewer pipes to find all cracks, including defective service connections and joint defects, assessing your pipes at an average rate of 30 feet per minute.

The best news is that there are no visual observations, no codes to learn, no guesswork by an operator, and no need to send out reports for somebody else to interpret. That's right, the first solution that provides real answers on how water is getting into, and leaking



Sheriff Chuck Hansen



out of your sewers & stormwater system. So, don't rely on smoke & dye testing and CCTV to find leaks. Use Electro Scan and fix your sewers right the first time. Besides, it's becoming the new law of the land.



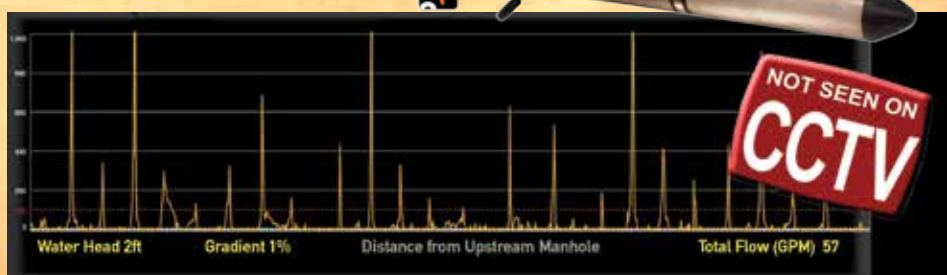
Sheriffs
Ed & Kerry LeSage
EJ Equipment
Electro Scan Dealer



Sheriff
Andrew
O'Keefe
Electro Scan.



Sheriff
Mark
Grabowski,
Electro Scan.



The MTech Company Distributes Electro Scan In Michigan and Ohio



Electro Scan Inc. is pleased to appoint The Safety Company, LLC dba MTech Company, as its exclusive dealer in Michigan and Ohio.

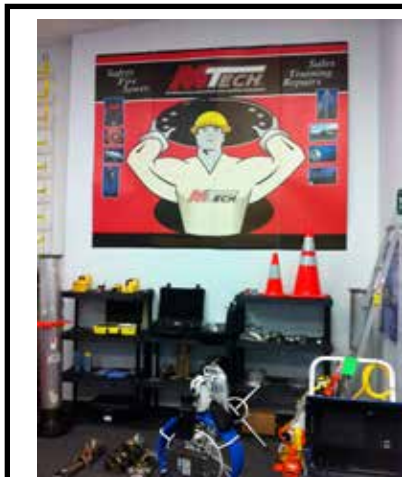
After buying a fledgling supply business just a few years ago, new to the industry, Bryan Cohen, Chris Cira, and Dan Soukup, are shaking up 'old guard' suppliers by offering superior products and great service to their customers.

Electro Scan is being added to an already impressive list of products that are sold and supported by MTech, including CUES, GapVax, Johnston Sweepers, Dyna-Vac, RKI Instruments, UEMSI, RIDGID, StoneAge, Cherne, Max-Life, among others.

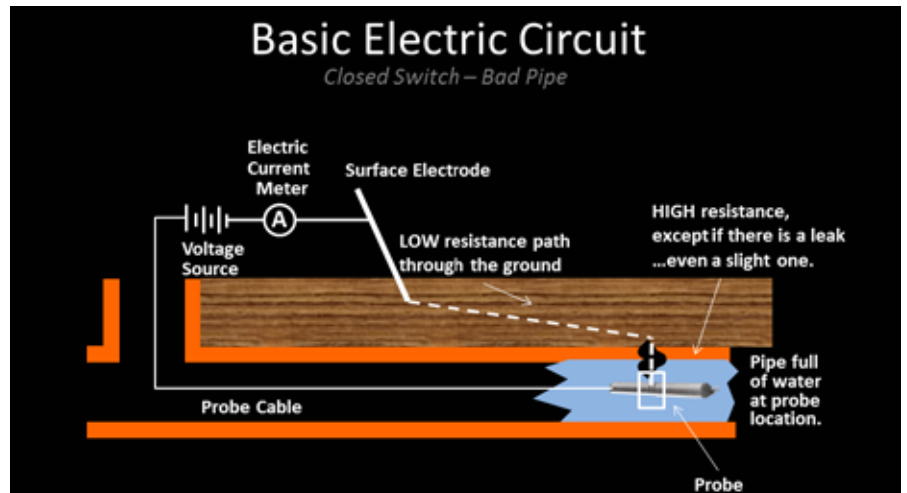
"We want to offer our customers the latest technology," states Bryan Cohen, MTech's Sales Manager. "And, of course, we're happy to be able to work with our top selling camera, CUES, and to be able to retrofit our competitor's cameras, too."

"Our training is second to none," says Dan Soukup, "and Electro Scan fits right in with a favorite saying of ours, 'Elevate from the Norm' in explaining how we work and play."

Headquartered in Bedford, Ohio, a suburb of Cleveland, all agencies & contractors in Ohio and Michigan should contact MTech today. For more information visit MTech online at <http://mtechcompany.com/>



New Patent-Pending Process Finds Leaks Using Electric Current



Electro Scan is a new technology like none other in the sewer business.

While CCTV relies on a pipe to be relatively dry, i.e. without standing water, Electro Scan requires the area around its probe (shown above) to be surrounded by water.

Water is the key ingredient that allows electrical current, emitting from the Electro Scan probe, to conduct to the wall of a pipe.

If a pipe doesn't leak, the electrical current will have no where to go. But, if a pipe has a leak, even a slight one, then the current will attempt to 'go to ground' and complete a circuit back to its source.

Call us today to learn how easy it is to Electro Scan your sewer mains and laterals. Find all sources of infiltration and make sure contractors installing new pipes and relining projects deliver "Leak Free" sewer mains & connections.

"Beer for Everyone" at Electro Scan WEFTEC Saloon -- Booth #927

continued from the Front Page

Electro Scan's patent-pending technology represents a departure from legacy visual observation techniques used to catalog pipe defects.

Instead of using a pre-defined set of coding standards, subject to interpretation and judgment, Electro Scan takes a scientific approach to pipeline evaluation, that does not require sophisticated interpretation.

Electro Scan automatically measures the variation of electrical current inside of sewer pipes to find all cracks, including defective service connections and joints. No visual observations. No guesswork.

No need to use Codes from either PACP or WRC, since data is automatically captured, processed, and uploaded to the Cloud. Instead of a 1-5 critical rating (OPRI), Platinum Subscribers get a Gallons (or Liters) per Minute of Rainfall Dependent Infiltration (RDI).



WECO Industries to Sell & Service Products In Electro Scan's Backyard



City of Richmond, Calif. City Hall.

Only one company could represent Electro Scan in Chuck Hansen's own backyard, i.e. Northern California. And, that would be WECO Industries.

Located in Vacaville, Calif., less than 45-minutes door-to-door from Electro Scan's headquarters in Sacramento, Calif., WECO Industries is the leading provider of sewer equipment in Northern California.

Founded in 1970 by Gordon White, a friend of the Hansen's for nearly 30 years, WECO and Chuck Hansen, often traded employees with his old company as he sought talent that knew the industries they were serving.

"Gordon forgets more in a day, then I will ever know about the sewer business," claims Chuck Hansen. "That's why it was important for WECO to become a dealer."

In addition to representing Electro Scan, WECO also sells and supports CUES, Electric Eel, Max-Life, UEMSI, Plugit, GapVax, Titus, Seal Guard, Ladtech, BASF, Goldak, Fischer, BW Technologies, Miller, Alegro Blowers, Safety Lift, and OK Champion product lines.

The combination of Electro Scan and WECO Industries couldn't have happened at a more important time. After successfully challenging most Bay Area municipal sewer agencies, San Francisco Baykeeper, the premiere watchdog of the San Francisco Bay's water quality, has single-handedly forced most Bay Area sewer collection agencies to be contractually obligated to either significantly reduce or eliminate infiltration with a near zero tolerance for sanitary sewer overflows.

Racking up an impressive list of consent decrees over the past four years, sewer collection managers are re-doubling their efforts to meet enforcement targets contained in their legal settlements.

Look for Electro Scan and WECO to jointly work with a number of key Northern California sewer service providers to address their needs.

For more information visit WECO Industries online at <http://www.wecoind.com>



Tom Johnson (Left) and Thomas Johnson (Right) outside a meeting at the City of Richmond, Calif.



Major California counties covered by WECO Industries. Not pictured are counties of Nevada, also covered by WECO, including: Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe and White Pine.



CCTV & Electro Scan Join Forces to Assess Sewer Mains & Laterals in Dry & Wet Weather

CCTV and Electro Scan

Some Things Just Belong Together



Closed-circuit television rigs are becoming modern day ‘Command & Control’ centers for public works departments to assess and evaluate their critical sewers.

While grout equipment has long been a standard found inside CCTV rigs, TV trucks are getting stuffed with advanced technology, including both hardware and software, that could have put a man on the moon thirty years ago.

Why do you think the Southern California ‘GREENBOOK’ is being modified to include other inspection techniques.

Given the growing acceptance of Electro Scan as the leader in sewer leak detection, it was important for Electro Scan management to allow its technology to easily fit with existing CCTV platforms.

In an effort to limit duplication of equipment, Electro Scan sought to utilize much of the existing cables, power sources, and assorted electrical components available on most commercially available TV trucks to support the delivery of Electro Scan data.



And, presto! The ES-620 for Sewer Mains™ was born. Available as an add-on to new and used CCTV trucks, Electro Scan’s ES-620 for Sewer Mains™ is now available from authorized dealers and can be easily added to any standard CCTV rig.

“It’s a match made in heaven,” says Chuck Hansen, Chairman & CEO of Electro Scan. “A CCTV truck is the best available platform to ‘see’ pipe defects like sags, protruding taps, collapses, and roots, but was never intended for operators to identify & determine estimated rates of infiltration from hard to see leak locations. Besides, most televising requires a (practically) dry pipe to see the entire circumference of the pipe.”

Continues Chuck, “While CCTV gives you a good 360° view of a pipe’s condition in dry weather, in contrast, Electro Scan shows the performance of that same pipe in (simulated) wet-weather conditions, by adding water to surround the Electro Scan probe.

By combining CCTV & Electro Scan, agencies can now get a 365-day view of their sewer’s potential performance, able to locate all sources of infiltration, any day of the year. By finding all defects, agencies can prioritize critical pipes and develop comprehensive rehab strategies. Switching to and from CCTV & Electro Scan takes less than ten minutes in the field.”

While Electro Scan has purchased CCTV rigs from several manufacturers currently used as demonstration rigs, the company is working with business partners, strategic customers, and international dealers to ensure that standardized installation kits are available for all popular camera manufacturers.

Whether you upgrade your current specifications for a new rig or are looking to retrofit your existing rig, contact Electro Scan or an authorized dealer to learn how easy it is to add Electro Scan .



CLS Sewer Equipment Co. Leads Texas Sewer Market

Headquartered in Richardson, Texas, with a major South Texas Service Center located in Houston, CLS Sewer Equipment Co., Inc. is one of the fastest growing service companies supporting the wastewater collection market in the Gulf Coast.

How could you misunderstand what the company does with a website name of www.sewertools.com.



Chuck Hansen & Jerry Sonnier, President, CLS.

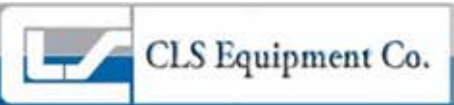
CLS represents leading manufacturers including CUES, Max-Life, Vac-Con, FMC, ENZ, Giant, John Bean, KEG, Piranha, Poly-Flow, 3T Prowler, and now Electro Scan.

Led by Jerry Sonnier, CLS President, with valuable support from Mark Wardlaw, CLS prides itself on delivering exemplary service and support to municipal and industrial customers throughout Texas.

“We are delighted to add Electro Scan products to our offering,” states Jerry Sonnier, CLS’s President. “Given our service locations in close proximity to downtown Dallas & Houston, we can service and support any customer throughout Texas.”

A key resources and secret weapon of CLS was the recent ‘acquisition’ of Richard Stubbs -- long-time software guru and CUES Granite XP CCTV software expert. Richard once attended a user group meeting of Chuck’s old company and recently asked Chuck ‘When are you having the next party in Lake Tahoe?’ during a recent trip to Houston.

Given Chuck long ties to Texas, having bought his first home in Houston, look for Chuck to be a frequent supporter of field demonstrations for Electro Scan products.



Electro Scan Partners with Maric Sales in Utah, Idaho, Montana, Wyoming, and Eastern Nevada



Electro Scan Inc. is delighted to appoint Maric Sales as its exclusive representative in Utah, Idaho, Wyoming, and Montana.

Maris Sales has been family owned and operated since 1982. Led by John Housley, Maric Sales has supported municipalities and contractors throughout Utah, Idaho, Wyoming, and Montana. Offering the best, most reliable equipment in the industry to support its customers, Maric Sales has helped its customers face the challenges of limited budgets and supporting aging infrastructure.

Says John Housley, “We service all the products we offer and carry a large inventory of (spare) parts to keep equipment running long after the sale.”

In addition to Electro Scan, Maric Sales represents a leading portfolio of products, including CUES, Vac-Con Industrial Vacuum Loader, Vac-Con

X-Cavator, KEG Technologies, GAMA-JET, Southland Tool, and UEMSI. More importantly, Maric Sales carries everything from sewer hoses, continuous and segmented rods, nozzles, skids, and roots saws.

“We are delighted to have such a well represented company as our partner, and look forward to our first customer demos in the coming months,” stated Mark Grabowski, Vice President, Municipal Markets, Electro Scan.



ES-620 for Sewer Mains™

Upgrade Your CCTV Truck to Make It a Combo Truck

CCTV & electro scan inc.
KILLING TWO BIRDS WITH ONE COMBO RIG.

If You Rely on TV Inspection to Prioritize Rehab, You Might Just Be Fixing The Wrong Pipe

A Re-Visit to USEPA's Field Demonstration of Condition Assessment Technologies Suggests Major Changes to SSES

Electro Scan is changing every facet of how Sewer Survey Evaluation Studies are conducted, including field data collection, hydraulic modeling, and rehabilitation selection.

As if the initial findings and conclusions from the original USEPA Field Demonstration of Condition Assessment Technologies study (published in July 2011), weren't enough, a subsequent analysis of the original data found a completely different prioritization of critical sewers, as compared to legacy CCTV inspections.

As you might recall, the original USEPA study tested a variety of innovative technologies that were compared to baseline CCTV inspection reports. Prepared in accordance with NASSCO PACP standards, the study included 7,009 feet of pipe inspected by CCTV. As part of the study, 8,685 feet of pipe was electro scanned, with 4,070 feet both televised and electro scanned.

In the original study, Electro Scan not only identified a larger number of leaks than identified with CCTV, but also accurately identified the largest sources of leaks, missed by CCTV.

While the original study did not quantify the leak or infiltration potential of the project area, a team of experts, including Terry Moy, Manager, Program Management, Clayton County Water Authority (GA), Charles G. Wilmut, Vice President, Burgess and Niple, and Robert J. Harris, President, Leak Busters, Inc., recently compared and contrasted resulting recommended pipe rehabilitation using CCTV data, compared to Electro Scan's defect analysis.

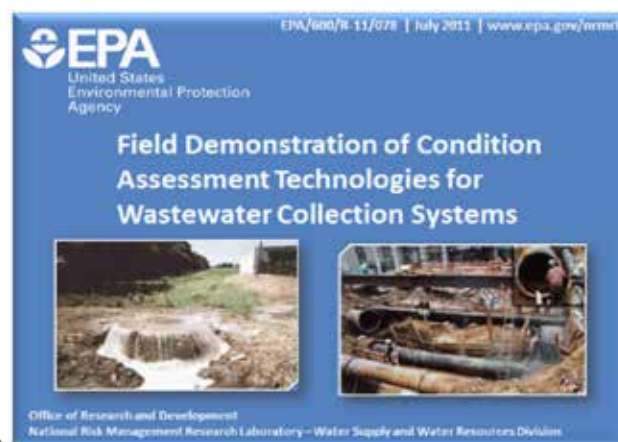
The results of the new study, presented October 1, 2012 at WEFTEC in New Orleans, Louisiana, revealed surprising results. As shown in the Top Graph to (Right), CCTV, using its OPRI Grade, showed the worst pipe as segment 107 to 106. In contrast, Electro Scan shown in the Middle Graph (Right), indicated the worst pipe as segment 96 to 95.

By fixing pipes with highest infiltration, as determined by Electro Scan, agencies could significantly reduce RDI at a considerably lower cost.

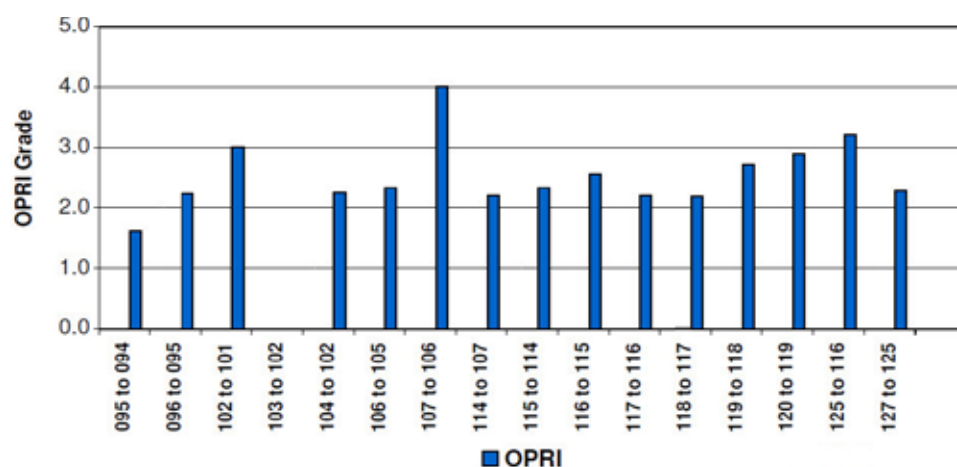
Fixing The Wrong Pipe With CCTV

While sewer agencies, contractors, and engineers have made CCTV a bedrock of many rehab decisions, agencies that are looking to reduce high rates of rainfall dependent infiltration are advised to consider Electro Scan to help locate, quantify, and target their next pipes to rehabilitate.

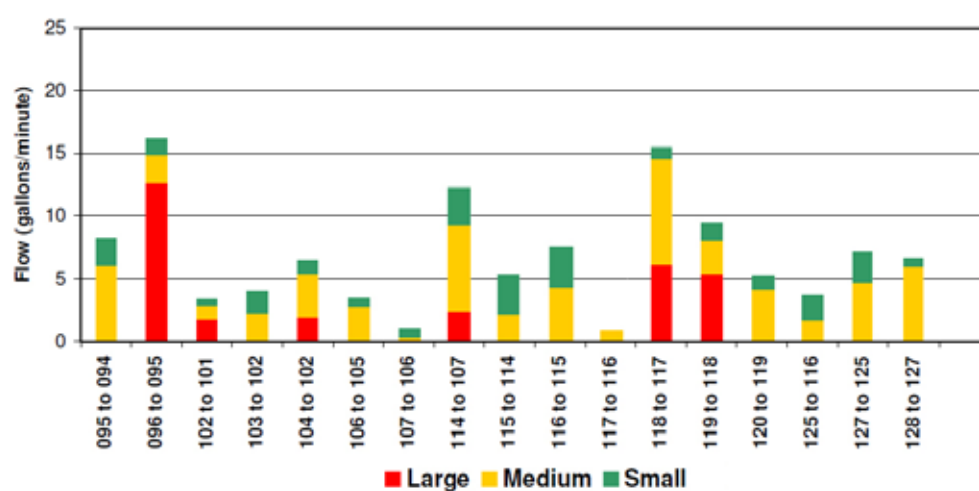
For more details of this landmark study, contact one of the authors for a copy of the study and raw data.



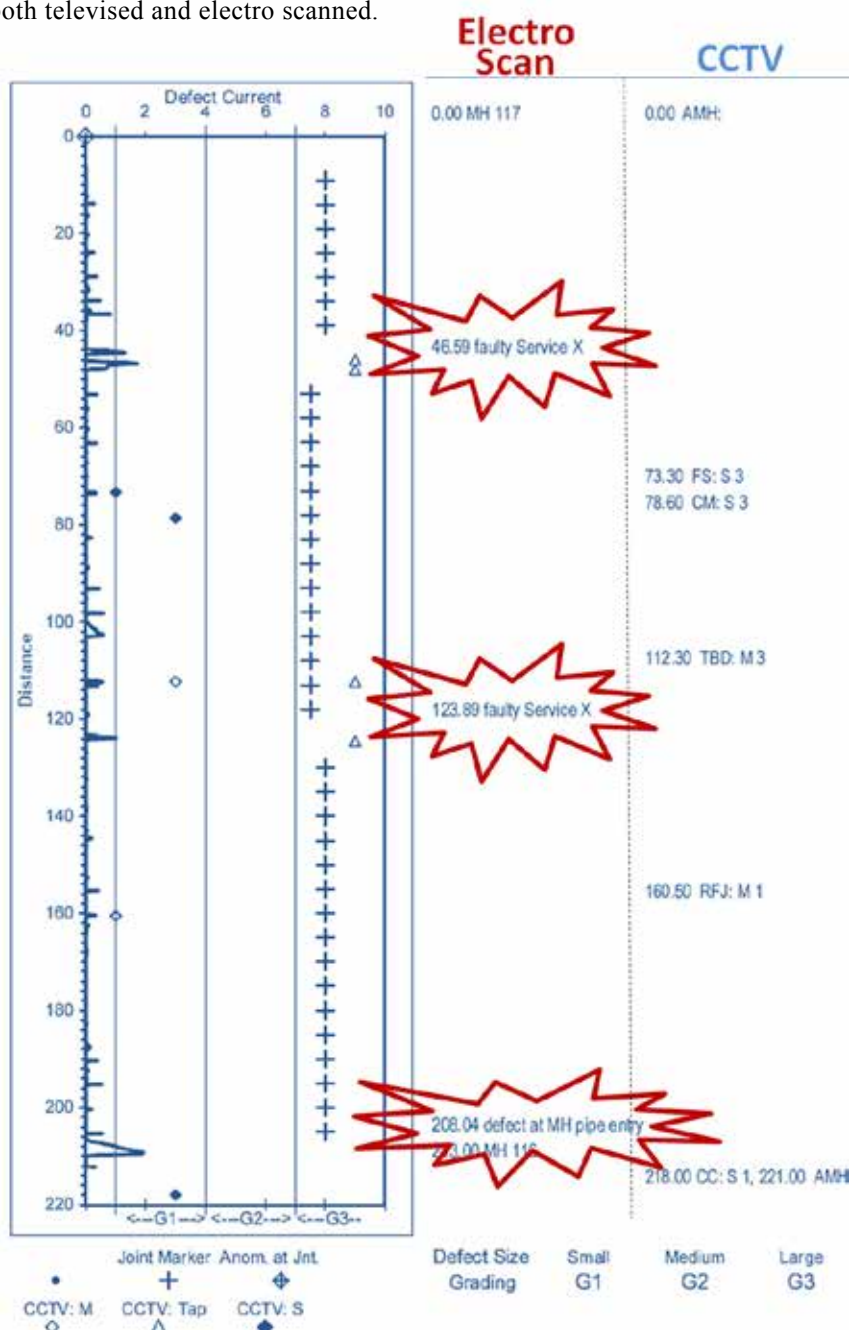
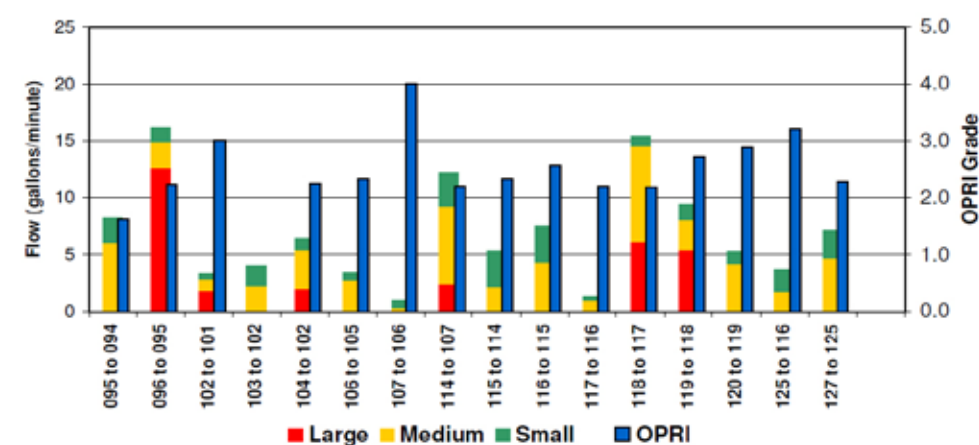
CCTV Indicates the Worst Pipe 107 to 106



Electro Scan Indicates Worst Pipe 96 to 95



Electro Scan More Dependable than CCTV To Detect Rain Dependent Infiltration (RDI)



Source: EPA Field Demonstration Project, Published July 2011



Electro Scan Sponsors Innovyze European User Group Conference

Electro Scan was pleased and delighted to sponsor the recent Innovyze European User Group Conference held May 19 & 20, 2012 in Birmingham, England.

This year's program featured two overlapping tracks, including two-days dedicated to Water Supply, Drainage and Flooding and one day dedicated to Asset Management.

Given's the recent acquisition of UK-based Wallingford Ltd., developers of the leading hydraulic model, combined with Innovyze's (formerly MW Soft) legacy models, Electro Scan management felt it was timely to introduce modelers to the next generation in sewer data assessment.

"I have always felt that Asset Management

for water and sewerage assets was a logical extension of hydraulic models," stated Chuck Hansen. "After all, engineering models are the first tools to produce initial as-built construction drawings. So when I found out that Innovyze was extending their models to include work orders and costing, it was great news."

Long reliant on legacy CCTV that does not adequately capture condition assessment or leak (infiltration) quantities, Electro Scan brings a whole new level of accuracy to hydraulic models, allowing users to more accurately portray real world hydraulic flow conditions, linked to pipe defects.

Electro Scan looks forward to seeing hydraulic models benefit from its new meta data to assist in managing the full life cycle of sewerage assets.



Chuck Hansen Joins Webinar Discussing Impact of Private Sewer Transfer in UK

In October 2011, the British Government transferred the ownership of most of the private sewers in England and Wales to the ten water and sewerage companies, to form part of the public sewer network.

While this transfer has removed a burden from customers of unexpected sewer repairs, its has significantly increased the amount of infrastructure to be managed by the water companies, with the quantity and state of repairs, unknown.

Held on September 18, 2012, broadcast from the studios at the London Stock Exchange, Chuck Hansen was joined by Phil Mills, Vice Chair of the Water Panel, Institute of Chartered Engineers, and Tommy Harrington, Director of Environment, Dwr Cymru Welsh Water, to discuss key issues of the UK Private Sewer Transfer.

Held just a year after the Big Transfer, the international webinar focused on key issues of asset management, the use of innovative technologies to readily assess the condition of these new assets and, need for coordinated approach in working with private contractors and drain layers.

In addition to assessing the asset condition, confusion continues with regards



Was Your Last Lining Project Delivered 'Leak Free'? How Would You Know, If You Just TV'd The Line?

Lining contractors have been getting away with murder since the very first relining projects were completed nearly 30 years ago.

While most contractors do a good job in lining sewer pipes, how does an agency check their final product?

Sewer utilities and municipal agencies are now realizing that unless a recently constructed or lined pipe is hydrostatically tested, there is no assurance whether a project is being delivered "Leak Free."

Using CCTV to inspect a liner is always important. You want to see the liner has not ruptured, that there are no bubbles, and that the line is consistently smooth. But how do you know if there are any leaks? If you are trying to eliminate infiltration, isn't that what you want to find out?

Now, sewer utilities and municipal agencies have a cost-effective way to test their contractor's work performance. Using Electro Scan, agencies can easily and cost-effectively determine as soon as the lining is cured

in place, whether the contractor has delivered a "Leak Free" project.

Common contractor problems found by Electro Scan have included poor service line re-connections, leaking transitions between sewer main and manholes (i.e. defective inverts), and a surprising number of defects just

inside the lateral, where linings have only adhered to the wall of the lateral, in many cases where changes in pipe material occurs.

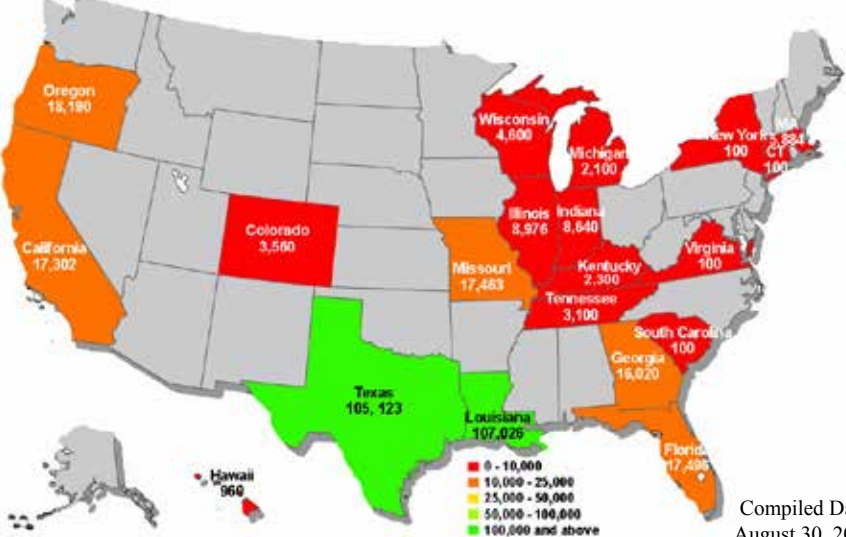
Where Electro Scan shows leaks like an EKG monitor, a "Leak Free" line will show a completely flat line reading, indicate no leaks.

Over 350,000 Linear Ft of Electro Scan Completed to Date in the United States

Electro-scanning is unlike any other assessment tool with all data being collected and stored in a cloud-based, data rich warehouse, allowing agencies to access password-protected scanning data on the Internet.

Utilizing today's most sophisticated web services and advanced coding standards (second nature to the management of Electro Scan), data can be readily accessed, stored, and retrieved, like never before.

While user data is safe & secure, and immediately available for download to third party applications, Electro Scan usage is expected to grow rapidly in the next 12 months, with all macro indicators available at www.CriticalSewers.com.



Electro Scan Data Automatically Transferred & Stored on the Cloud

Contractors Able To Automatically Deliver Field Data To Sewer Agencies, Including All Pipe Defects & Estimated GPM Infiltration Rates

It is an age old question: How to get data that is collected in the field to the office in the most efficient and effective way?

Chuck Hansen remembers rack-mounting 'portable' computers inside of CCTV trucks in early 1980s, when computers looked more like oversized sewing machines. One of his first in-vehicle systems was for the City of Salem, Oregon, where they used it to record CCTV inspection data.

Data was entered into a green-screen rack-mounted into the TV truck, using code that served as a downsized version of office-based software. Data from the truck was copied onto a floppy diskette to be taken to the office at the end of the day.

"In a world of Smartphones, I'm stunned that software vendors are still making users download data to hard drives and flash drives to get data to the office," states Chuck Hansen. "It's like we're back in the 80s when we were stuck using 5 1/4" floppy disks."

New Standard in Field-to-Office Reporting

Pressing the SAVE button on an Electro Scan Smartphone or Laptop application sets a whole new standard for data portability, transfer, storage, and reporting.

For Electro Scan, once data is transmitted, via Bluetooth or hard-wire, into its Smartphone app or web-enabled Laptop app, data is automatically transferred to its secure cloud-based server, and immediately available for review by sewer agencies or office personnel.

No need to download data onto a separate storage device or flash drive, only to be physically uploaded to an office-based server.

Electro Scan Handles All Contractor Reporting to Agencies at \$2.00 Per Ft.

In a break from traditional data reporting, Electro Scan now takes care of all agency and contractor data management and reporting, including uploading, storage, secured client access, and export via its CriticalSewers.com cloud-based application.

"We wanted to eliminate the hassle and headaches normally associated with reporting data," stated Mark Grabowski, Electro Scan's VP of Municipal Services. "Electro Scan handles all data once the contractor finishes their field work and presses the SAVE button."

It should be noted that any municipal sewer agencies that buys equipment from an Electro Scan authorized dealer is never charged a data management fee; however, contractors working for a sewer agency are charged \$2.00 per foot to handle all automatic uploading and data delivery to their client's cloud account.

Contractors are required to use Electro Scan's web-enabled Smartphone app (ES-38 for Sewer Laterals™) or Electro Scan Laptop app (ES-620 for Sewer Mains™) and must have a pre-approved escrow account with Electro Scan to facilitate the automatic upload of all data to their client agency, on a timely basis.

To access data, including estimated GPM infiltration rates and access Help Desk Support from Electro Scan, Sewer Agencies must have a Platinum or Platinum^{PLUS} Support agreement with Electro Scan.

"We are excited to provide unprecedented analytics and pipe assessment data," states Chuck Hansen, Chairman & CEO. "In the future, we hope to offer an online comparison with previous TV inspection reports to provide a complete pipe assessment. We look forward to sharing our groundbreaking technologies and data."



(Above). Contractor's are charged a per foot data management fee, including the ability to provide an estimated Gallons Per Minute (GPM) infiltration rate. Data is uploaded to Electro Scan's CriticalSewers.com cloud application for same day client availability.



(Above). CriticalSewers.com represents a breakthrough in data storage, retrieval, reporting, and exporting. Designed as a web app to display Electro Scan data uploaded 'same day' from the field, CriticalSewers.com is expected to add CCTV, Smoke Test, Dye Flood Testing, and Pressure Tests, to allow a single one-stop solution to identify, rank, prioritize, and report, pre- and post-rehabilitation of sewer infrastructure.

Plumbers Depot to Bring Electro Scan to Southern California Market

You knew it wasn't going to be a typical dealer visit when one of the owners of the company, in this case Plumbers Depot (Hawthorne, Calif.) drives his new bright red truck onto the airport tarmac, helps you load your equipment into the back of his truck, and wants to drive straight to the job site where people and gear are waiting to see a live demonstration of something called 'Electro Scan.'

So began our day with Jose Martin, President of Plumbers Depot, who along with his brothers, Juan and Miguel, runs Plumbers Depot, which has become one of the fastest growing sewer equipment suppliers in Southern California.

Representing Electro Scan across the Southland, including Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Luis Obispo, San Diego, Ventura counties, Electro Scan is delighted to have added Plumbers Depot to its valued dealer network.

Plumbers Depot has come a long way in a very short time. Starting out by selling equipment & parts to Plumbers, which lasted for the first three months, a local city maintenance worker wandered in to see if they had some spare parts for its equipment that had broken down. Plumbers Depot was born, doing about 90% of the business to municipalities and 10% to plumbers.

In addition to representing Electro Scan, Plumbers Depot is also a top selling dealer for CUES, GfG Instrumentation, StoneAge, GapVax, Hadronex Smart Covers, and more.

"In the years I have been in this industry I have gotten to know my clients not only on a business level, but on a personal level also, establishing great working relationships," states Jose Martin, President of Plumbers Depot.

"My goal is to keep my customers happy and in order to succeed we strive to meet our customers' needs and excel in customer service," says Jose.



Top Left, Electro Scan's Andrew O'Keefe unloads an Electro Scan ES-38 Air Push Rod as Top Center, Jose Martin, President of Plumbers Depot, unloads an ES-38 for Sewer Laterals used to inspect an 8" sewer main at the City of Hawthorne, California.

Illinois-based EJ Equipment Kicks-Off First Customer Demonstrations of Electro Scan

Electro Scan didn't know much about EJ Equipment, Inc. when we first heard the name, but we soon determined that this was the company to represent us in Illinois and Eastern Missouri.

Representing one of our first dealer agreements, before proposing that EJ Equipment represent us, we were invited to attend their Customer BBQ at their headquarters in Manteno, Ill. With over 400 BBQ lunches served that day we thought if EJ was half as good selling our products as they were doing BBQ, we'd have a long and successful association.

“Individual commitment to a group effort... that is what makes a team work, a company work, a society work, a civilization work.”

Vince Lombardi
Posted on Company Website

Surrounded by happy customers that spoke highly about EJ Equipment's customer support and roadside service, other information quickly surfaced through conversation.

Led by husband & wife team Kerry & Ed LeSage, EJ Equipment runs like a well oiled machine. As a Woman-owned Business Enterprise (WBE) enables us to market our



products and services to a variety of accounts that are not so readily accessible to other dealer organizations.

Also, EJ Equipment's multi-million dollar capital commitment to inventory enables them to maintain an aggressive demonstration schedule on a year-round basis.



(Above) Staff from Electro Scan, EJ Equipment, and LMK Technologies, doing a live field demo in Manteno, Ill.

As active members of Kankakee County Women in Business, APWA, NITHCA, IWEA, South & North Suburban Water Works Association, and ATSA, EJ Equipment is known for their consistent participation in local and national exhibits and events



EJ Equipment is a proud sponsor of the Chicagoland Speedway; where the company hosts a sizeable customer appreciation event at a major racing event each year. This year, Electro Scan was proud to sponsor the Beverage Tent, Saturday & Sunday, Sept 15 & 16.

In addition to representing Electro Scan, EJ Equipment also supplies and services equipment and products from the following:

- VAC-CON
- TYMCO
- MAINTAINER
- CUES
- TRACKLESS
- EPOKE
- ENZ USA
- OK CHAMPION
- VAC-ALL
- TIGER
- AMERICAN ROAD MACHINERY

Kick-Off Meeting Leads to Same Day Customer Demo

EJ Equipment sailed through the initial Electro Scan Sales Training, conducted by Electro Scan's CEO, Chuck Hansen, Mark Grabowski, Vice President of Municipal Markets, and Andrew O'Keefe, Manager of Sales Administration, at EJ Equipment's headquarters in Manteno, Ill, not far from Kankakee.

Also in attendance was Ed LeSage, Central II and Southern Chicago, Scott Weets, Service Manager, Craig Suhre, Southern II and MO Sales Rep, Julie Belan, Inside Sales Manager, Kory Mann, Parts Manager, and Eric LeSage, North Territory.

After a brief lunch, it was time to hit the road and "shoot" a couple of lines with Electro Scan.

Since so many Municipalities and Contractors, want to get their hands on one of the Electro Scan products, by the afternoon we were in the field with representatives of LMK Technologies (Ottawa, Ill) ,



demonstrating Electro Scan to their top R&D technicians, including Jason Mathey. Within an hour, LMK was doing their own Electro Scanning in a line at the former State Psychiatric Hospital.

Setting up the equipment in less than ten

minutes, scanning was completed in less than 30 minutes.

Electro Scan looks forward to working with EJ Equipment and appreciated the opportunity to sponsor the company's annual NASCAR event.



From Left to Right, Andrew O'Keefe, Craig Suhre, Scott Weets, Julie Belan, Chuck Hansen, Ed LeSage, and Eric LeSage, at EJ Equipment headquarters in Manteno, Ill.

2013 TRADESHOWS

Underground Construction Technology Intl. Conference Houston, TX Jan 29-31	WEF Collection Systems Sacramento, CA June 9-12
NASSCO 37th Annual Meeting Cay Island Resort, FL Feb 13-16	INGENIUM Dunedin, NZ June 13-15
Pumper Show Indianapolis, IN Feb 25-28	ASCE Pipelines Confernece Fort Forth, TX June 23-26
NASTT No-Dig Conference Sacramento, CA Mar 3-7	Tri-State Seminar on the River Primm NV Sept 17-19
Iowa WEA Collection System Des Moines, IA Mar 3-5	WEFTEC 86th Annual Technical Exhibition & Conference Chicago IL Oct 5-9
38th Annual Roto-Rooter Franchisee Association Fort McDowell, AZ Mar 26-28	
California Water Environment Association Palm Springs, CA April 16-19	

Compliance EnviroSystems, LLC To Evaluate Adding Electro Scan to Its Portfolio of Triage Technologies

Compliance EnviroSystems, LLC, (CES) headquartered in Baton Rouge, Louisiana, will be evaluating electro scan as a candidate to add to its portfolio of triage technologies.

CES is best known as being one of the top SSES firms in the United States. They were instrumental in the clean-up work after hurricanes Katrina and Rita in 2005 and the assisting of Nashville after its 2010 flood. CES has announced plans to evaluate Electro Scan to assist in its field data collection and diagnostic work and pre- and post-rehabilitation of sewer mains and laterals.

“Our firm has always been on the forefront of using innovative technology and new equipment to help our clients,” states Casey Smith,



CES in the field using their iBAK camera working in the City of Baton Rouge, Louisiana.

CES EVP. “The limitations of CCTV to find leaks has always been a concern of ours, especially given consent decrees that call for dramatic decreases in infiltration.”

Founded in 1995, CES is a full service professional sewer evaluation, cleaning, and technical assessment firm. The company has worked in seventeen (17) states as well as Puerto Rico and Haiti. The Management Team at CES (Danny Miremont, President, Casey Smith, Exec VP, Joe Atol, VP Operations,

Brad Dutruch, VP Business Development) are dedicated to bringing the highest quality of field services provided by cutting edge technologies their clients.

CES offers a full range of field data assessment services, including Project Management, Closed Circuit Television Inspections, Dye Flood Testing, Flow Monitoring, GPS Data Collection, Laser Inspection, 3D Manhole Inspection, Nigh Flow Isolation, Rehabilitation Recommendations, Smoke Testing, Sonar Inspection, Large Diameter Pipe Cleaning, and Storm Recovery Services.

Casey Smith first heard of the electro scan technology in September 2011, when Chuck Hansen was doing due diligence to decide whether to invest in the company.

Chuck Hansen had explained that electro scan simulated wet weather conditions by either filling a service lateral or portion of a sewer main to measure the amount of electricity flowing through defects in a pipe wall. A key result was an estimated Gallons per Minutes (GPM) of Rainfall Dependent Infiltration (RDI) -- an industry first.

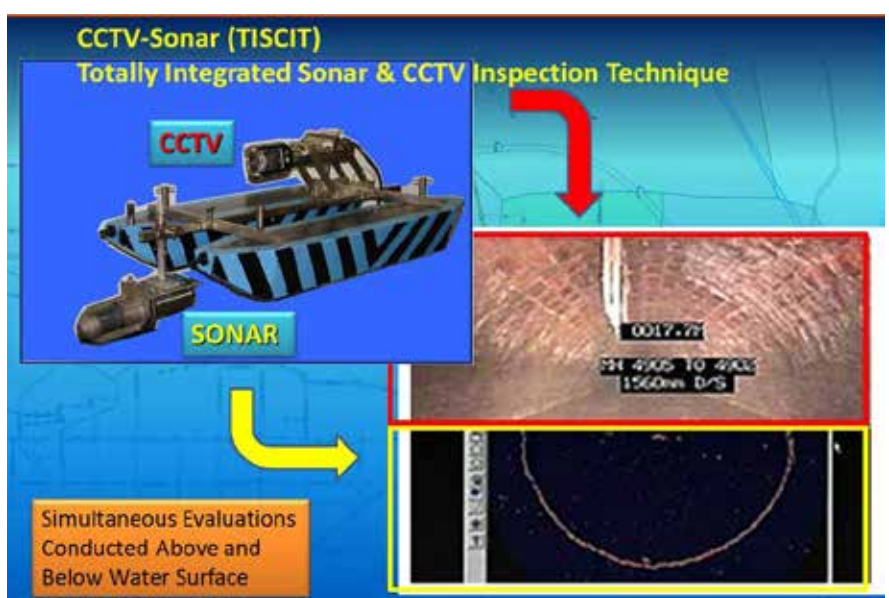
“Given Chuck’s background and history in computer software and technology, I’m particularly impressed with the ability to have field results automatically be transferred to the Cloud (Internet), available for immediate review by contractors and engineers,” states Casey. “In contrast to some other evaluation technologies, where we have to send results to third-party experts to interpret, the data-- kind of like giving your X-ray or CAT-scan to a radiologist, Electro Scan immediately shows us where all our leaks are located with an estimated GPM computed in the Cloud.”

Electro Scan looks forward to field testing its ES-38 for Sewer Laterals™ and its ES-620 for Sewer Mains™ at selected CES client sites in the coming months.



Casey Smith, EVP, CES

Game Changing Triage Technologies



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New Orleans Revisited

CES Key Accomplishments:

- 100 Vacuum Trucks From 20 States
- 3.5 Million Linear Ft of Storm Sewers Cleaned
- 62,000 Catchbasins Cleaned
- 5,000 Tons of Debris Removed

Eye-Tronics Joins Electro Scan to Cover Kentucky

Chuck Hansen first met Bobby Chesnut in the early 1990s when he was working at Louisville Metropolitan Sewer District (MSD) where he was part of the CCTV Department.

Bobby knew the inside of MSD’s sewer mains so well, he was one of the few people that could record footages inside a sewer main that had ‘No Roots’ when roots were typically present.

Today, Bobby owns and operates Eye-Tronics, a leading sewer evaluation company doing work in parts of Indiana, Kentucky, and Tennessee, in addition to be the exclusive CUES camera representative for Kentucky.



“I remember Chuck and his Dad in the early years and all the help they gave us to organize our TV data,” reports Bobby Chesnut. “I was surprised to hear Chuck getting involved with Electro Scan, since I thought he was comfortably retired after selling his old software company.”

MSD is familiar with the earlier versions of electro-scan, performing studies on a number of sewer mains, some of which had been lined several years before as part of a rehabilitation program.

Today, electro scanning is actually included as part of its standard acceptance testing for new pipes, but the lack of available product has prevented it use.

“Bobby has been a fixture in the sewer industry for all his life,” commented Chuck Hansen. “That’s why CUES (Orlando, FL) sought Eye-Tronics out to represent them.”



“We knew of Bobby when I was at Aries,” said Mark Grabowski, Electro Scan’s Vice President of Municipal Markets and former Aries Project Manager. “He’s had a reputation of helping his customers, no matter what equipment they used, including Aries.”

Electro Scan looks forward to scheduling its first field demonstrations, in Kentucky, working with Eye-Tronics.



(Above). Chuck Hansen and Bobby Chesnut.

Case Study - A Comprehensive Evaluation of Sewer Laterals

Milwaukee Metro Sewer District, WI Goes Straight to It's Customer's Laterals

July 22, 2010 was simply the last straw. The storms that hit the Milwaukee, Wisconsin area that day had a devastating effect; several neighborhoods, including those in the city of Wauwatosa, were overwhelmed by rain with the main culprit being clean water flowing into laterals draining into sanitary sewers.

Claimed Bill Wehrley, City Engineer for the City of Wauwatosa in a comment to local media, "If 20% of our problem is from public sewers and we fix them, then 80% of our problem still looms out there."

With the cost of relining private laterals ranging from \$7,500 to \$15,000, depending on a number of factors, such as length, depth, diameter, and connection to the sewer main, it is important to accurately assess the condition of sewer mains, to prioritize rehabilitation.



In the past, many communities have traditionally relied on legacy inspection techniques, including CCTV inspection, Smoke Testing, Dye Flood Testing, and Pressure Testing, which have typically been used at great cost, disruption, and in the case of surface dye flood testing, messy for the local community.

Since Electro Scan had already undergone extensive testing as part of a recently published three year study resulting from the USEPA-supervised Field Demonstration of Condition Assessment Technologies for Wastewater Collection Systems (EPA/600/R-11/078, published July 2011), Brown & Caldwell's Gary Skipper, P.E. decided to recommend using Electro Scan to assess the laterals of its two existing test neighborhoods in the City of Wauwatosa as part of a Water Environment Research Foundation (WERF) and USEPA funded project.

According to Walter Graf, WERF Project Manager, "When I first saw this (Electro Scan) I knew it would be a 'no brainer.' My background is in the oil & gas well logging business, and they have been using this technology for years. Visual inspection techniques [CCTV] has never been reliable, and electro scan can find leaks, automatically."



Beginning with its Project Kick-Off Meeting held June 29, 2012, and with principal field work completed on August 24, 2012, Electro Scan finished its first major Brown & Caldwell project using its ES-38 for Sewer Laterals™.

Three objectives for Electro Scan were outlined at the Project Kickoff Meeting, included the ability to:

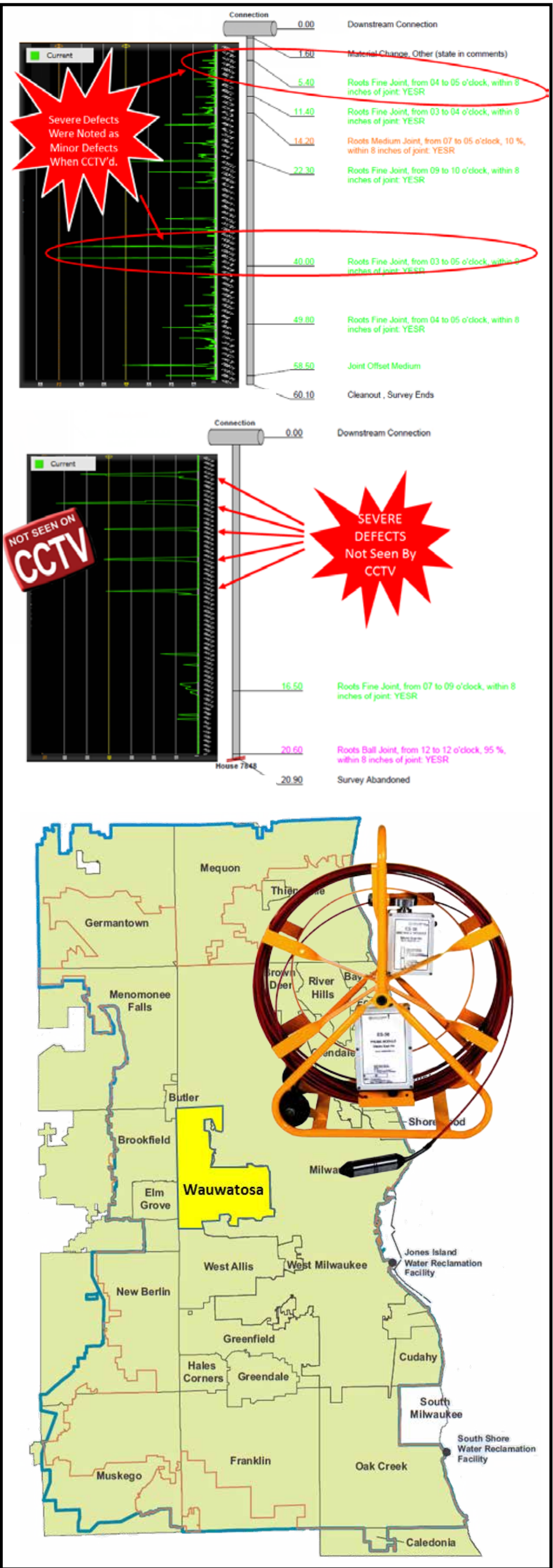
1. Compare Electro Scan results to infiltration estimates for laterals during rainfall simulation.
2. Compare Electro Scan results to air pressure test results.
3. Compare Electro Scan results to television inspection results.

Prior to starting work using Electro Scan's ES-38 for Sewer Laterals™, a significant amount of field work had already taken place, including:

- Lateral Inspections using CCTV
- Metering and Weir Flow Testing
- Rainfall Simulation "Soaker Hoses"
- Dye Flood Testing
- Installation of Clean Outs
- Lateral Cleaning

While a Final Report (Draft) is not scheduled for release until December 7, 2012, data comparisons of CCTV v. Electro Scan are already providing some interesting comparisons. All Electro Scan results were compared to previous completed CCTV inspections that used NASSCO's Pipeline Assessment & Certification Program (PACP).

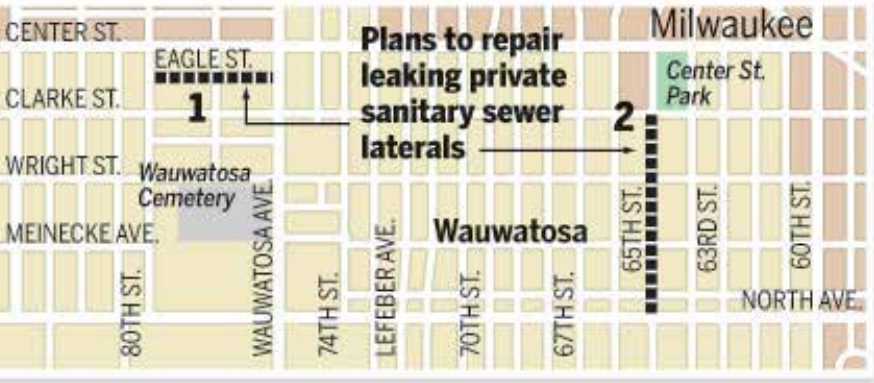
For more information about the project, contact Walter Graf, WERF Project Manager, Tel: 571-384-2102, Email: wgraf@werf.org. Interested parties may also request a preliminary report of selected side-by-side comparisons available from Electro Scan by contacting Mark Grabowski by email at mark@electroscan.com.



Laterals project

Wauwatosa is lining private sanitary sewer laterals in two neighborhoods to reduce storm water flowing to municipal sewer mains.

- 1 Three blocks of N. 65th St., between W. North Ave. and W. Clarke St.
- 2 Two blocks of Eagle St., between N. 80th St. and Wauwatosa Ave. (N. 76th St.)



Journal Sentinel

Electro Scan And CCTV Join Forces To Evaluate All Sewers

Don’t worry. CCTV is not going away; just undergoing a much needed upgrade to help usher in the next generation in sewer assessment technologies.

Electro Scan & CCTV: A Relationship That Gets Better With Age

CCTV has played a key role in finding & fixing the most egregious sewer main defects and collapses for nearly 50 years. Whether used to locate both ends of a pipe collapse or used as part of an ongoing O&M program of cleaning & televising pipes, CCTV has helped to keep pipes flowing.

But while CCTV is effective in ‘seeing’ and cataloging pipe sags, protruding service connections, crossbores, and alignment problems, it has not proved effective in finding major sources of infiltration, leaks at joints, faulty service connections, or leaks.

As commonly acknowledged, ground-water may typically enter a sanitary sewer network through cracks or leaks wherever the sanitary sewer system lies beneath the water table or the soil above the sewer becomes saturated. While, in some cases, sewer mains have been OK, poorly installed service connections, joints, or poorly renovated sewer mains, many times have caused unwanted infiltration into an agency’s sewer system.

While CCTV offers a good way to visually inspect the inside of a sewer main, find debris, locate roots, and determine

If CCTV Inspection Gives A 360° View of a Pipe, Than Electro Scan Provides a 365-Day Assessment Of It’s Performance

sags, offering a 360-degree view of a pipe’s condition, Electro Scan, with its ability to use electrical current to find all defects that may cause sources of leaks, provides a 365-day assessment of a sewer pipe’s overall performance.

With an estimate of nearly 40,000 CCTV cameras and trucks, worldwide, Electro Scan quickly recognized the value of utilizing existing CCTV components, including cable, digital and analog distance encoders, and communication protocols, to attach to its proprietary probes.

While each equipment manufacturer has their own equipment, Electro Scan has set out to make universal connectors to allow field operators to quickly and easily change from using existing CCTV cameras to Electro Scan.

“Agencies and contractors have long used one of several generally accepted standards for evaluating and cataloging pipe defects,” states Chuck Hansen, Chairman and CEO of Electro Scan

Comparing Electro Scan and CCTV		
ELECTRO SCAN		CCTV
KEY DIFFERENTIATORS		
Underlying Technology	Quantitative readings of Electrical Current	Visual observations in accordance to PACP,WRC, or Country-specific standards.
Standard Pipe Condition	Wet Condition. For Sewer Mains, Probe must be surrounded by water; not the entire pipe. For Laterals, filled with water with Air Push Rod.	Dry Condition. No standing water that will obscure observations.
Daily Production Rate	3,000 - 4,000 ft per day. Probe is best 30 ft (1 meter) /minute.	2,000 - 3,000 ft per day.
Interpretation Required	None.	Recommended that Operator be Certified.
Pipe Preparation	Clean and Empty.	No Grease or Roots.
Position Accuracy	Within one (1) centimeter	Variable
Standard Pipe Condition	Clear of debris and obstructions.	Clear of debris and obstructions.
OTHER CONSIDERATIONS		
Advantages	1. First Technology to Calculate GPM 2. Locates all Defects that Cause Leaks 3. Able to Certify New Pipe and Pipe Lining as “LEAK FREE”	1. Visually see Protruding Taps & Crossbores 2. Visually see Pipe Alignment and Sags.
Disadvantages	1. Cannot Define Leaks to Clock Position 2. Cannot Detect Sags in Pipe. 3. Non-conductive pipes only (i.e.Asbestos, Concrete, Brick, Clay, Concrete, Plastic,Terracota,VCP, etc.	1. Undependable in Locating Leaks. 2. Operator Dependent. 3. Unable to Independently Rate Joints.

Inc., “WRC in the UK and NAASCO’s PACP were leaders in creating standard visual reference catalogs to help operators interpret and record standardized pipe conditions. The main problem has been the inability for visual observations to accurately locate and assess defects that cause leaks.”

While CCTV is a preferred method to find protruding service connections, crossbores, roots, grease build-up, alignment problems, and collapses, it is not suitable for locating and quantifying defects that may cause leaks.

While CCTV relies on pipes to be relatively dry, i.e. absent of standing water to minimize undue reflection and able to view the full circumference of the pipe, in contrast, Electro Scan requires the sewer main to be surcharged around the Electro Scan probe only -- not the entire pipe.

By filling the pipe around the Electro Scan Probe, the electrical current from emitted from the probe can conduct current to the wall of the sewer pipe.

Since sewers are predominately non-conductive, i.e. not allowing electrical current to be released outside of a closed (i.e. non-leaking) pipe, if a pipe

If a Pipe Leaks Electricity, It Will Leak Water, too.

is “leak free” than Electro Scan readings would show a flat line reading. If there is a defect, crack, fissure, or joint problem, Electro Scan’s electrical current will flow out of the pipe, through the crack, and attempt to return to its source, essentially attempting to close its electrical loop.

In other words, if a pipe leaks electricity, it will leak water, too.

While Electro Scan is not suited for metal pipes, such as cast iron, copper, and steel, it is best for non-conductive pipes, such as asbestos concrete, brick, clay, concrete, fiberglass reinforced, plastic, reinforced concrete, resin liners, and terracotta; all ideal for Electro Scan.

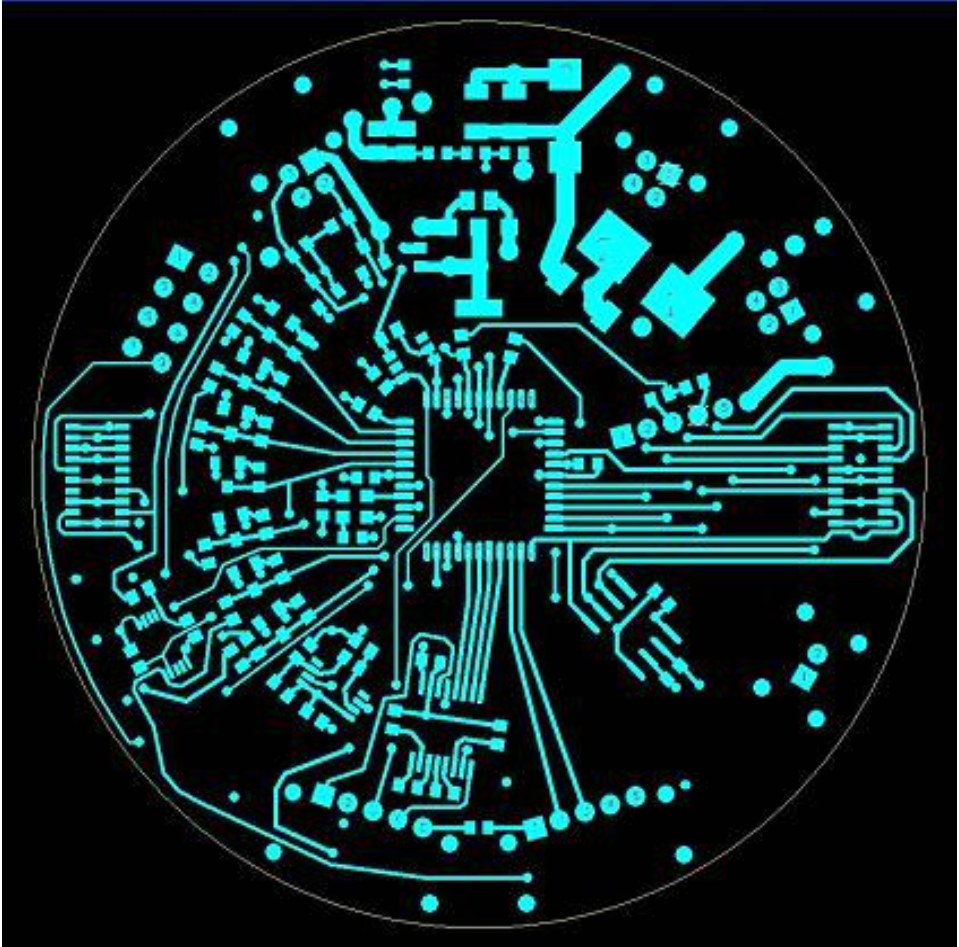
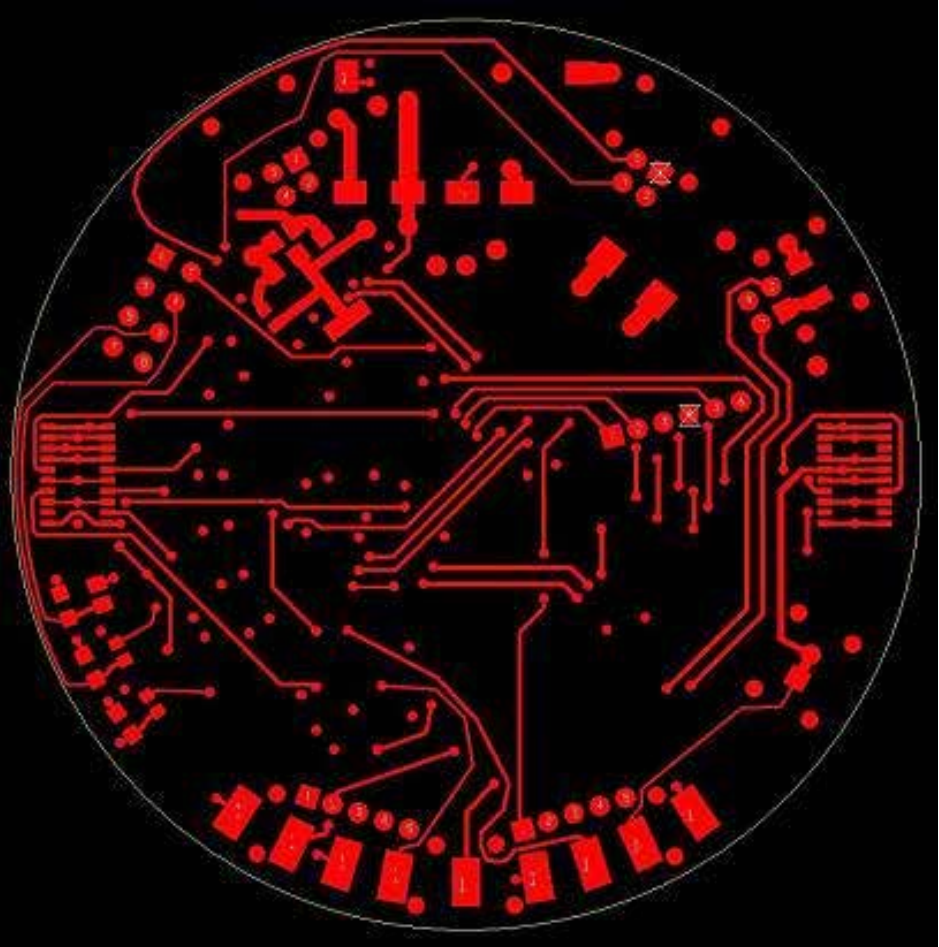
No longer should sewer agencies accept the use of CCTV inspection to certify

new construction or pipe lining projects. While not cost-effective to have contractors complete either a hydrostatic (water) pressure test or air pressure test for each sewer main, it is cost-effective to utilize Electro Scan to certify new and relined pipe construction.

CCTV and Electro Scan, combine to deliver a new level of pipe analytics.



Electro Scan Inc.'s printed circuitured boards used in it's patent-pending ES-620 for Sewer Mains™, designed, developed, fabricated, and assembled in California.



Electro Scan -- Made and Manufactured in the U.S.A.

The Electro Scan story is not just about changing decades-old ways of evaluating sewers, but is a modern day parable on new technologies replacing old ones.

Turning The Page on Visual Assessment to Find Bad Pipes

The public works industry has relied on qualitative visual inspection standards, for so long that for some, acceptance of a new standard will be uncomfortable, if not troubling. Given the large investment in legacy systems, data collection, training, and support by sewer agencies, it is always difficult to change how things were done in the past.

After all, civil engineers have long been schooled on ‘acceptable’ ways of determining rates of infiltration and exfiltration, with many firms, using previous Sanitary Sewer Evaluation Studies (SSES) as the baseline for new studies.

Regulators are reluctant, too. After working so hard to craft acceptable guidelines for agencies and consultant, alike, there is often a prolonged delay to accept new methods to allow better decision making.

Fortunately, since Regulators have established a common set of enforcement actions with a common denominator of ‘eliminating sanitary sewer overflows,’ any new technology found to deliver superior assessment information is quickly embraced if proven to help sewer agencies effectively and efficiently control their sewerage treatment and transportation of effluent.

Is a Picture Really Worth A Thousand Words?

The phrase “a picture is worth a thousand words” is commonly credited to Fred Barnard, an advertising manager in the early 1920s. Barnard used these words as a headline when selling advertising in trams.

Barnard originally claimed that it was a Japanese proverb, then later said it was Chinese. Regardless, Barnard’s claim was not about information content, but affect - when used in advertising, a picture draws attention more than text.

And so it went with CCTV, including its videos, images, and panoramic views; they might not provide much information, but they sure draw a lot more attention than text.

After decades of increasing camera resolution using better optics, improved luminosity, pan/tilt/zoom capabilities, and remote deployment, CCTV inspection has yet to allow users to ‘see’ and quantify defects that cause sewers to leaks.

CCTV Was Never Designed to Find Leaks; But Electro Scan Was

You might say that Electro Scan has arrived at the right place, at the right time, and in the right hands of its developers.

Given the record number of cities, counties, and private sewer utilities that are currently operating under USEPA or court ordered consent decrees, managers have never needed a more timely solution to help identify and quantify infiltration.

“A key roadblock to using CCTV is the simple fact that it relies on a sewer pipe being dry, or at least not surcharged,” states Chuck Hansen, Chairman & CEO of Electro Scan. “Since I’m no stranger to CCTV results, what first attracted me to Electro Scan was its ability to operate in a pipe full of water, i.e. simulated wet-weather pipe conditions.”

“By either surrounding its probe with water for evaluating sewer mains or flooding a lateral for evaluating service connections, Electro Scan was the first to focus entirely on finding leaks,” states Chuck. “Laser profiling, ground penetrating radar, acoustical amplification, and sonar, never addressed leaks, and it’s the biggest threat to sanitary sewer systems, today.”

No longer are voters easily willing to approve countless sewer construction revenue bonds. After completing system-wide SSES projects, committing millions of dollars to rehabilitate suspected sewer lines, only to show little if any reductions in Rainfall Dependent Infiltration.

After some initial Electro Scan prototypes were developed in Arizona, with

offshore circuit board designed in the United Kingdom, Electro Scan shifted all product development, design, fabrication, and assembly to Northern California, with its headquarters established at a familiar address in Sacramento, California.

“I wanted to have control over all aspects of our core product, including quality control and quality assurance, not just the software and data delivery end” states Chuck Hansen, Chairman and CEO of Electro Scan Inc.

“Bolstered by our development team,

handling Bluetooth communication of data, directly from our probes to mobile smartphones or PCs, eliminating the need to manually enter any assessment data, once data is saved in the field, it immediately becomes available on Electro Scan’s cloud,” states Chuck Hansen.

Finally, in partnership with Jameson (Clover, South Carolina), our Air Push Rods and Probe Reels are manufactured to our specification, with final assembly taking place in Northern California. Call us to arrange a tour of our new facilities.

Chuck Hansen Comes Out of Retirement to Run Electro Scan

He’s back! No, we’re not referring to the Alice Cooper song from his 1986 album, Constrictor, that served as the theme song Friday the 13th Part VI: Jason Lives. We’re talking about the return of Chuck Hansen to the sewer business.

“Everybody tells me I belong in sewers,” says Chuck Hansen, “so its only fitting I return where it all began.”

Most people will recognize Chuck from the famous software company that shared his last name. Started in 1983 with his father and brother, and best known for developing the sewer management software that was used by all 250 CCTV trucks as part of the City of Houston’s USEPA-mandated Physical Inspection Project in the early 90s, Chuck sold his namesake company in 2007 and retired.

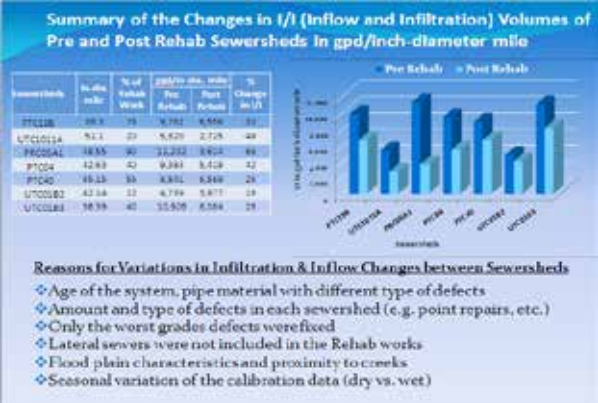
After selling his company, reportedly for \$100 million, Chuck spent time with his family, earned his pilot’s license & instrument rating, and played his baritone

& bass sax with several artists & bands.

Eddy Money, Huey Lewis & The News, Mickey Dolenz (The Monkees), Mickey Thomas (Starship), and Tower of Power (now recording their new CD at Chuck studio, The Track Shack), were just some of the acts Chuck played with during his sabbatical. Other artists recording at The Track Shack have included John Legend, John Rich (Big & Rich), Rick Ross, Lee Brice, Lonestar, The Game, Bow Wow, and Ne-Yo.

I hope to keep playing with a few bands across the country,” says Chuck. “But, I’m taking a little break and going on the road for Electro Scan, for the foreseeable future.”

“For now, Chuck is dedicated full time to making Electro Scan a household name. Look for him to become a catalyst for changing an industry that is desperate to find & fix bad pipes.



Major Southeast metropolitan city hydraulic analysis showing limited success, from measured flows of pre- & post-rehabilitation.

Tower of Power - You're Still A Young Man

YouTube

Left to Right: Mic Gillette (Trombone), Chuck Hansen (Bass Sax), and Stephen 'Doc' Kupka (Baritone Sax), Tommy Politzer (Tenor Sax) and Emilio Castillo (Vox), of Tower of Power. Search for 'Chuck Hansen' on YouTube

93,880

Southern Municipal Equipment Co. To Cover Carolinas for Electro Scan

One of the first dealers to sign up to represent CUES when they changed their business model several years ago, Southern Municipal Equipment Co. has a big following of municipal users in the Carolinas.

At first reluctant to talk with Electro Scan, once Russell Senn heard that its reels were made just up the road at Jameson in Clover, South Carolina, he decided to invite the gang to visit him in Lexington, SC where Wenn's have called home since the 1850s.

In addition to representing Electro Scan, Southern Municipal Equipment also represents CUES, Vac-Con, John Bean, Insight|Vision, KEG, ENZ USA, StoneAge, and KWMI.

Russell, working with Kyle Moore, has been a real innovator in North and South Carolina. Besides offer parts and service, Russell was one of the first to convert 4-Wheel ATV vehicles for remote O&M activities.

Look for Electro Scan to join Southern Municipal Equipment at the 92nd Annual AWWA/WEA in Raleigh, NC, November 12-14,



Pictured Left to Right, Russell Senn, Chuck Hansen, Kyle Moore, and Mark Grabowski.



Diagnostic Resources & Solutions, LLC Snags Florida, Georgia, Tennessee & Puerto Rico to Represent Electro Scan

Electro Scan Inc. is please to announce that Diagnostic Resources & Solutions, LLC has joined its dealer network representing the Company's products in Florida, Georgia, Tennessee, and Puerto Rico.



Woman-Owned Business to Become Authorized Electro Scan Dealer & User

Founded in 2002 and headquartered in Kennesaw, Georgia, DRS began field operations under a Mentor/Protégé program with Baton Rouge-based Compliance EnviroSystems, LLC (CES). CES, one of the top sewer evaluation firms in the North America, provided field training and quality certification, including DRS as a sub-contractor on a number of projects.

Led by Danyale Smith Berthelot, President, Diagnostic Resources & Solutions (DRS), a Woman-owned Business Enterprise, quickly made a name for itself by delivering comprehensive field inspection & reporting services for a number of significant sewer collection projects.

"Our company was fortunate to have its initial projects working with CES," states Danyale Bethelot. "Besides gaining invaluable experience in establishing standards & practices for data collection and assessment, it gave us a unique perspective on client deliverables and recommended methods of repair and rehab."



Danyale Berthelot, CEO

Today, DRS's portfolio of services includes Project Management, Smoke Testing, Manhole Inspections, High Pressure Cleaning, Closed Circuit Television Inspections, Lateral Cleaning and CCTV Inspection, Data Management, and now Electro Scanning.

"What attracted us to DRS was their reputation as a Contractor," stated Chuck Hansen, CEO of Electro Scan. "Plus, their ability to install and retrofit CCTV vehicles to allow TV trucks to easily add Electro Scan."

Led by Brandon Berthelot, in charge of Mechanical Engineering & Services for DRS is able to install or retrofit Aries, CUES, EnviroSight, iBAK, and Rausch trucks to include Electro Scan.

"I'm excited to add the Electro Scan technology to client TV rigs throughout our territory," states Brandon Berthelot. "Today's TV trucks are more than just big DVD makers; they have become sophisticated condition assessment delivery tools. Whether a client needs laser profiling, sonar, electro scan, or just plain Clean & TV services, we need to be able to operate and maintain a complete toolkit that allows us to assess 360° of a pipe, 365 days a year."

Brandon Berthelot, a graduate of the LSU School of Engineering, is also the husband of Danyale Berthelot.

In addition to becoming Electro Scan's authorized dealer in Tennessee, Georgia, Florida, and Puerto Rico, DRS will also a certified training resource and user of Electro Scan.

Georgia -- Home to One of Electro Scan's Biggest Users

DRS will be have a distinct advantage in servicing and support Electro Scan, as the will have one its most well known users in its backyard. Located in the State of Georgia and the source for many of Electro Scan's leading published reports and case studies, is Terry Moy, Manager, Program Management and Engineering, Clayton County Water Authority (Marrow, GA).

Working with Woolpert, Inc., Clayton County Water Authority was an early adopter of the electro scan technology, testing 10,260 linear feet of 8" to 12" diameter pipe representing sanitary sewer interceptors.



Representing forty-two (42) line segments in the Mud Creek, Atlanta Pump Station and Basin 61 areas, Clayton County's electro scanning showed that most pipe segments had defects that were potential leaks

While the number, size and type of each defect varied by pipe segment, twenty four (24) pipe segments showed more than 20% of their joints had defects.

Attendees at this year's WEFTEC conference in New Orleans should plan on

attending the paper, co-authored by Terry Moy, scheduled to be presented Monday, October 1st, from 1:30pm to 2:00PM, Room B-21, as part of Session No. 17.

"Today, tight budgets, capacity constraints, and finding & fixing the biggest sources of (rainfall dependent) infiltration, are the hottest topics facing sewer agencies," comments Danyale. "Our new partnership with Electro Scan, leveraging our field expertise, geographic market reach, and technical background, makes us a winning combination."

Brown Equipment Co., Inc. Orders Next CUES Demo TV Truck with Electro Scan

At Brown Equipment, the motto is "The salesman may sell the first piece of equipment, but it is quality service that keeps the customer coming back!"

In addition to representing Electro Scan Inc., Brown Equipment sells and services CUES, Aquatech, Johnston, American Road, Spaulding Manufacturing, O'Brien, and Terex Woodsman Chippers.

Founded in 1968 by Ralph E. Brown, in Fort Wayne, Indiana, Ralph started by helping an old Army buddy sell his newly patented "boom mower." Ralph quickly realized that 'man cannot live on boom mowers alone' and quickly added other items to grow his revenue stream.

In the 70's, Brown Equipment became associated with the "Porta-Patcher," and with Ralph's engineering background provided the knowledge to develop and add a patent to offer a system that could patch potholes in any kind of weather. By taking cold mix asphalt and removing the distillates a true hot mix was made. As result of the Porta-Patcher's success, Brown Equip-



ment became its principal manufacturer and established dealers throughout the U.S. and Canada.

Ralph passed away in 1994, but the early success with Porta-Patcher taught the Brown's how to grow and manage a successful dealer equipment network, with lessons being passed onto a third generation today.

Electro Scan looks forward to working with Doug Brown and Kiel Williams to rollout its products in Indiana.



Atlantic Machinery, Inc. Joins Electro Scan Dealer Network in Virginia, Maryland, Delaware and DC

Electro Scan is excited to welcome Atlantic Machinery Inc. to its dealer network supplying sewer agencies and contractors in Virginia, Maryland, Delaware, and the District of Columbia.

Atlantic Machinery, Inc. was founded in 1980 to provide a highly specialized sales and service capability for the sewer and street cleaning industry.

The company's goal has always been to achieve its success through providing superior equipment and backing it with exemplary service and parts support.

Throughout its 32 year history, Atlantic Machinery has maintained its focus as a spe-



cialist in sewer and street equipment. While sales initially were mostly municipal and contractor based, they are today almost equally divided between municipal/non profit/contractor and Federal/Military.

The dealership's original territory was Maryland, Virginia and Washington, DC. As the company grew, the states of Delaware and West Virginia were added.

The 1990's success in providing significant quantities of equipment to local Federal and Military installations, led to the Atlantic Machinery obtaining General Services Administration (GSA) and Department of Defense (DLA) contracts for several manufacturers within the sewer and street cleaning industry.

As a result of these contracts, the

company has delivered equipment throughout the world for over 10 years.

Atlantic is based in Silver Spring, Maryland just inside the Washington, DC beltway, with facility consisting of an 11,000 square feet housing shop, parts, and office areas.

Its shop consists of three (3) large 20x60 bays which are equipped to handle any problem or repair, and is staffed by three (3) factory-trained mechanics.

Atlantic has a dedicated CCTV Laboratory staffed by a factory-trained technician and equipped with the latest diagnostic equipment. A large stock of Cues parts is maintained.

Atlantic territory is covered by (4) four highly Experienced Sales People who are managed by Trevor "T" Gardner III, Vice President.

Besides Electro Scan, Atlantic Machinery represents a number of leading manufacturers, including Vac-Con, Inc., Schwarze Industries, Inc., CUES, Inc., PipeHunter by Underground, Sreco-Flexible, Stedt Hydraulic Crane - Stetco, Omco-Ochoco Mfg, Corp., ENZ, UEMSI, PB Loader, Piranha, and Plug-It Products.

"We are very fortunate to be working with T. Gardner and Atlantic Machinery to support Electro Scan products," states Chuck Hansen, Chairman & CEO of Electro Scan. "We look forward to scheduling joint customer demonstrations and supporting local trade shows in the area in the coming month.

For more information, please visit www.atlanticmachineryinc.com.



ATLANTIC MACHINERY INC.
Sewer and Street Equipment Specialists



Trevor "T" Gardner, III (Left) and Trevor Gardner of Atlantic Machinery.

Chuck Hansen Returns to Hampton Roads James City Service Authority & York County, VA



After consolidating and relocating our manufacturing & fabrication facilities to Northern California, re-designing our product line for introduction in both the U.S. and abroad, and attending nearly a dozen tradeshow and conferences, it was time to hit the road.

Initial plans called for whistle stops to visit consultants, dealers, educational institutions, engineers, and commercial plumbers. Most importantly, Electro Scan would also be making its very first 'on-site' customer visit to James City Service Authority, VA.

In the 1980s, one of the first customers of Chuck's former software company was James City Service Authority (JCSA), VA, first visited by his Dad, Robert J. Hansen, P.E. Since one of first American colonies was at Williamsburg, Virginia, the original visit was planned as a modern day ground zero. The rest was history.

After scheduling pilot & plane for Chuck's King Air (F90) and plotting a course to dodge thunderstorms and severe wind turbulence, a call was placed to Larry Foster, P.E. Director, JCSA to make arrange a visit.

"Who is this?" said Larry, suspending disbelief that Chuck Hansen was calling him from retirement. "Nope, I'm not retired anymore, and I want JCSA to be our very first municipal visit," said Chuck.

Larry Foster went on to explain that that the entire region was operating under a USEPA and State mandated consent decree and that he'd love to provide his 100-person training room at his new facility and invite all the local sewer authorities to attend a Town Hall.

Our meeting was Monday, July 23rd, in historic Williamsburg, VA, and we wish to thank Larry Foster, his staff, and all the attendees who attended our Town Hall.



Chuck Hansen and Ted Henifin, Director, Hampton Roads Sewer District (HRSD).

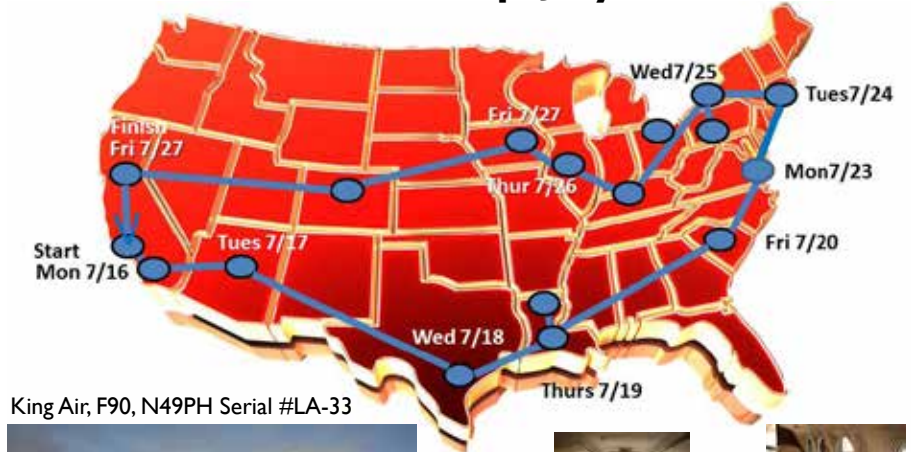


Chuck Hansen and James Hopkins of James City Service Authority.



(Below) Electro Scan's flight plan for visiting consultants, dealers, educational institutions, engineers and commercial plumbers. Not pictured, a quick weekend trip to Charleston, South Carolina to visit Fort Sumter. Thank you, Mike Traud, for a great ride and lots of smooth landings.

Electro Scan Road Trip, July 16-27, 2012



King Air, F90, N49PH Serial #LA-33



Larry Foster, P.E., Director of JCSA and Chuck Hansen.

Finding Leaky Sewers in Canterbury, Missed by CCTV

Field Work for
Ashburton District Council.
Christchurch City Council &
NZ Ministry of Education,
Showcases Electro Scan

July and August was a busy month for Electro Scan in Canterbury (NZ). Working with HydroTech, City Care Ltd., and goodearthmatters & Arrow Strategy, Electro Scan completed several projects to demonstrate the field use and effectiveness of electro scan technology.

Ashburton District Council

A cold, wet, and rainy day, still brought out key managers, contractors, and operators to see how Electro Scan worked in a live pipe. Scanning a pipe that had previously indicated no leaks, was the first stop in Canterbury.



Akaroa, Bromley, and Lincoln

Working with City Care Ltd., where Electro Scan found 3-4 times more leaks than had previously shown on CCTV.

Akaroa was particularly interesting for Electro Scan's Andrew O'Keefe and Mark Grabowski. After a difficult drive, reminiscent of the 'Road to Hana' the beautiful coastal community of Akaroa, has sewer mains that were suspected to have leaks, that were not easily found by CCTV.



CCTV v. Electro Scan		
	CCTV	Electro Scan
Akaroa	2	13
Bromley	7	13
Lincoln	2	7

NZ Ministry of Education

David Bridges of Palmerston North's goodearthmatters was so intrigued after see a table top demonstration of Electro Scan that he asked us to scan a line just televised at Heaton Intermediate School, managed by the NZ Ministry of Education. The results: Electro Scan identified 49 cracks compared to 12 cracks identified by CCTV, with Electro Scan, in each case, finding the largest defects.



(Left, Top) Low tide in Akaroa, waiting for a water truck. But a few minutes later (Left Bottom), higher tides fill the sewer main. Special thanks to Hugh Blake-Manson of City Care Ltd. and Shaun Hodson of HydroTech in Ashburton.



Electro Scan Delivers First Units To Australian Dealer

UVS Pty Ltd (UVS) was established in 1973, originally as Underwater Video Systems, to provide Remote Ocean Vehicle (ROV) services to the offshore oil & gas exploration business in Australia.

Today, nearly 40 years later, UVS is known as the premier company for all things associated with underwater electronics supplying and servicing a wide range of technologies to markets as diverse as deep ocean research to sewer inspection services.

UVS has enjoyed a long association with the service and support of sewer



inspection and trenchless technologies in Australia which makes them a unique partner in Australia. As exclusive representatives for Electro Scan, UVS expects to provide sewerage utilities with unprecedented leak detection capabilities.

"We are extremely excited about the opportunity to introduce the Electro Scan products into Australia, the possibilities are enormous", said Neil Trenaman COO of UVS Pty Ltd.

"Our customers will definitely welcome, for the first time, the ability to accurately and cost effectively detect and rank leaking sewer pipelines. Forward thinking management can now bring industry accepted risk assessment and mitigation analysis principles to asset management and remediation of their sewerage networks."

(Left) Specialty equipment designed and developed for Rangedale to inspect large sewer interceptors for Melbourne Water. UVS operates is the leading CCTV camera repair facilities in Victoria.



Electro Scan Selects AguaPura To Market, Sell, Support Brazil

Chuck Hansen's last visit to Brazil was in September 1997, when he was invited by local CCTV contrac-



tor, VIDEOSAN, to attend ABES-FOZ 97, near Foz do Iguaçu, and speak to a number of local sewer authorities about asset management.



Dialing Code: 55
Brazil's Capital, Brasília
Population: 200,000,000
GDP: US\$ 2.477 trillion

Chuck always felt that Brazil would be a great market, despite his lack of knowing Portuguese. Due to the country's exploding growth in trade, exporting of raw materials to Asia, and adding sewer mains by several thousands of miles a year, Electro Scan is excited to appoint AguaPura to represent its products throughout Brazil.

With a population nearing 200 million people and scheduled to host the 2016 Summer Olympics, Brazil has quadrupled its expenditures of sewer inspection and rehabilitation in just two years.



Chuck Hansen Returns to Rotorua 2012 INGENIUM Conference

Catching Up With New & Old Friends

Chuck Hansen returned to New Zealand after a seven (7) year hiatus, attending the 2012 INGENIUM conference in Rotorua.

His first time in Rotorua was when he was invited for a final interview by the Pipe Asset Management System (PAMS) committee which later selected Chuck's old company to supply a country-wide asset management system to manage wastewater collection and water distribution assets.

And this time wasn't that different. Attending the conference with Electro Scan's Andrew O'Keefe, Manager of Sales Administration, Chuck spent several minutes addressing Conference attendees and introduced the final keynote speaker, Christchurch's most famous citizen, Sam Johnson.

Former employees, customers, engineers, and contractors, were introduced to the Electro Scan where the company markets its products as its ES-150 for Sewer Drains™ for sewer pipes 76-200mm in diameter and ES-300 for Sewer Mains™ for sewer pipes 150-450mm in diameter.



ES-38 for Sewer Laterals™

ES-38 Push Rod



ES-38 Probe Reel



Smartphone



Field Printer



Accessories



Hosted Cloud App

critical sewers™

Electro Scan’s ES-38 for Sewer Laterals™ is designed for pipe diameters from 3” to 8” (76-200mm). Marketed under the ES-150 brand name in the European and Asia Pacific Rim counties, the unit includes a variety of accessories to facilitate in-field pipe preparation and operations.

electro scan inc.

ES-620 for Sewer Mains™



Hosted Cloud App

critical sewers™



Electro Scan’s ES-620 for Sewer Mains™ is designed for pipe diameters from 6” to 20” (150-450mm). Marketed under the ES-300 brand name in the European and Asia Pacific Rim counties, pricing includes turnkey installation services to modify your existing CCTV truck to allow crews to electro scan.

New Specifications Arrive For Sewer Agencies to Electro Scan Sewer Mains, Laterals, Manholes

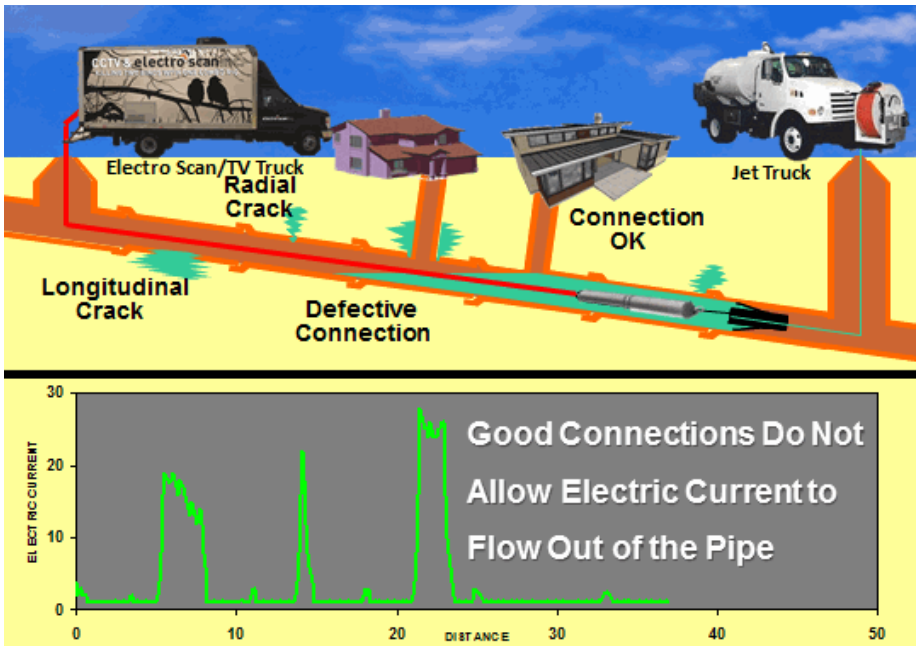
Sample specifications are now available to update RFPs and RFQs to take advantage of Electro Scan technologies.

Being called the ‘Holy Grail’ of the sewer industry, Electro Scan provides a new level of data, not previously available from CCTV inspections and other field tests.

In addition to identifying defects by leak location and size, Electro Scan provides consultants, contractors, and engineers (depending on your agen-

cy’s support plan) (1) the amount of flow by Gallons per Minute (GPM), not available from legacy inspection techniques, (2) direct integration to hydraulic modeling package, (3) location of all pipe joints, representing a new metadata layer (i.e. coverage) for your GIS, (4) comparison of previously stored CCTV inspection results, and (5) access to www.CriticalSewers.com, your new home for all your sewer defect information.

Contact your Electro Scan Authorized Dealer today.



Electro Scan Authorized Dealers

UNITED STATES

AZ Wastewater Industries
20 South 48th Ave., Suite 802
Phoenix, AZ 85043
Tel: 602-778-9359
Web: www.azwastewaterindustries.com
Contact: Gary Hall
AZ, NM, and Clark County, NV

Atlantic Machinery
2628 Garfield Avenue
Silver Springs, MD 20910
Tel: 602-778-9359
Web: www.atlanticmachineryinc.com
Contact: T. Gardner & Jason Kline
Maryland, Delaware, Virginia, and District of Columbia

Bahr Sales & Service
1185 South Broad Street
Wallingford, CT 06492
Tel: 203-265-6711
Contact: Bill Bahr
CT, RI, MA, NH, VT, ME

Brown Equipment Co., Inc.
10603 Majic Port Lane
Fort Wayne, IN 46899
Tel: 260-4781475
Website: www.brownequipment.net
Contact: Doug Brown
Indiana

CLS Sewer Equipment, Inc.
726 S. Sherman Street
Richardson, TX 75081
Tel: 972-479-1335
Web: www.sewertools.com
Contact: Jerry Sonnier
Texas

Diagnostic Resources & Solutions
2840 Cressington Blvd.
Kennesaw, GA 30144
Tel: 678-594-0731
Web: <http://diagnosticresources.net/>
Contact: Danyale Smith Berthelot
Florida, Georgia, Tennessee, and Puerto Rico

EJ Equipment
6949 N. 3000 E. Road
Manteno, IL 60950
Tel: 800-522-2808, 815-468-0250
Contact: Ed La Sage
Web: www.ejequipment.com
Illinois and Eastern Missouri

Eye-Tronics
145 Smith Lane
Louisville, KY 40229
Tel: 502-955-5288
Contact: Bobby Chesnut
Kentucky

Faris Machinery
5770 East 77th Avenue
Commerce City, CO 80022
Tel: 303-289-5743
Web: www.farismachinery.com
Contacts: Giles Poulson and Bryan Boyle
Colorado



Maric Sales
6101 West 9790 South
West Jordan, UT 84081
Tel: 800-424-8693
Web: www.maricsales.com
Contact: John Housley
ID, UT, MT, WY, Eastern Nevada

Municipal Pipe Tool Co.
515 5th Street
Hudson, IA 50643-0398
Tel: 319-988-4205
Web: www.munipipe.com
Contact: Bryan Robinson
Iowa, Nebraska, and Eastern South Dakota

MTech Company
7401 First Place
Bedford, Ohio 44146
Toll Free: 800-362-0240
Web: www.mtechcompany.com
Contact: Bryan Cohen
Michigan and Ohio

Plumbers Depot
3921 W. 139th Street
Hawthorne, CA 90250
Tel: 310-355-1700
Web: www.plumbersdeportinc.com
Contact: Jose Martin
Southern California

Southern Municipal Equipment
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Lexington, SC 29073
Tel: 803-358-0221
Web: www.southernmunicipal.com
Contact: Russell Senn
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PO Box 3022 Thornton
New South Wales 2322
Tel: +61 (0)2 49643508

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Bibra Lake, WA 6163
PO Box 1337 Bibra Lake
Western Australia 6955
Tel: +61 (0)8 94342544

BRAZIL
Aqua Pura
Tel: +52 1 871 1890879
Contact: Ing. Crisanto Rodríguez P.



Electro Scan’s ‘Way of Doing Business’



Faris Machinery's Boyle Equip Bring Electro Scan to Colorado

Electro Scan is delighted to award an exclusive franchise to Commerce City-based Faris Machinery, and their wholly-owned subsidiary, Boyle Equipment, to market and service customers in the State of Colorado.

Faris Machinery has been a trusted partner in Colorado since 1953, providing solutions to municipalities and contractors in Concrete, Asphalt, Sewer, Refuse, Oil & Gas. Faris expanded its offerings by acquiring Boyle Equipment in 2011 and Foster Equipment in January 2012.

A full-service dealer with three locations in Colorado, Faris Machinery offers service, parts, and rentals.

"I had known Bryan Boyle and Boyle Equipment for over 20 years," states Electro Scan's Chuck Hansen, "but understood that Bryan had sold his company in August 2011. After learning of Bryan's continued involvement and meeting with Giles (Poulson), we wanted Faris as our dealer, even more."

Six months later, Faris Machinery acquired Foster Equipment, too.

- Faris – since 1953
- Boyle – since 1988
- Foster – since 1982

According to Giles Poulson, President of Faris Machinery, "We listen, we know the business, and we have solutions that meet the needs of municipalities and contractors."

Faris has 10 factory-trained mechanics and six fully-equipped field service trucks deployed throughout our three branches.

5770 East 77th Ave Commerce City, CO 80022	2269 Commercial Blvd Colorado Springs, CO 80906	772 Valley Court Grand Junction, CO 81505
office 303 289 5743	office 719 527 1016	office 970 242 4997
fax 303 287 9273	fax 719 527 1019	fax 970 242 4783



Faris mechanics are factory-certified, trained professionals with cutting edge technical knowledge – equipped to do the tough jobs on-site or at our shop. We have field service mechanics on call 24/7.

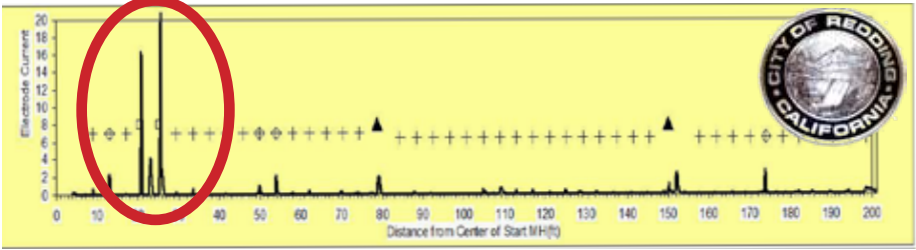
Metro Reclamation District Central Treatment Plant Highlights Electro-Scanning
In 2005, the Metro Reclamation District (CO) first highlighted sewer electro-scan or focused electrode leak location technology in a paper presented at the North American Society for Trenchless Technology (NASTT), NO-DIG, in Orlando, Florida, April 24-27, 2005.

Noted as a first-step technique for identifying leak sources in reinforced concrete, clay, brick, plastic, or plastic-lined steel pipe from 3" to 60" in diameter, the study explained how output from electro scanning is a plot of the electric current flow between a surface electrode and an in-pipe, radially-focused electrode (sonde) as it is pulled through the sewer pipe.

"We are delighted to have an immediate presence in the region with Faris," states Chuck. "Additionally, we look forward to scheduling our first meetings with local and international engineering firms that are headquartered in the Denver area."



City of Redding, Calif. Digs Up Lines To Confirm Electro Scan



Located 160 miles North of Sacramento, with a population 90,000 and Wastewater Revenues \$22.4 Million, the Public Works Department at the City of Redding was experiencing excessive I&I in specific areas of City, not found by CCTV inspections.

As a result of initial flow monitoring, the City identified wet weather flows greater than 450,000 gallons per day, representing more than four times dry weather flows, with selected sub-basins surcharging and sometimes overflowing.

In an effort to locate sources of infiltration, extensive flow monitoring was conducted at every man-hole-to-manhole section, with all pipes televised.

Electro Scan became a key aspect of their assessment program. Testing 25,000 feet of 6" to 8" pipe diameters, a pilot project was initiated. As Electro Scan results were so different than those determined from visual observations from CCTV inspections.



The results from electro scanning its pipes were significant. Of all the pipes inspected, the City identified pipes with the twelve (12) largest pipe defects and repaired them.

By focusing on the largest defects, the City successfully reduced its wet-weather infiltration from 450,000 to 250,000 gallons per day.

Accurate defect positions were found due to electro-scanning which provided reliable and relevant data, not available from legacy CCTV inspection and coding standards. More importantly, electro-scanning was proved the fastest & cheapest way to accurately minimize infiltration.



Bahr Sales & Service Rolls Out Electro Scan in New England

Wallingford, CT-based Bahr Sales, Inc. has been awarded the coveted New England territory to represent Electro Scan. Included in Bahr's territory is Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and Maine.

A leading dealer for CUES (Orlando, FL), Bahr Sales has already been introducing Electro Scan technology to customers in Connecticut & Rhode Island, known to have significant issues with groundwater infiltration.

"We're delighted to add Electro Scan as a product, and as an add-on to new and existing CCTV rigs," says Bill Bahr, owner of Bahr Sales, Inc. "We're a full service shop, so we plan on retrofitting all rigs from our Wallingford, Conn. facilities."

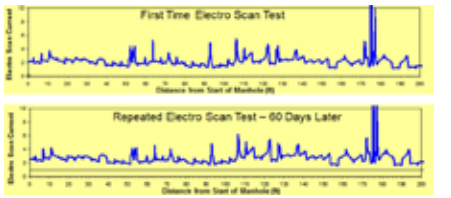
"Just take a look around his shop, and you know Bill knows a thing or two about cars & trucks," says Andrew O'Keefe. "Bill will be a great dealer for us and we can't wait to get a demo rig into New England to help convert Aries, CUES, Enviright, iBAK, and Rausch equipped camera trucks."



(Left) Andrew O'Keefe and Bill Bahr taking about Electro Scan and fast cars.



USEPA Tests Electro Scan 'Consistency'



The USEPA-supervised Field Demonstration of Condition Assessment Technologies for Wastewater Collection Systems (EPA/600/R-11/078, published July 2011) examined a number of key characteristics of Electro Scan and its operations in the field.

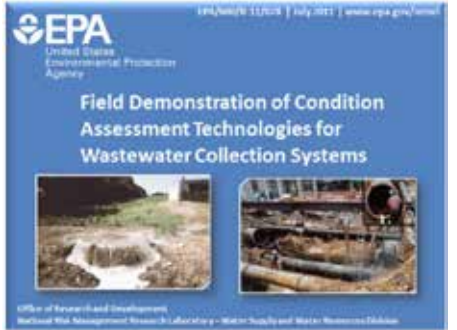
Most importantly, was its validation of Electro Scan's consistent reporting of leak defects.

Since Electro Scan is an automatic process, instead of relying on visual inspection coding standards, its results should be the same whether the test is immediately repeated or repeated days or weeks later, assuming no major changes in the pipe's integrity during that time.

In the case of the USEPA study, Electro Scan was tested in 7,009 ft of pipe, with several pipes re-scanned sixty (60) days after its original scan, with the results compared (See Images Above).

How does that compare to CCTV?

Just take two of your operators, hopefully trained by the same NASSCO-certified PACP trainer, separately have them go into a room to view the same 300-ft, 8" sewer main, and compare their results. What more can you say?



Municipal Pipe Tool Co., Serves IA, NE & Eastern South Dakota



Electro Scan Inc. is pleased to award Iowa, Nebraska, and Eastern South Dakota territory to Hudson, Iowa-based Municipal Pipe Tool Co.

“My 87-year old Mother asked me if we had anyone covering South Dakota, so I was motivated to include to find the best dealer I could for our kick-off,” states Chuck Hansen, whose Mom & Dad were both born in Yankton, South Dakota -- the same town where NBC Commentator, Tom Brokaw, is from.

Municipal Pipe Tool Co., LLC, (MPT) is unique within the Electro Scan dealer network, as they not only represent equipment from CUES, Vacall, Sewer Company of America,



and RIDGID, but they are full service contractors that provide CIPP Pipe Lining, Sewer Cleaning, TV Inspection, Smoke Testing, CIPP Point Repairs, Lateral Grouting, and Manhole Rehabilitation.

“We see a lot of advantages for us (MPT) to introduce Electro Scan to our Midwest clients,” states Bryan Robinson of MPT. “Everyone knows that ‘visual inspection’ has its limitations, so if we can show a city engineer a better assessment of pipe, they will do a better job prioritizing pipes to rehab.”

Our last stop in our 2012 U.S. road trip, Electro Scan was originally going to meet Bryan in Waterloo, but a last minute delivery diverted us to meet in Des Moines, with some of the best weather of the trip.



Richmond, Calif. Shares Aggressive Targets to Solve Infiltration

Electro Scan Inc., in association with its authorized dealer, Vacaville-based WECO Industries, were recently invited by Dan Duffield of the City of Richmond, Calif. to present alternatives to using CCTV and Hydrostatic Pressure Testing of Sewer Laterals.



Using a Town Hall Meeting format, that included representatives from Chevron, East Bay MUD, Burlington Northern Santa Fe, Safeway, Veolia Water, a number of commercial plumbers, CCTV contractors, and civil engineering firms, the City of Richmond wanted to introduce Electro Scan as a possible replacement to Hydrostatic testing of sewer pipes.

“We have committed to eliminating all Industrial Infiltration by October 2014,” stated Dan Duffield, City of Richmond. “With over 800 businesses working in Richmond, it is not cost-effective to use Hydrostatic Testing. Not only is it a costly approach (\$800-\$1,000

per line), but it’s Pass/Fail standard makes it impossible to decide whether a line can be repaired with a point repair or the entire has to be replaced.”

After its initial meeting in August, the City of Richmond invited Electro Scan and WECO to inspect six (6) sewer lines at two industrial sites. Completed September 5th, all pipes had been lined with PVC, less than ten years ago. The first site was a city-owned easement that was part of the Safeway Bread Baking Plant, while the second location was the USEPA Region 9 Laboratory, located on the University of California, Berkeley, Richmond Field Station.

Asked why the City selected PVC pipes to test electro scan, Dan Duffield replied “I knew (based on previous projects) it would have no problem finding leaks in our old clay pipes; what I wanted to know was whether it (electro scan) could find any defects in pipes that we were hoping to exclude from our plans, because they were (fairly) recently lined.”

The result: Electro Scan found severe defects



AZ Wastewater Industries Goes Live With Electro Scan

After successfully securing WECO Industries (Northern Calif.) and Plumbers Depot (Southern Calif.) it was important to include Phoenix-based Arizona Wastewater Industries (AWI) to round out our Southwest U.S. dealer network.

Our initial joint demonstrations with AWI was at the Tri-State Workshop on the River, in Primm, Nevada, where Electro Scan first showcased its ES-620 for Sewer Mains™, designed for 6” to 20” sewer mains and available as an add on for CCTV rigs.

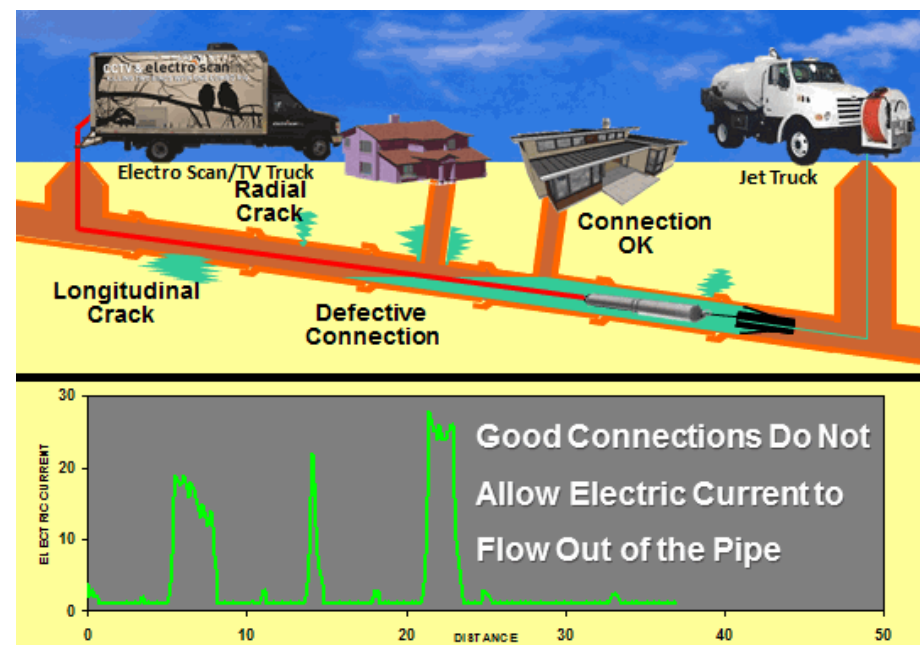
On display was Electro Scan’s converted Aries CCTV truck, equipped with a CUES camera, plus the company’s patent-pending ES-620 for Sewer Mains™. In addition to Electro Scan/AWI/Plumbers Depot’s indoor booths, four kegs of beer were available dispensed from its Combo Electro Scan/CCTV rig. Next stop...WEFTEC in New Orleans.

Representing Super Products, Sewer Equipment Co. of America, CUES, UEMSI, ENZ USA, Inc., USB-SEC, StoneAge, GFG, Inc., Lansas Products, French Creek Production, and

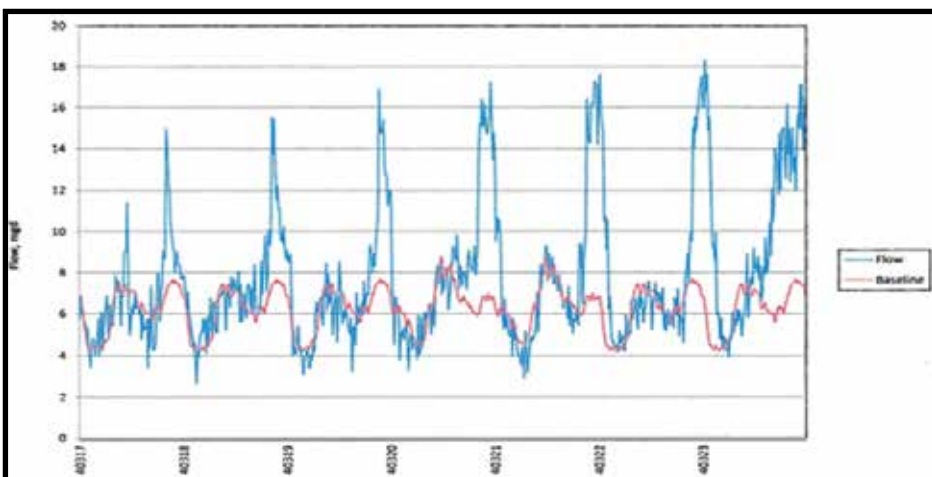


Goldak, AWI is a fixture in the Arizona, New Mexico, and Clark County, Nevada areas.

Electro Scan is fortunate to have such a great partner as AWI on its team.

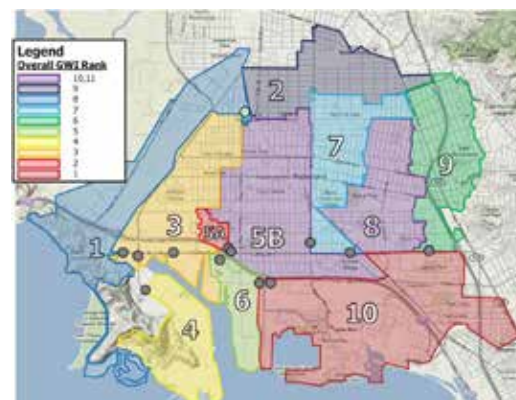


(Below). City of Richmond, Tidal Inflow Meter #11



in 5 out of 6 pipes that were scanned. “It’s not good news, but I’m glad we found out (now) that we have problems with relatively new pipes, as well as old,” commented Dan.

“This is exactly why sewer utilities



need to inspect all new construction, relined, and sliplined pipes,” stated Chuck Hansen. “You will always use CCTV as part of a pre-rehab site review, but you are throwing your money down the sewer if you use CCTV as a post-rehabilitation ‘certification’ that a pipe has been installed without leaks.”

“The Safeway Bread Plan was a perfect site for us (Electro Scan),” said Mark Grabowski, VP, Municipal Markets for Electro Scan. “Its

always important to get a good ground when you’re electro scanning, and with the area covered with concrete (Right), adjacent to an active railroad, having multiple trains going past during our testing, getting a solid connection and the potential for interference were non-issues.”



Electro Scan Leapfrogs Legacy Sewer Lateral Inspection Methods

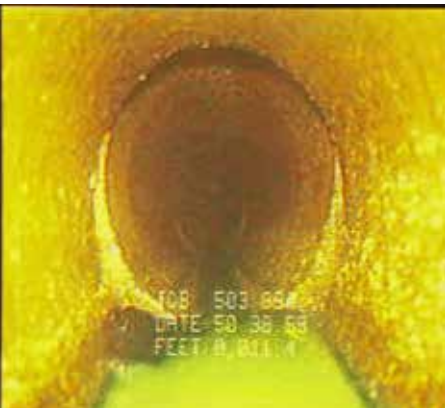
CCTV No Longer Accepted by Major Calif. Sewer Utility

In a move that is sure to invite controversy, Oakland, Calif.-based East Bay Municipal Utility District announced early in 2012 that it no longer would accept CCTV inspections to certify sewer mains as 'leak free.'

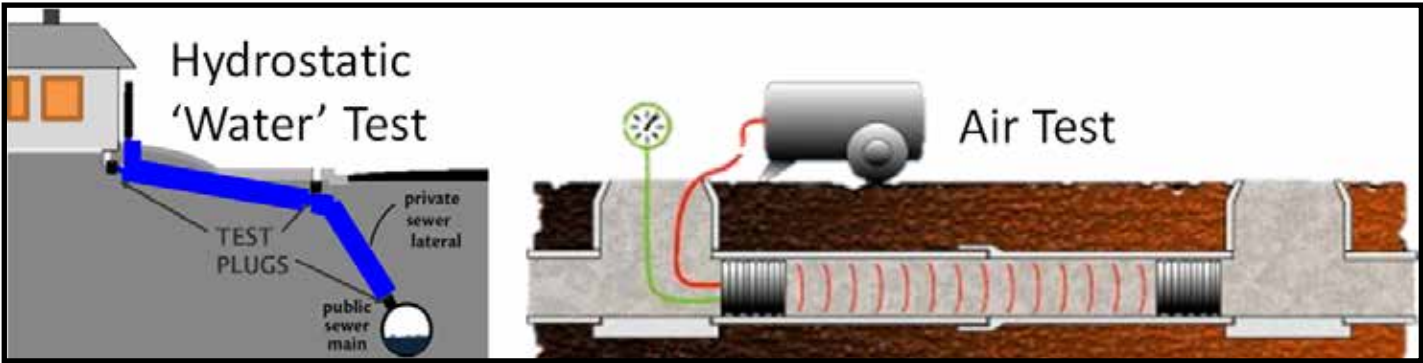


After successfully helping to sponsor and get passed an ordinance that prevents the sale of private properties unless laterals are certified as leak-free, EBMUD, is in the process of making businesses and home owners responsible for fixing leaking laterals. Lots of other methods have been tried, including:

Surface Dye Flood Testing. Found to be inconsistent, unreliable, and unable to readily provide quantifiable infiltration rates.



Smoke Testing. Same as above; unable to provide consistent, reliable, or quantifiable infiltration rates. Smoke is not dependable in tracing leak fissures.



Pressure Testing. It is a well-known fact that neither Hydrostatic 'Water' Tests or Air Tests can tell where leaks occur along a pipe. (Above). And, in some cases, may miss crucial leaks, as in the case (See Below) where encrustation covered over leaks providing a temporary 'FALSE-POSITIVE' test result.

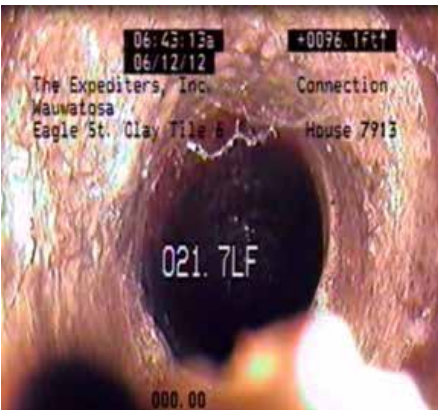
Stopping short of the British model where water companies in England & Wales recently transferred the ownership

of private laterals to their balance sheets EBMUD has taken a leadership role in systematically transferring the cost of repair and rehabilitation, directly to the property owner, by making it part of the escrow process.

In addition to becoming part of the escrow closing aspects of all real estate transactions, EBMUD, and its neighboring sewer authorities have also included the testing and certification requirements as part of the

issuance of new building and home improvement permits.

"Making the closing of escrow contingent on certifying a sewer lateral is leak free, is a great start," states Chuck Hansen, CEO of Electro Scan. "But, given historic lows in the housing market and lack of building permit activity, sewer utilities will have bolster their rehabilitation programs with products like Electro Scan, to better identify and quantify sources of infiltration."



(Above). This pipe with CCTV images of three (3) joints were correctly cataloged in accordance with NASSCO's PACP standards with 'Light to Medium Encrustation'; it also passed its Hydrostatic Testing holding water pressure within standard; however, Electro Scan found all leaks. Until encrustation become an approved rehab method, these pipes need to be relined or repaired to prevent infiltration.

Convert From CCTV to Electro Scan, In the Field, In Under 10 Minutes

Authorized Dealers offering Electro Scan's ES-620 for Sewer Mains™ are looking to have the average TV crew able to switch from CCTV to Electro Scan, and vice versa, in ten minutes or less.

That's right, Electro Scan is providing CCTV Integration Kits that the most popular CCTV cameras to be upgraded to allow users to transform their legacy closed-circuit television rigs into a combination CCTV/Electro Scan solution.

"Previous versions of electro-scan for sewer mains represented a standalone system," commented Chuck Hansen, CEO and Chairman of Electro Scan. "Looking more like an oversized sewing machine case, early versions included its own cable, winch, and data communications protocol to send data to a laptop computer."



"Before buying the technology, along with its intellectual property, I asked 'why the original developers weren't using the infrastructure already provided by existing CCTV rigs?' to simplify the product and add it to a technology that was already accepted and understood," tells Chuck.

While Electro Scan recently purchased its own Aries and CUES CCTV trucks to document its enhancements and conversion process for use by its dealers, Electro Scan has secured a number of sewer contractors as strategic alliance partners to assist in converting their rigs to allow both CCTV and Electro Scanning of sewer mains.

"We could have purchased one of each vehicle, but why.?" states Chuck, besides most of the contractors want

to convert their CCTV trucks, without the double kegerator that Electro Scan is installing in their Combo CCTV / Electro Scan trucks.

Once converted, agencies and contractors can later upgrade their installation to include Electro Scan's ES-2060 for Sewer Mains™, able to assess 20-60 inch (450-750mm) pipe diameters.

Electro Scan looks forward to scheduling a demo with either one of its own rigs or one of its local dealers.



(Above). Electro Scan's funnel plug, attaches to a jet hose from the downstream manhole to create a reservoir of water surrounding the ES-620 probe. The Electro Scan Funnel Plug, available for all diameters of 6" to 20" allows water to surcharge around the probe, preventing the need to fill an entire sewer main. If the sewer pipe is already filled, there is no need to use the funnel plug.



(Above). Electro Scan's ES-620 and 2060 for Sewer Mains™ operates as an add-on component to your CCTV rig. Contact an authorized dealer for more information.

ELECTRO SCAN SET TO UNVEIL INDUSTRY BREAKTHROUGH

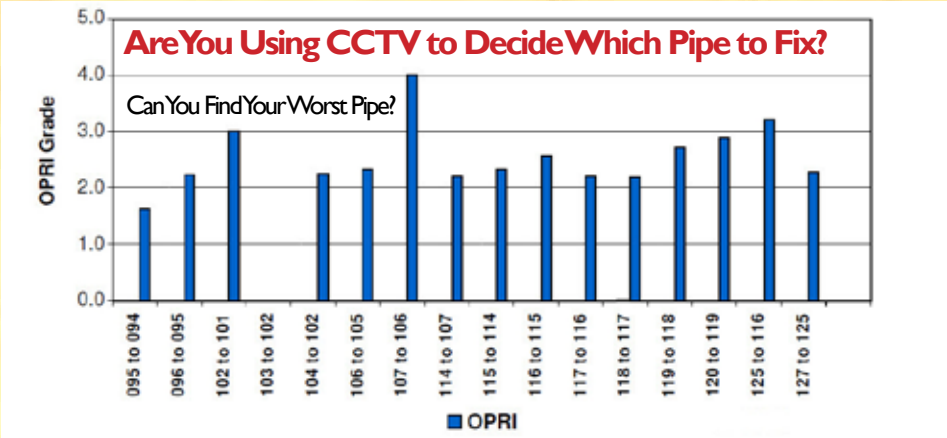
Technology Changes How Defects Are Ranked, Prioritized for Replacement

Sure to become a notable day in the history of the wastewater collection industry, Electro Scan's Chief Scientist, Rob Harris, will be presenting a paper that debunks the use of CCTV to quantify infiltration.

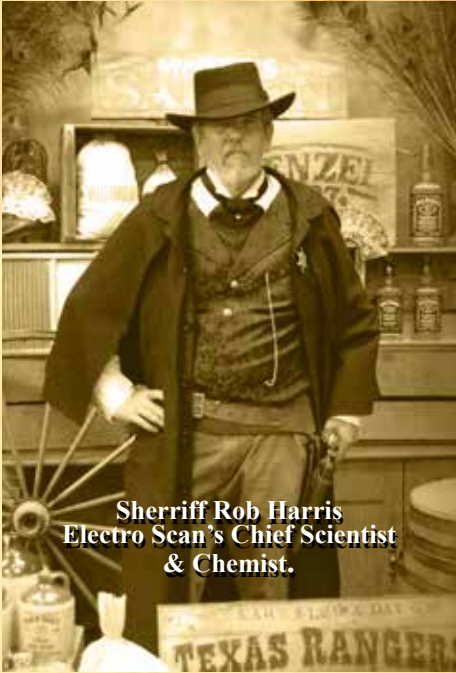
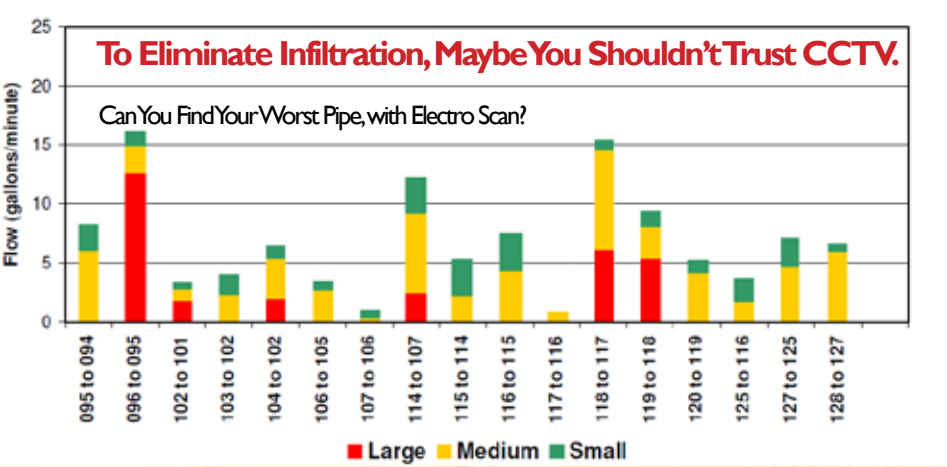
Data made available from the US EPA's Field Demonstration of Condition Assessment Technologies for Wastewater Collection Systems, EPA 600/R-11/078, published July 2011, will be presented.

"CCTV is still a valuable tool," states Chuck Hansen, Electro Scan's CEO, "but should no longer be used as a reliable data source for quantifying infiltration." In addition to Rob Harris, co-authors include Charles Wilmut from Burgess & Niple, and Terry Moy from Clayton County Water Authority, Georgia.

Entitled USEPA Sewer Electro Scan Field Demonstration Revisited, come early to get a seat at what will change how you conduct your SSES and eliminate Rainfall Dependent Infiltration, RDI.



Find out why we might have been fixing the wrong pipes if we based our recommendations on CCTV inspection results, commonly uploaded to major hydraulic models.



WEFTEC
Featured Presentation
Monday, October 1st
1:30-2:00PM, Rm B-21
Session No. 17

ES-620 for Sewer Mains™
6" to 20" (150-450mm) Diameter Pipes

Add-on Accessory to CCTV Trucks. Call an Electro Scan Dealer Today.

electro scan inc.
THE NEXT GENERATION IN FINDING INFILTRATION

ES-38 for Sewer Laterals™
3" to 8" (76-200mm) Pipe Diameters



Electro Scan Added to CCTV Rig Delivers Total Assessment Solution

Electro Scan Inc. announced today the immediate availability of its ES-620 for Sewer Mains. Representing a breakthrough in field data collection, the new product is available as an add-on to new and used CCTV trucks.

Combining its new product with industry leading CCTV trucks, Electro Scan has introduced its patent-pending CCTV Integration Kit to allow field crews to easily add Electro Scan to locate and quantify all defects that leak, including the ability to calculate a Gallons per Minute of infiltration -- an industry first. Data is automatically uploaded to the Cloud

Electro Scan, combined with CCTV, delivers a Total Assessment Solution, that provides never before

available leak information to help locate and eliminate Rainfall Dependent Infiltration, also known as RDI.



Sheriff Neil Tenaman, Electro Scan's Australian Dealer



SEWER AGENCIES TO ADOPT ELECTRO SCAN STANDARDS

Electro Scan now offers its ES-38 for Sewer Laterals, for pipe diameters from 3" to 8" or 76-200mm, and ES-620 for Sewer Mains, for pipe diameters from 6" to 20" or 150-450mm in diameters, in accordance with ASTM F2550-06.

Infiltration of groundwater through defects in a sewer pipe can substantially increase the operation and capital costs of sewers and cause a risk to public health. While CCTV has been the mainstay in pipe assessment for nearly forty years, the need for accurate location, scope, and measurement of all defects are key factors in developing cost-effective repair, replacement, and rehabilitation plans

Approved February 1, 2006, 'Standard for Locating Leaks in Sewer Pipes Using Electro Scanning -- The Variation of Electric Current Flow Through the Pipe Wall' represents a breakthrough in sanitary sewer and stormwater pipe assessment.

"In doing my due diligence and background checks into Electro Scan, I was surprised to find out that something as common as Laser Profiling, hadn't received an ASTM designation," commented Sheriff Chuck Hansen, Electro Scan's Chairman & CEO. "I'd be concerned to rely on assessment techniques that haven't been run through the gauntlet of a group like ASTM."

Electro Scan is delighted to have an approved ASTM standard to guide the operations and performance standards to measure the variation in electric current flowing through defects in pipe walls and, more importantly, determine an estimated Gallon per Minute, GPM, of Flow given specific Water Head and Pipe Gradient conditions -- a Wastewater Industry First!



Sheriff Danyale Smith Berthelot, Electro Scan Authorized Dealer in Georgia, Tennessee, Florida & Puerto Rico.

ASTM F2550-06 was the product of Committee F36 - Technology and Underground Utilities and Committee F36.20 - Inspection and Renewal of Water and Wastewater Infrastructure. In addition to the scope and principle of operation for electro-scan, the standard also includes separate sections describing its significance and use, contract responsibilities, description of apparatus, standard procedures, data definitions, reporting and key terminology.

Municipal sewer agencies and consulting engineers should make sure that all RFPs and RFQs include specific reference to ASTM F2550-06 and that all new sewer construction and relining projects use this standard to ensure that contractors are delivering leak free sewer mains and service connections as part of their rehabilitation projects.

Join our mailing list to keep posted on new the availability of the 2012 ASTM Standard.

Change Service Requested

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Sacramento, CA 95825-4026

THE ES-38™

KEEP THEM ROLLIN'

Sheriff Kenny Alarcon, and special friend, Leah Grace.