TRENCHLESS WORKS 200TH ISSUE

THE VOICE OF THE TRENCHLESS COMMUNITY APRIL 2023

Official Magazine & Media Partner: KSTT Official Publication of the International Society for Trenchless Technology ISTT

EXTENDED TRAINING OFFER FOR PIPE RENOVATORS

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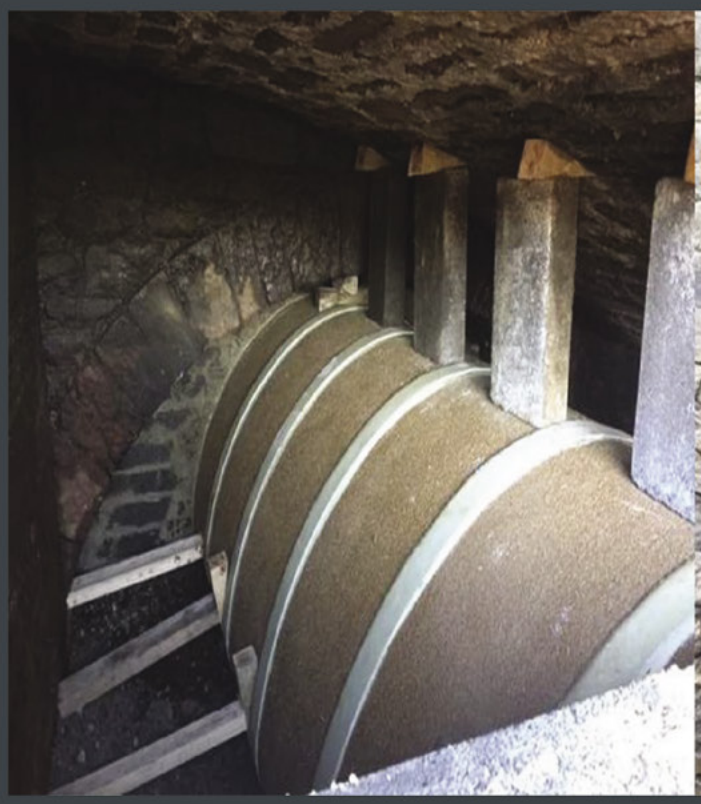
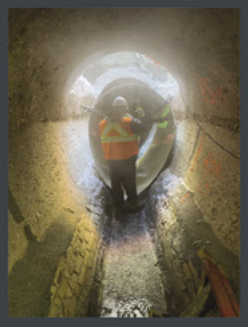
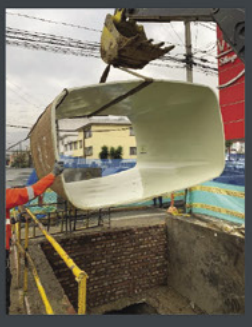
CHANNELINE
GRP Structural Lining Systems







PANELS SHOWN ABOVE ARE MANUFACTURED BY CHANNELINE

ANY SHAPE – ANY SIZE

Large diameter pipelines and culverts represent the backbone of any city's utility network for the collection and disposal of sewerage and effective drainage of stormwater. The need arises to consider the means by which the structural rehabilitation of these pipelines and ducts can be achieved whereby a new, 150-years plus life expectancy can be provided with a high degree of confidence. Channeline international has been providing bespoke Structural Glass Reinforced Plastic (GRP / FRP) lining systems since the early 1980's, during which time we have accumulated unrivaled engineering and manufacturing experience for both Circular and Non-circular buried infrastructure worldwide. **At Channeline, we are proud of our heritage and are committed to offering economic custom solutions to our existing and future customers in the Storm and Wastewater Sectors.**

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CHANNELINE
Beyond the Ordinary

Beyond the Ordinary

TRENCHLESS WORKS 200TH ISSUE

SPOTLIGHT

Ian Clarke, Editor-In-Chief,
Trenchless Works

Well, who would have thought it, 200 hey! No, not me the magazine! Just look at the picture to the left – not quite looking 200 yet (I hope), although compare this picture with the one I used to use and maybe you might think differently. Yes, Trenchless Works magazine with this publication celebrates its 200th issue.

After almost 17 years since its launch in September 2006, the time for me at least has flown by. Having spent some 15 years previously with the then Mining Journal producing the one-time ISTT official magazine No-Dig International, it came as something of a shock to find myself redundant in 2004. What else was there to do but go independent!

For the first two years of NoDig Media Services it was a case of establishing a grounding from which to work and in September 2006 the very first issue of Trenchless Works hit the 'airways' or should that be 'netways' as it has only ever been an online/pdf distribution magazine?

Anyone reading the issues since then will have noticed that I am far from being a graphic designer, but the idea was never to be the best-looking magazine but to try to be the one of the most informative regarding trenchless technology.

Having worked at this aim for 15 years, I could see that eventually there would be a need for me to step back and even consider retiring (don't cheer too loudly please)! But no not yet. However, this meant a decent exit strategy was needed on my part, if the magazine was to continue forward.

To my surprise, at about the same time, some chap called Paul Harwood happened to discuss his desire for a magazine that might support and progress the Westrade position in the trenchless world of the future. So, after some months of verbal tennis, we both agreed that Westrade would take on Trenchless Works magazine as publisher under licence, which it still does today. So, at the start of 2021, Westrade took on the production and sales of the magazine whilst I continued to support the editorial side of things. I am so pleased to say that Westrade's production guru's, designers and sales team have taken what was a magazine that came from a sound starting point and morphed it into the modern-looking and highly-readable publication you have before you today. My sincere thanks go to the team for this effort.

The publication has also progressed through Paul's sterling efforts to become the latest official publication of the ISTT, so that is twice I have been an editor with that honour. We have also become the UKSTT's media partner and work closely with other Affiliated Societies such as the NASTT. >


TRENCHLESS WORKS

ISSUE 1 | FROM 05 SEPTEMBER 2006 | SPONSORS LINKS

SANIPOR RECIEVES WRc APPROVED™ STATUS AFTER RIGOROUS LABORATORY TESTING AND SYSTEM ANALYSIS

Click for main story

TRENCHLESSWORKS 200TH ISSUE

SPOTLIGHT

I look forward to working with Paul and the rest of the team for a while yet and would like to thank past, present and potential future article providers and advertisers for their support over the years and hopefully into the future. Without these latter contributors there would be no magazine, so their continued support is always very much appreciated.

Some of the magazine's long-term and more recent supporters have also thrown their congratulations into the ring given this 200th issue anniversary. Some their comments follow.

"Wow 200th issue of Trenchless works. This magazine is now the mainstay of the trenchless industry offering a comprehensive overview of the global market. Great articles, updates, educational news and also information on events up and coming and also past. I would like to congratulate Ian, Paul and the Westrade team for putting together, growing and presenting a great product that is a key element of the trenchless industry. Here is to the next 200 and beyond!" – Ian Ramsay UKSTT Chair and IRR Trenchless Consultancy.

"Congratulations to Trenchless Works on the achievement of 200 issues – what an amazing milestone for the team. We are extremely appreciative of the work that goes into the magazine and the information provided to reach our industry. Cheers to 200 more!" – Maynard Akkerman, Akkerman Inc, USA.

"When Ian Clarke launched "Trenchless Works" as an online-only format in 2006, he had seen the writing on the wall. Having worked as an editor for leading civil engineering magazines, he had witnessed the creeping decline of print media in favour of digital. But being a mining engineer as well, he was aware of the potential of trenchless technology. Hence, he seized the opportunity to set up a No-Dig publication as a service hub for the industry. And time just proved him right. TRACTO was on board right from the start. The first issue of Trenchless Works featured a ramming project by contractor Murphy as part of the Trans Pennine Gas Pipeline and an HDD crossing in the World Heritage Site of the Emerald Coast. Since then, both the magazine and trenchless technology have taken some huge leaps forward. The TW focus has expanded from the UK to the world. It became a common platform for all the key players and advocates in the trenchless business, a 'must read' for keeping up to date with and a chronicle of technical developments. Just read some of the early issues and you'll see how smart No-Dig technology was even then. Joining forces with Westrade in 2021 has taken Trenchless Works to the next level. It is now a central hub of information and promotion for the trenchless community, spreading the word across all media channels available. So, congratulations to Ian and the TW team at Westrade on the 200th issue of Trenchless Works! Keep on giving trenchless a voice that is heard everywhere." – TRACTO, Germany.

Ian Clarke

Editor-in-Chief Trenchless Works

EXTENDED TRAINING OFFER FOR PIPE RENOVATORS

New location – Academy at Bodenbender GmbH.

Since 1991, Bodenbender has been offering training courses on trenchless sewer rehabilitation at its academy in Biedenkopf, central Hesse, Germany. The training focuses on the practical application of products from the company's own production facility. In order to be able to expand the range of training courses even further in the future, the family-owned company moved to a new location in autumn 2022. Under the new name 'Relining Academy', external instructors will also lecture on topics such as work safety or leak testing in addition to the existing range of courses. In this way, the company wants to consolidate its leading position in the market as a 'partner for reliners'.

Since the 1970s, Bodenbender GmbH has developed from a small sewer rehabilitation company into one of today's leading suppliers of tools and materials for professional trenchless sewer rehabilitation. Today, the product range offers solutions for all application challenges, from long-distance renovation to partial renovation or manhole renovation. Inliner, Pointliner and vehicle systems form the core of the product range.

Since the beginning of the 1990s, an essential part of the company's identity has been the training offered to customers and partners of the company. This is now to be significantly expanded at the new location. Managing Director Christian Kunkel explained: "Up to now, our company has been spread over several locations in Goldbergstraße in Biedenkopf. Last >

Inside the new training facility at Bodenbender GmbH.

year, we decided to give up our previous premises in Goldbergstraße 32 and took over a vacant building complex a few metres further on and finally renovated it so that office, warehouse and production buildings were accommodated in one location. In the course of this, the premises for the new retraining academy were expanded and modernised. This enables us to conduct training courses under particularly practical rehabilitation situations, especially in the area of manhole rehabilitation and in-house rehabilitation." said Kunkel.

'All-round Package'

In future, the specialist in the field of trenchless sewer rehabilitation would also like to offer an 'all-round package' in the training sector. "Training is extremely important to us, but of course it is also very time-consuming." continued Kunkel. "For this reason, we want to minimise the effort for our customers and partners. In future, they should no longer have to send their staff to several providers and have multiple travel, downtime and planning expenses, but simply be offered everything combined in one house." Andreas Stentrup - Team Leader Application Technology at Bodenbender, explained: "As far as the training offer is concerned, we already have some concrete ideas. But this will certainly develop over time. We are happy to respond to the wishes of our customers and train in the areas where there is a need, for this, of course, we also rely on feedback from our customers."

International Interested Parties

In addition to appointments specifically for individual customers, there will also be fixed appointments in the future that all customers can attend, for example, for the topic of occupational safety. >

Practical, hands-on work is a significant part of the training process.

The new name of the Academy also promises a lot. Sales and Marketing Manager Anna Gerlach explained how the name change to Relining Academy came about: "The previous name 'Bodenbender Akademie' no longer fits for the new orientation of our training courses, after all, soon there will no longer be pure Bodenbender content available here, but experts from the most diverse fields. In addition, we would like to align ourselves more internationally! We already regularly train partners from non-German speaking countries and the demand continues to grow. We would be happy to soon welcome our customers from Greece or even Australia with us in Biedenkopf." said Gerlach.

Improved Working Conditions

In addition to the new orientation of the training programme, the move to the newly refurbished premises also brings other advantages. Managing Director Jonas Bodenbender commented: "We now have significantly more space across the board including several spacious conference rooms, a larger area for research and development, as well as more offices and common rooms. We expect this to lead to improved working conditions and increased employee satisfaction." he said. The official opening of the new premises with customers and partners is planned for autumn 2023, but deliveries and training have been collected or carried out at the new location since October 2022.

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INTERNATIONAL NO-DIG 2023 MEXICO
THE 39th INTERNATIONAL NO-DIG

CALL FOR ABSTRACTS FOR NO-DIG MEXICO FURTHER DEADLINE EXTENDED!

The deadline for submission of Abstracts for the No-Dig Mexico Conference which will run between 17 and 18 October 2023 has been further extended to **1 June 2023** in order to provide papers across the broadest possible range of trenchless activities, particularly those from the Central and South American regions.

The list of topics which the organisers would like to be included in the Conference programme includes:

- New installation methods (Pipe jacking, Microtunnelling, Pipe bursting, Pipe ramming, Impact moling, HDD, etc.)
- Rehabilitation and repair methods (CIPP, Slip lining, Spray lining, etc.)
- Pipe inspection
- Site survey
- Underground detection
- Asset management
- Other relevant topics

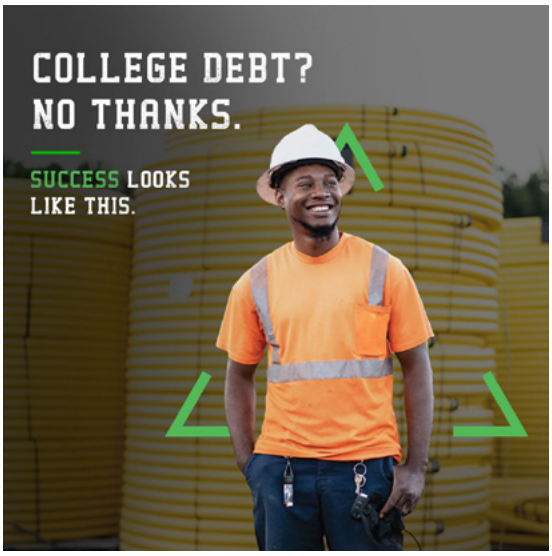
Submission of Abstracts DEADLINE EXTENDED to 1 June 2023

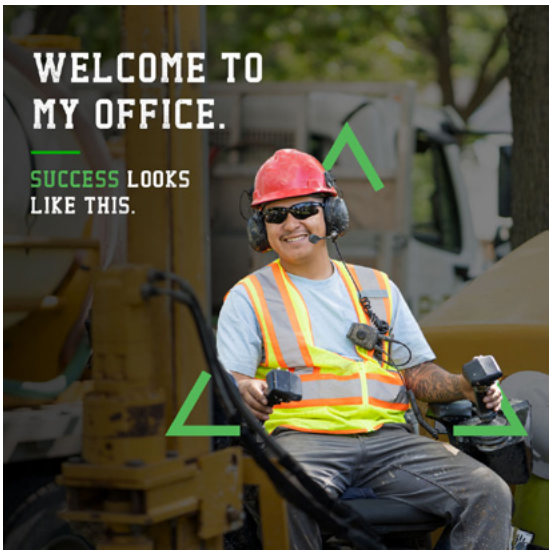
A synopsis of the proposed Paper (maximum of 200 words), the author's biography, and a photo will be needed to complete your submission. The submissions website can be found at: https://www.no-digmexico.com/call-for-papers/. Note that there is no 'Submit button' in this system. The completed submissions will be automatically forwarded to the organiser right after the new closing date unless the submission is withdrawn. To check your status, click on 'My submissions'.

If there are any questions relating to the submission of any abstract or the selection process, please contact: NoDig_Conference@istt.com

The Submission process schedule is as follows (Subject to change without notice):

- 01/06/2023 Deadline for abstract submission
- 20/06/2023 Notification of abstract acceptance
- 30/07/2023 Draft paper deadline
- 01/09/2023 Full paper deadline >





DCA CAMPAIGN PROMOTES DISTRIBUTION INDUSTRY CAREERS

Today's jobseekers have tended to overlook job openings in the distribution pipeline industry as a great first step toward their dream career. An alluring new workforce initiative – 'Success Looks Like This' – now makes it difficult not to.

The Distribution Contractors Association (DCA) in North America, officially launched its 'Success Looks Like This' initiative in February. A host of sponsoring companies have been promoting the campaign individually and posting their contributions to the overall on their own social media sites since December 2022.

The campaign's intended audience ranges from high school students and college graduates about to enter the workforce, to non-traditional candidates with large gaps in their work history or training in a completely unrelated field, to employees just looking for something more rewarding than their current job.

It also provides campaign guidance for employers, sharing insights with them on the psychology of today's diverse workforce and what candidates are looking for in a job.

Need to educate the workforce

The 'Success Looks Like This' campaign is DCA's proactive response upon discovering what influences Gen Z and Millennial career choices.

Most candidates tend to prioritise financial success, as well as the potential to have a positive impact, contributing to a worthy cause. They also place high value on working in a friendly and supportive work culture that supports a healthy work/life balance. >

However, many Gen Z and Millennial jobseekers had one or more misconceptions about pipeline-related jobs. Among these were fear of failure, believing that the jobs required skillsets they did not possess or could not acquire. For some it was a false notion that pipeline work is low-paying, dirty, harmful or dangerous work. >

Inspirationally educational resources

The 'Success Looks Like This' campaign materials use a humorous tone and bold language to connect with the audience, resetting any misperceptions about the underground utilities industry.

The materials show what industry roles entail, their function and the opportunities for training, professional development and personal advancement.

Participating companies have access to fliers, posters, and thousands of photos for use in their own social media, all featuring real-life industry professional at their job in friendly, safe and orderly work environments.

The sponsoring companies of this campaign included Centuri, United Rentals, Ditch Witch, Wyo-Ben, Vermeer, Artera, ISCO, Charge, Pipe Strong, ECI Contracting, Primoris, Intren and Vacuworx.

One of the strongest resources in the campaign is a suite of videos, each featuring underground utilities professionals whose various roles span all levels of the industry:

- Labourer
- Executive
- Backhoe & Hydroex Operator
- Drill & Locate Operator
- Welder & Fuser
- Safety Director
- Office Executive/Coordinator
- Foreman

"The 'Success Looks Like This' campaign materials use a humorous tone and bold language to connect with the audience, resetting any misperceptions about the underground utilities industry."

Let's Get To Work

Campaign materials lead jobseekers and employment providers alike to the DCA workforce development microsite, DCALetsGetToWork (www.DCALetsGetToWork.com).

Site navigation is intuitive and easy to use. Employers can post their jobs at the site and find resources that educate them about the various strengths of each diverse subculture within the pool of candidates. Candidates in turn can easily search through job openings, apply for DCA scholarships and upload their resumes. Uploading their resumes on the sites currently gets them in front of more than 230 industry employers for consideration.

This Is What Success Looks Like on the road

Promotional materials including the videos are available on the DCA website and its social media platforms. They will also be available in DCA and member booths at select industry tradeshows and exhibitions. These include such events as the SkillsUSA TechSPO in Atlanta (19 to 23 June), ASCA in Atlanta (15 to18 July) and Utility Expo in Louisville, Kentucky (26 to 28 September).

(left to right) Chris Watson, Scott McMurray, André Oberfeld, Andrew Williams, meet for new S1E & SAERTEX multiCom partnership.

S1E ENTER NEW UV-CIPP LINING PARTNERSHIP WITH SAERTEX MULTICOM.

S1E Limited has announced they are the new distributor for SAERTEX multiCom® to provide their UV-CIPP lining solutions to customers in the UK and Ireland.

From the 3rd of April 2023, we are pleased to announce that S1E and SAERTEX multiCom are working closely together to provide the UK and Irish markets with SAERTEX multiCom's trenchless rehabilitation solutions.

The new partnership between S1E and SAERTEX will improve the availability of materials and services, as they both continue to work to provide products and processes for the trenchless rehabilitation industry, that protect the environment and benefit customers.

S1E will be supplying UV-cured fiberglass-reinforced pipe liner to rehabilitate wastewater and stormwater pipes and will be supported by having close contact with local SAERTEX multiCom representative Chris Watson.

"We are glad to have found a strong partner in S1E, who has a broad portfolio of quality products and is well connected to the market. Above all, we see this partnership as a great added value for our customers, who will receive even better local support. It also allows us to provide material for short-term needs," says Chris Watson, Technical Sales Manager – UK & Ireland at SAERTEX multiCom.

Scott McMurray, Managing Director at S1E said, "This partnership adds more high-quality, market-leading products to our CIPP Lining offer for the customers, who are always looking for the best equipment and systems to implement within their business, in the UK market."

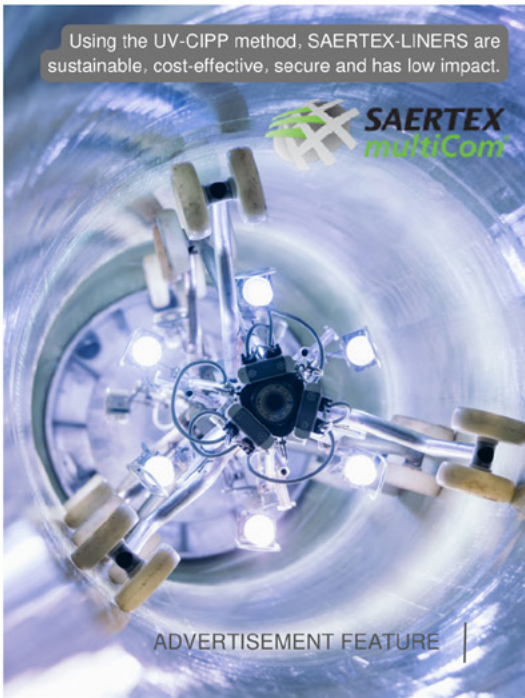
SAERTEX multiCom is the industry-leading manufacturer of UV-cured fiberglass-reinforced pipe liner in the world. Because they are a solution provider for the trenchless rehabilitation of wastewater and supply pipes, they partner with their customers throughout the installation process – from initial planning and bidding to on-site support and project completion.

Specialist in trenchless technology, S1E will be an exclusive reseller of SAERTEX-LINER® MULTI for gravity applications. The strong mechanical properties, the installation friendly construction and the standard-included gliding and UV light protection foil offer customers and installers enormous advantages. Lower wall thicknesses, shorter curing times, higher pulling forces, and time saving due to no need of additional gliding foil, as well as a service life of up to 100 years are just some of the advantages of using a SAERTEX-LINER.

"We'll be distributing the SAERTEX-LINER MULTI that has been approved by independent bodies like WRc and DIBt. This liner is an efficient, cost-effective solution that offers industry leading performance and quality. We can't wait to demonstrate and offer this to our customers," commented S1E General Manager, Terry Ingleby

"In addition to material supply, we are already planning further steps to implement a higher level of service and support," adds André Oberfeld, Area Manager Northern Europe & UK at SAERTEX multiCom.

FOR MORE INFORMATION:
WWW.S1E.CO.UK



Using the UV-CIPP method, SAERTEX-LINERS are sustainable, cost-effective, secure and has low impact.

DITCH WITCH LAUNCHES AT CONEXPO

The American Augers DD240T launched at ConExpo.

As part of its offering at the recent ConeExpo event Ditch Witch brought to market several new trenchless associated product lines.

One such offering was a reinvited American Augers Mid-Size Directional Drill designed to bring high-performing technology to boost operator efficiency. Featuring a new fluid pump and engine upgrades, DD240T operators can perform at a new level, according to the company.

The reimagined DD240T mid-size directional drill features an upgraded CAT engine and industry premier Gardner Denver fluid pump, maximising power and uptime on any HDD jobsite.

The DD240T features a Tier 4 Final Stage 5 CAT engine that meets the emission standards for engines in Europe. By reducing jobsite emissions, the new engine allows HDD contractors to take on even more jobs. The 536 hp engine also brings powerful drilling capabilities to a mid-size drill to maximise jobsite productivity.

The DD240T also features a new onboard fluid pump from Gardner Denver, the industry's premier supplier of fluid pumps. The new Gardner Denver fluid pump has a rating of 450 gpm (1,700 l/min). However, to improve the machine's longevity and increase performance and uptime capabilities the DD240T is set to run at just 300 gpm (1,136 l/min). This allows crews to work efficiently without pushing their drill to its limits every time it is turned on. >

The new M300DH fluid cleaning system from American Augers.

Additionally, the DD240T has a redesigned cab to boost operator comfort. With an improved air conditioning system and a taller cabbed unit, contractors can stay cool and comfortable, increasing productivity.

Further to this, horizontal directional drill (HDD) operators can get jobs done more efficiently and with greater ease using the revamped M300DH fluid cleaning system from American Augers. Designed with customer-focused improvements, the M300DH boosts operator comfort, improves ease of use and increases access to work spaces.

The M300DH, which assists HDD operators with clean drilling fluid, has been updated with a new pit pump variable frequency drive (VFD). The drive enables operators to adjust the pit pump flow to more accurately match the HDD rig flow and shaker feed. This provides more precise fluid management and reduces the operator's need to constantly manage the pit pump.

The M300DH also features a new genset connection that allows operators to quickly and easily disconnect from the onboard generator set and plug into an offboard generator set, boosting uptime. This new feature can help operators who have experienced hours or even days of downtime when their generator goes down, now return to work in minutes. The genset connection is colour-coded for correct wiring, making it easy to get the offboard generator set up and running efficiently.

"The enhanced M300DH incorporates the features and design improvements that were asked for by customers." said Richard Levings, American Augers product manager. "The updates address various customer needs such as improved mixing performance, better tank agitation, and increased accessibility to the shaker and other working spaces on the cleaner deck. These improvements can help streamline operations and provide a new level of efficiency."

To maximise accessibility, the M300DH offers a flexible catwalk that can fold up for easier transport. Additionally, the catwalk is strategically placed on the screen change side of the shaker to improve operator access to the shaker.

The M300DH's redesigned 30 ft (9 m) trailer is extended for better service access from the ground. The extended trailer also allows for lower placement of the generator set to enhance operator working space and reduce noise on the deck. Furthermore, it supports the addition of a new deck access stairway that replaces the side ladder for easy entrance and exit and increased operator comfortability. >

The Ditch Witch W12 truck vac.

The M300DH fluid cleaning system can pair with multiple class drill sizes including drills in the 100,000 lb (45 t) class and below, giving operators more variability and jobsite flexibility.

In the area of vacuum excavation, to enhance utility contractors' productivity while potholing or cleaning up spills and debris, Ditch Witch has introduced the W12 truck vac to its line-up. The first offering in Ditch Witch's new line of Warlock vacuum excavators, the W12 gives contractors a PTO-driven vacuum excavator that is backed by the service and support of the global Ditch Witch dealership network.

The W12 brings increased capacity, versatility and performance to jobsites with 1,200 gallons (4,500 l) of fresh water and a 12 cubic yard (9 m^3) debris tank. With 5,000 cfm (140 m^3/min) and a 27 in Hg (914 mbar) of vacuum power, coupled with the extensive storage capacity, crews can take on bigger jobs and maximise time of the jobsite, which will reduce time spent dumping debris.

The design and layout of the debris tank positioned between dual 600 gallon (2,270 l) saddle tanks of fresh water creates a more stable truck, improving operator experience. For easier operator usability, a remote-control system controls the water system and boom, and can lift and lower the tank.

"We are building on 20 years of truck vac knowledge to bring excavation crews the innovative line of Warlock vacuum excavators." said Chris Thompson, vacuum excavation product manager at Ditch Witch. "The increased versatility and capacity of the W12 allows crews to improve productivity and decrease downtime on even the toughest jobsites. Operators get improved technology and optimised design with the same service and support that comes with purchasing any equipment in the Ditch Witch dealer network."

The W12's dual hose reels coupled with the ability to use both a hydro and air method enable crews to use one machine for a variety of excavation tasks, even in harsh environments. Together, the size and versatility of the W12 allows it to be used for slot trenching, HDD projects, potholing and more. The W12 is the first truck vac released in the new Warlock series from Ditch Witch.

“SIMPLE AND EASY SYSTEM TO WORK WITH!”

Svanbjörg Vilbergsdóttir
Consultancy - Ráðgjöf og eftirlit

Svanbjörg Vilbergsdóttir was tasked by the government of Greenland to oversee small diameter pipe rehabilitation projects in hundreds of apartment buildings. She chose NuCure CCUV because it combined quality control with a fast and easy-to-execute process.

“I loved the simplicity of the NuCure UV system. And I like how fast UV works in our cold temperatures.”

“Once I learned that it also came with quality assurance documentation – I was sold! I can review the data, including before and after videos, to grade it and create a report right from the portal.”

“The training was excellent. And NuFlow Central offers training videos and support, so we can continue to learn on our own time. It’s a simple and easy system to work with, and easy to teach others.”

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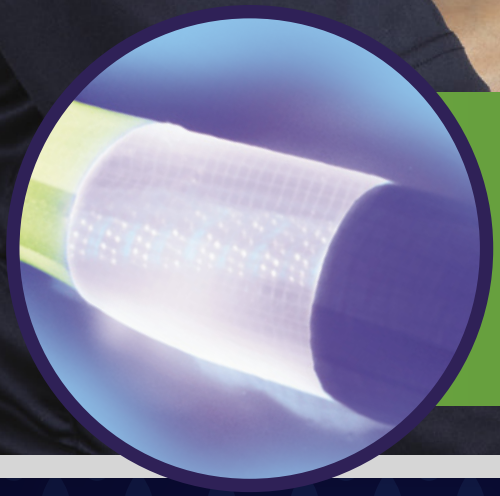

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SUEZ PIONEER RETIRES AFTER 48-YEAR CAREER

Mike Smith.

Mike Smith's name might not ring a bell to many but, perhaps even unknowingly, he has achieved a sort of legendary status in the world of Ice Pigging™. Mike is not used to being in the spotlight, but he deserves to be given credit for his lifelong achievements in the water industry.

His recent retirement as team supervisor was a cheerful yet bittersweet moment for him and his colleagues at a farewell get-together at the Ice Pigging headquarters in Pucklechurch, Bristol, UK. Amidst bursts of laughter recalling fun times, the heartfelt speeches from Mike's peers evoked a poignant moment for everyone present. "I feel very sad to leave it." said Mike.

For the past 12 years, Mike had been at the forefront of the pioneering SUEZ Ice Pigging cleaning service now being successfully implemented across the UK, Europe, USA, Australia, and Asia. Unlike traditional pigging techniques, Ice Pigging is a highly effective, low-risk, no-dig process that can be used in a wide range of pipe network using ice slurry that is moved through the pipe systems to remove unwanted pipe residue and tackle water discolouration. A world first, this service is currently used in water, wastewater, industrial, oil, and gas pipe sectors. >

Mike looks back on a notable 48-year career that spanned 36 years as trunk mains operator at Bristol Water, to 12 years in Ice Pigging. From having a steady '9-to-5 job' and being 'home every night' routine, he suddenly found himself driving to Barcelona, Spain on his very first day with the Ice Pigging team!

"No two days are alike in SUEZ!" Mike exclaimed, remembering his stints travelling around the UK, Ireland, Netherlands, Spain, France, Belgium, Germany, and Italy. "And the best part of all this is the places you go and the people you meet."

Mike's first introduction to Ice Pigging was in 2005 when he was selected to be part of the Bristol Water team that tested a novel water pipe cleaning technique invented by Professor Joe Quarini of Bristol University. He thought it was a good challenge as it was less predictable and less repetitive from his regular job.

Although many people doubted this new technique would ever get off the ground, Mike was willing to give it a go, working closely with managers and academics. "It was a challenge developing something most people thought would not work." said Mike.

One thing led to another and he welcomed the offer to join SUEZ when Ice Pigging was formally launched in 2011. By that time, the technique and equipment had already been fully developed, a far cry from the early days when Mike literally started with 'ice in a bucket on a trailer, and a paddle to stir it with'.

A chat with Mike is an enjoyable trip down Ice Pigging memory lane. He will happily tell you of the ins and outs of the service, from using a demo rig to building a tanker, to the evolution of ice making. He and his team pretty much trained everyone offering the service worldwide. He is the unsung guru of the Ice Pigging world, if you will. Best of all, no one else in the UK has the experience that Mike and the whole team have.

One of his favourite stints was removing a manganese sludge from a raw water main from reservoir to source for Wessex Water. His scariest job? Cleaning a delicate 15 in diameter water main that crosses the main East Coast Railway line into Newcastle.

His favourite part was driving to operations all across the country and the continual refinement of the ice making machines, as well as the satisfaction of a job well done. He loves the sense of accomplishment seeing the water in the pipes turn from filthy to clean. The most hysterical? It was doing a job in a field when a herd of wild horses chased the team down. "While the others were quickly detaching the equipment, I left them and ran straight to the van." said Mike with a smile.

He will always cherish the 'connection and camaraderie with colleagues and customers on site' particularly on night shifts. What separates this pipe cleaning service from the rest is that it can be done in the middle of the night with minimal noise and disruption to customers.

"Ice Pigging is brilliant! The biggest advantage is that the process is so quick, it can be done in a few hours overnight, most customers do not even know we have been." said Mike.

While he is looking forward to enjoying his retirement, do not count him out of the Ice Pigging world just yet. Mike says he will still help the team if needed, while indulging in his DIY pastimes, looking after his grandkids, and keeping his dog, Caz, entertained. But one thing is sure, Mike will retire knowing that his 'baby' is now making a big difference in the industry that made him who he is now.

"The biggest advantage is that the process is so quick, it can be done in a few hours overnight, most customers do not even know we have been." said Mike. "

FYLD APPOINTS DIRECTOR – WATER SECTOR

FYLD, the AI-powered digital platform that enhances the safety and productivity of fieldworkers, has appointed Joshua Wood as Director - Water Sector, a newly created role designed to further strengthen the company's expertise within the water and wastewater industry. He will be responsible for enhancing the value that customers derive from the platform, while also accelerating FYLD's global growth plans in the sector.

Joshua brings nearly a decade of operations management experience to this role, having held various roles within FYLD and Thames Water, the UK's largest water and wastewater services company. As part of the leadership team, Joshua will work closely with the product development, business development and client delivery teams, to progress and communicate the platform's continued innovations to FYLD's customers.

His appointment comes as the global water sector battles major challenges surrounding water resources and environmental protection, with FYLD implementing solutions across the sector with positive and measurable impacts on pollution and leakage. These are issues that affect regions in which FYLD has a strong presence, including the UK, North and South America, as well as targeted areas for expansion such as Australia and the Middle East.

FYLD has established itself as a critical tool for fieldworkers in challenging environments across large geographical areas. With climate change and changeable weather patterns increasing, FYLD is supporting regions with significant drought and water resource challenges through delivering efficient field teams. By enabling more productive field force teams, FYLD's platform can reduce the time spent completing jobs which leads to substantial water saving efficiencies, as well as productivity, cost and environmental benefits. >

"2023 is a year of strategic expansion at FYLD. We are targeting new geographies and strive to continue transforming the productivity of AI-powered field operations. Joshua's new role is pivotal to this growth and we are delighted to have him lead our global water services offering."

Utilities and contractors use the platform to leverage real-time, AI-powered site visibility to improve decisioning making, remote collaboration and operating performance. Accelerated innovation aimed at delivering better business and sustainability outcomes has enables FYLD customers to unlock safer, greener and more efficient operations not only in the water sector but other hazardous industries such gas, electricity, highways and construction.

Joshua said: "FYLD is committed to tackling the pain points the water sector faces through deployment of sustainable solutions that promote efficiency and increase productivity. Our game changing technology continues to streamline and optimise field force management to address the industry's biggest challenges. Ultimately, FYLD helps fieldworkers in safety-critical sectors stay out of harm's way while boosting productivity. I look forward to continuing to offer my industry expertise to embed our award-winning technology in contractor and water utility companies around the world, to make sure everyone gets home safe at the end of each working day."

FYLD was launched in 2019 and started trading in 2021. It reached the milestone of onboarding 100 global companies to the platform after one year of commercial operations.

Shelley Copsey, CEO at FYLD, said: "2023 is a year of strategic expansion at FYLD. We are targeting new geographies and strive to continue transforming the productivity of AI-powered field operations. Joshua's new role is pivotal to this growth and we are delighted to have him lead our global water services offering. By continuing to demonstrate our innovation and capabilities in the water sector, we aim to replicate the results we are experiencing in regions where FYLD is deployed. We are already having positive initial conversations with major utilities in Australia, which we are excited to progress this year. Joshua will play a key role in leading this strategic growth for FYLD, while delivering his invaluable industry insights to our team and customers."

FYLD boasts features such as real-time video risk assessments enable fieldworkers to identify hazards along with potential productivity blockers such as inadequate safety barriers or incomplete permits. This unlocks myriad operational benefits, including real-time site visibility, elimination of paper-based forms and reduced requirements for site visits.

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DATES AND LOCATION FOR NO-DIG LIVE 2024 ANNOUNCED

2024 NO-DIG LIVE

Westrade is delighted to announce that its flagship event for the UK and international trenchless sector, No-Dig Live, will take place at the NAEC Stoneleigh Park, Warwickshire between 1and 3 October, 2024.

NAEC Stoneleigh offers some of the country's most sought-after exhibition space boasting 250 acres of outside space for larger equipment and live demos, three state of the art exhibition halls covering just over 10,000 m^2 and a purpose-built conference centre. Visitors will also benefit from the venues excellent refreshment and catering facilities, ample free parking.

Stoneleigh is also incredibly easy to access with links to the M40, M6 and M1 and trains running from London to Warwick Parkway or Coventry every 30 minutes. Birmingham airport is also just a 30-minute drive away.

Commenting on the move Westrade's Managing Director, Paul Harwood, said: "We are incredibly fortunate to have been able to secure NAEC Stoneleigh for No-Dig Live 2024. This is a venue that has changed beyond all recognition since we were last there in >

2012 and we have been overwhelmed with the positive feedback we have already received. Its location, facilities and combination of both indoor and outdoor space makes it perfect for exhibitors and visitors alike. We look forward to welcoming all our trenchless friends and colleagues to Warwickshire next summer for what we are confident is likely to be our biggest show yet."

Westrade will be holding an Open Day at Stoneleigh on 8 June, 2023 for any exhibitors wanting to get a feel for the venue and see the space available to them. For more details and to book a space on the day please email Chantel Avis cavis@westrade.co.uk

The change of venue for No-Dig Live follows a decision to develop much of the outside space at its previous home, the East of England Showground, for housing.

MODERNISING UK GAS PIPELINE REHABILITATION WITH SANILINE

SaniLine was also used to rehabilitate a gas pipe in Wuppertal, Germany.

Sanivar has introduced SaniLine® technology to the UK, offering a new pipeline rehabilitation method to the industrial gas market.

After more than 20 years of successful use across Europe, SaniLine offers a robust and cost-effective solution to asset life extension across UK gas pipelines.

The innovative trenchless solution consists of a highly resistant polyester-yarn textile liner with a polyurethane or polyethylene coating. The versatile liner ranges in size from DN80 to DN800 and is approved for water, sewage, industrial applications, gas and oil.

The liner can navigate 45° bends and withstand operating pressures of up to 16 bar. The solution uses a cold curing method that does not require extra UV or other curing machinery, making it an environmentally friendly, long-lasting solution.

Tim Farley, Business Development Manager at Sanivar, said: "We are extremely proud to bring SaniLine to the UK as this specialist technology is something that has seen great success across Europe for many years. The trenchless pipe rehabilitation method is a great alternative to pipe replacement as it reduces the number of site excavations, reduces civils footprint making it a safer and much more cost-effective solution."

Prior to its introduction to the UK the flexible solution was used to complete the rehabilitation of an existing gas pipe in the city of Wuppertal, Germany following a plan to increase its operating pressure.

While new pipes can generally accommodate a rise in pressure, older pipes need to be reinforced or replace. The existing gas pipe had also experienced multiple leaks, which for safety reasons needed to be rectified.

The pipe was successfully rehabilitated using SaniLine technology which strengthened and sealed the existing pipes, making a costly replacement unnecessary.

Sanivar products began development in Switzerland in the 1970s, in response to the need for robust repair products for pipelines carrying dry gas. Since then, Sanivar has innovated and expanded to produce high quality, Swiss-manufactured, PE-coated textile liners that will rehabilitate pipes carrying gas, potable water, petrochemicals, industrial water, drainage and sewage.

SaniLine has a 25-year providence in gas applications across Europe with over 50 km of pipes refurbished across multiple locations.

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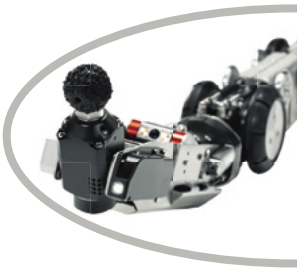

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RSM SEWERTRONICS SPEEDYLIGHT+ VX

RSM Lining Supplies Global Ltd recently introduced the Sewertronics SpeedyLight+ VX System to the UK market. The company is incredibly pleased to announce its newest upgrade, increasing cure suitability up to 225 mm diameter as it is now compatible with both the Extra Small and Small Curing Heads.

The SpeedyLight+ VX installing a liner.

The SpeedyLight+ VX is a small, portable unit which fits perfectly into hard-to-reach areas and is an ideal piece of starter equipment for UV LED lining. UV LED cure is fast becoming one of the most used curing methods within the CIPP industry. Boasting a multitude of benefits, it is a fast, safe, and simple curing process with a much smaller on-site footprint than all other curing methods. The use of styrene free resins ensures there is no odour on site and the time required for pipe rehabilitation is reduced dramatically when compared with traditional curing methods.

Sewertronics' SpeedyLight+ VX has been developed specifically to be suitable for use in both horizontal and vertical pipes and requires significantly less power and energy than more traditional UV curing systems. The all-in-one design allows the system to be used virtually anywhere with the control unit, power supply, and cable reel all integrated within a single, portable unit. It has a total weight of less than 60 kg with built-in wheels, allowing it to be transported easily in all circumstances.

Phil Steele, RSM's Sales Director, commented: "The easy manoeuvrability of the SpeedyLight+ VX makes it perfect for use on domestic jobs or those with limited access. >

The SpeedyLight+ VX system is well-suited to even the most unlikely installation sites.

"The option of purchasing the unit with either 25 m or 40 m of cable allows the customer to tailor their purchase to their individual requirements, making it a fantastic starter piece of equipment for UV LED lining."

The option of purchasing the unit with either 25 m or 40 m of cable allows the customer to tailor their purchase to their individual requirements, making it a fantastic starter piece of equipment for UV LED lining."

Incredibly versatile, the VX system is suitable for use with felt liner impregnated with either a standard UV Vinylester Resin or RSM's exclusive Leak Tight UV Resin and can successfully navigate bends up to 90°. It has an integrated CCTV camera within the curing head delivering a clear image of the pipe throughout the installation process to ensure everything is running smoothly.

RSM has been hosting a variety of demonstrations of the system across the UK and will be hosting more in the future.

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METROPOLITAN MAYOR VISITS RELINING PROJECT

Balikesir, the Turkish metropolitan city with a population of 1.3 million people, recently undertook a relining project. BASKI (Balikesir Water and Sewerage Utility) announced the project comprising 1.1 km length of 200 mm to 300 mm diameter PVC fold & form relining. KANALTEK, a corporate member of TSITT (Turkish Society for Infrastructure and Trenchless Technology), completed the installation of the liners in March 2023.

Yücel Yilmaz, the Metropolitan Mayor of Balikesir (left) and Izzet Günal, the General Manager of BASKI (right).

Yücel Yilmaz, the Metropolitan Mayor of Balikesir, paid a visit to the relining site on 15 March, 2023 together with Izzet Günal, the General Manager of BASKI. The Mayor expressed his appreciation for the trenchless installation with locally manufactured liners which brings many advantages to the inhabitants of the city.

Along with Balikesir city, several trenchless projects are ongoing in other metropolitan cities of Turkey. Some 65 km of CIPP UV relining and 65 km PVC fold & form relining projects are continuing in Istanbul. Tenders including thousands of kilometers of pipeline, CCTV inspection and cleaning works are annually announced by Turkish water and wastewater utilities. A large number of microtunnelling and horizontal directional drilling projects are also continuing in Istanbul, to expand the water and wastewater network serving the 16 million population of the metropolitan city. >

The relining team at work.

TSITT has hosteds annual No-Dig shows since 2011. ISTT and TSITT jointly held the International No-Dig 2015 Conference and Exhibition in Istanbul with great success. The conference and exhibition attracted 94 companies from 21 countries.

This year's No-Dig Turkey Conference and Exhibition will be held between 31 October and 1 November, 2023 at WOW Istanbul Hotel & Convention Center with the theme of Earthquake Resilient Underground Pipelines. Interested authors are invited to submit their abstracts by no later than 31 July, 2023. For detailed information about registration, exhibiting and sponsorship opportunities, please visit www.nodigturkey.com or email info@akated.com

The Metropolitan Mayor in the Relining Control Room.

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FIRST REHABILITATION OF A PRESSURE PIPELINE WITH PRIMUS LINE® AT HOME!

Although on the market and in use worldwide for more than 20 years, the rehabilitation of a pressure pipeline took place for the first time in Holy Week and Easter week at the home base and headquarters of Rädlinger Primus Line GmbH in Cham. A drinking water pipeline with a length of 260 m was rehabilitated using trenchless means by using the Primus Line® system, extending the service life of the pipeline by at least 50 years.

The Primus Liner was delivered in to the start pit on the outdoor pool site on a reel: a space-saving way.

The drinking water pipeline of DN200 to be rehabilitated was made of cast iron and with an operating pressure of around 5 bar runs from the municipal utilities in Cham across the company grounds of a car dealership, crosses railway tracks as well as a busy street and ends on the open-air swimming pool site.

Due to leaks, the municipal utilities had already taken a part of the more than 60 year old pipeline out of service. In order to be able to re-use it, a section with a total of 260 m has now been rehabilitated with the Primus Line® system. However, not much of the renovation was visible above ground. The Primus Line® system was pulled in via just two construction pits at the beginning and the end of the section to be rehabilitated. The starting pit was located on the open-air swimming pool site near the River Regen, the destination pit on the grounds of the municipal utilities.

For the civil engineering works, Rädlinger Primus Line GmbH brought another local company on board, Johann Wutz Hoch- und Tiefbau GmbH, which took care of excavating and securing the construction pits. In the starting pit in the open-air swimming pool site, for example, the Wutz GmbH team had to install sheet pile walls due to the proximity to the Regen in order to prevent possible groundwater infiltration. >

The Primus Liner is pulled in by means of a cable winch. In this project, the launch pit was secured with sheet piles to prevent groundwater infiltration.

How does the Primus Line® technology work?

The Primus Line® system is a technology for the trenchless rehabilitation of pipelines. It is not necessary to dig trenches, to remove the defective pipeline and to install a new one. Instead, Primus Line® is pulled in into the existing pipes, ensuring continued use for more than 50 years. The Primus Line® system consists of two components. On the one hand, the liner, a hose with a three-layer structure. The inner layer, either made of polyethylene (PE) or thermoplastic polyurethane (TPU), is suitable for most various media such as water, gas and oil. The outer layer of PE primarily serves to protect the liner during installation. The entire pressure of the pipeline, in this case an operating pressure of five bar, is absorbed by the middle layer. It is made of a seamless aramid fabric. The combination of these components makes the liner flexible and safe at the same time.

The second system component is the connectors by which the liner is connected to the existing distribution network. Rädlinger Primus Line GmbH not only develops connectors and liners, but also manufactures them in the district of Cham and installs them with its own installation teams in the DACH region. Internationally, the company works with a large number of specially trained partners.

Why trenchless technology?

In this project, Primus Line® was able to show off several of its strengths. As this is a trenchless technology with only minimal civil engineering work, the rehabilitation of the drinking water pipeline went almost unnoticed. The duration of the renovation work was significantly shortened and the busy Badstraße did not have to be closed. Traffic could continue to flow at least on one lane, despite a structural change to an exit.

Primus Line® crossed the car dealership grounds and the railway tracks underground in the old pipe just as it did in the sunbathing lawns on the open-air swimming pool site, without additional, costly interventions, such as rerouting the rail traffic. This little impact on the environment predestines trenchless rehabilitation methods therefore for hard to access or protected areas.

Due to its flexibility, the liner is furthermore able to pass through bends. The rehabilitated section in Cham had five to negotiate with curvatures between 22° and 30°. As standard, Primus Line® manages bends up to 45°, and even 90° under certain conditions. >

They did not miss the Primus Liner's insertion right on their doorstep (from left to right): Mayor Martin Stoiber, Primus Line Managing Director Peter Lischewski, the couple Tanja and Werner Rädlinger from the Werner Rädlinger Group and Deputy District Administrator Markus Müller.

Hans Kraus, head of water operations at Stadtwerke Cham, gets up close and personal with the Primus Liner.

In addition to this, Primus Line® passed through shut down exits, like close to the car dealership. Separation of the pipes as with conventional open construction was not necessary.

The rehabilitation with Primus Line® also optimised the pipeline's flow capacity which previously had been impaired by heavy incrustations. Despite a small reduction in cross-section, the smooth inner layer of the liner provides the improvement.

How is trenchless technology installed?

A pre-inspection of the drinking water pipeline to be rehabilitated with a camera had revealed heavy incrustations in the pipeline due to corrosion. These incrustations were removed mechanically before liner insertion. The installation of the system itself was very simple.

Another camera inspection determined whether the inner diameter of the pipe was free. Then the liner was pulled into the host pipe. For this purpose, the liner was delivered coiled on a reel at the starting pit in the open-air swimming pool site. A winch positioned at the destination pit on the municipal utilities' grounds then pulled the liner through the host pipe. Insertion took place on Holy Thursday. The connectors were installed subsequently, the system then checked for tightness as well as hygiene and handed over to the customer. Recommissioning was taken over by the utilities' expert staff.

There were two exits in the rehabilitated section, one to the service room of the open-air swimming pool and one in the area of the Badstraße. There, the exit was set back towards the pavement so that the road does not have to be closed for future maintenance work.

The entire project was scheduled for a period of just under four weeks around Easter comprising digging the construction pits, cleaning the defective pipeline, pulling in the liner, installing the connectors and putting the pipeline back into operation, so that everything would be ready for the opening of the outdoor pool season.

CAPPAGH LIGHT THE WAY WITH BRAWO MAGNAVITY LED CURING

Cappagh Group lining division team on their first field day using the Brawo Magnavity LED lining system.

Cappagh Group is the first organisation in the UK to purchase two Brawo Magnavity LED Lining Systems from S1E as they deliver trenchless solutions to Thames Water for the next eight years.

Incorporated in 1973, Cappagh is a progressive, professional organisation, proud to serve the construction industry across the South. The business partners with utilities to ensure necessary services like water, sewerage, gas, and electric continue to flow.

Previously working with Thames Water for over 20 years, Cappagh has recently won the Waste Network Services lining contract to deliver trenchless solutions to the company for the next eight years. The lining division at Cappagh have continued to show their abilities to tackle the most challenging of reactive lining repair activities across the whole of the Thames Water network, and Cappagh's latest investment is set to provide class leading trenchless repairs.

After assessing the marketplace for the best solution, Cappagh consulted with S1E Ltd; the specialist suppliers of trenchless technology and discovered the Brawo® Magnavity LED Lining System.

The Brawo Magnavity LED Lining System utilises next generation light curing, with its innovative features and compact design. Continuing to offer outstanding value and service to their customers, Cappagh have invested in not one, but two Brawo Magnavity LED Lining Systems, including the required full installation system kits that include two inversion drums and air compressors.

These modern systems to enter the CIPP lining system market, have been supplied by S1E, Brawo's leading UK distributor and the first UK reseller of the Brawo Magnavity LED system. Working alongside Cappagh Group, S1E has completed delivery, handover, initial training, and demonstrations of the new system to Cappagh's lining division operatives, as well as completing two jobs on site to install new liners using the LED lining system, all in five days.

Dean Hansford, Head of Trenchless Innovations, at Cappagh Group, is leading the company's investment in trenchless solutions with the Brawo Magnavity system, said "Due to significant growth and new contract awards, we wanted to continue with our investment strategy right across our business to guarantee we provide the best solutions for our clients and their customers."

Scott McMurray (left) from S1E, hands over the two Brawo Magnavity's to Dean Hansford (right) at Cappagh Group.

"The Brawo Magnavity LED lining system ticks all the boxes. We wanted a solution that had a small footprint and was easy to manoeuvre, caused less customer disruption and was environmentally friendly, and of course, simple to use and delivered high-quality results too. We were impressed, with the increase of our productivity on site it enabled whilst continuing to provide customer confidence in us and the products we use."

"This is a significant investment for Cappagh but one that we believe will not only add capability to our team but also value in every sense to our client."

The compact LED curing machine from BRAWO Systems, is capable of curing the range of flexible Brawo® liners in pipe diameters of DN70 to DN300. The system saves time and effort as the unique LED heads allow simultaneous retraction with inversion of the liner; curing is thus carried out immediately after installation.

The new light curing system consists of an intelligent LED head with 96 or 192 high-performance UV LEDs, a 50-metre-long combination hose with integrated power and compressed air supply, a retraction unit, and a control box. With a modular construction, compact design and low system weight, easy transportation of the system is guaranteed even under the most difficult access conditions, e.g., on plots of land and in buildings.

The first field day using the new Magnavity LED curing system with Cappagh Group went as smoothly as the Lining Operations Manager, James Shaw had hoped. 21m of 100mm Pitch-Fibre Pipe with areas of deformation exceeding 40% was successfully re-rounded and lined to leave it fully serviceable and flowing free. James said, "These innovative systems, courtesy of S1E and Brawo are going to give us a great burst in our productivity."

The time on site for this type of lining work was drastically reduced as the inversion and cure only took two hours to complete.

The re-rounding and re-lining of previously installed Pitch-Fibre pipes are a common challenge for the lining division at Cappagh Group, but now using the Brawo Magnavity system, they can easily access points of entry and achieve great results using a combination of the LED system and the WRc approved Brawoliner system to improve structure and flow capacity.

Hakim Dehimi, International Sales Director at BRAWO Systems, said: "We are very proud that Cappagh Group and S1E rely on the LED technology of BRAWO Systems GmbH. Cappagh Group is now able to manage all the difficult situations when rehabilitating laterals and sewers on private properties and inside buildings. With Brawo Magnavity the installation and light curing of BRAWOLINER in laterals with multiple bends goes with ease even over longer distances. We are looking forward to intensifying the cooperation with our partners in UK."

Albion Goga from S1E (right) on site at Cappagh Group providing training with the lining division team.


Brawo Magnavity's high-performance UV LEDs with extremely high efficiency for smart light curing.

"These innovative systems, courtesy of S1E and Brawo are going to give us a great burst in our productivity."

Albion Goga, Product Development Manager at S1E, said: "This has been a fantastic venture to be a part of with Cappagh Group, and Brawo Systems GMBH. S1E have been part of every stage of the process, from sourcing the Magnavity system, delivering the full installation kits, to providing training on and off site for a straightforward installation on the system's first field day with the lining division team."

"The Brawo Magnavity LED lining system is the perfect alternative to traditionally cured liners, due to its ability to reduce risks on site and at the same time drastically increasing the productivity of the lining teams. It is great to see that more and more companies are wanting to get involved and catch a glimpse of the Magnavity and its abilities. We are all looking forward to continuing to offer our services in providing leading trenchless technology."

FOR MORE INFORMATION:
WWW.S1E.CO.UK

THE EVOLUTION OF HDD TECHNOLOGY 'MADE IN GERMANY'

1986: The GRUNDODRILL 12G with drum magazine was the first ever HDD rig with an automatic drill rod changing system.

As early as the 1980s, the developers at TRACTO asked themselves the question, if steering a bore undergound could really work? When HDD technology came to Germany from the USA in the early 1990s, it was decided to develop a horizontal directional drilling system 'Made in Germany'. Leading to the birth of the GRUNDODRILL family.

The first tests were undertaken with a soil displacement hammer, which was fitted with small wings at one end and a slanted head at the other to help it steer round bends, depending on the positioning of the bore head. The trial was quite effective but not as precise as the TRACTO engineers envisioned. In the mid-80's the team developed the GRUNDOMOLE, a soil displacement hammer combining a slanted steering head with hydraulic thrust and rotation. Then, in the early 1990's, the first drilling machines that could be steered precisely underground were available in the USA. Re-designing those rigs and adding rubber tracked undercarriage, TRACTO introduced its first surface launched drilling rig, the GRUNDOJET. Initial drilling results were not satisfactory, however. Among other issues, the modified tools were not up to scratch - the back-reamers bent and drill rods broke under the stress of the local site conditions and there was no proper detection system either. These failures, however, were also lessons learned. TRACTO therefore decided to develop its own horizontal directional drilling system based on this experience and German-engineered precision. The GRUNDODRILL family was born. >

The milestones in HDD technology 'Made in Germany' from 1987 to the present.

Steerable fluid-assisted drilling not only had great potential worldwide, it was also a perfect addition to the range of trenchless technology 'Made in Germany'. In the early 1990's TRACTO realised that a drilling rig for launch and surface start was in demand. The GRUNDOHIT, forerunner of the GRUNDOPIT mini drilling rigs, was thus designed. The precision of the directional bore in combination with a compact design, ideal for minimally invasive construction in the confines of our world's urban metropolises. The GRUNDOHIT featured a percussive hammer, which was to become a trademark of the GRUNDODRILL family. As well as drilling, the percussion enabled thrust in hard soil for ultra-precision steering.

Early Milestones in HDD Technology

At the time, TRACTO was the only manufacturer of trenchless machinery using the horizontal directional drilling method in Germany. Based on the experience gained with the GRUNDOJET, TRACTO engineers set to work on another new construction, the GRUNDODRILL 6.5 t. Using the team's combined project experience, the technicians soon realised that the bore rig needed to be stronger and faster. This led to the development of the GRUNDODRILL 10S. This powerhouse was able to drive itself to the starting point of the bore through its own drive. Moreover, detection technology from Digital Control was now sufficiently developed to provide better target precision. The detection systems could now show the soil conditions as well as the rotation and inclination of the bore head. From that point TRACTO engineers have prioritised precise and simple locating. Precise measuring helped to eliminate errors.

The GRUNDODRILL 12G was the next milestone that was launched in 1986. Technically the machine was a quantum leap forward. By means of a unique rotary drill rod magazine, the rods were fed in automatically for the first time. This was a great benefit for the machine operator, who no longer had to insert the rods by hand. The GRUNDODRILL 12G boasted yet another indispensable >

In 1996 TRACTO introduced the first drilling rig with a swivel magazine, the GRUNDODRILL 20S, which saved space and made work faster.

innovation, it was the first machine with a cabin and seat with access to the control panel. Offering a high level of operator comfort this is still a key feature of the GRUNDODRILL bore rigs. This successful period of TRACTO innovations has continued ever since, with input from customers used to adapt and advance the products. Whilst the late TRACTO company owner Wolfgang Schmidt lead manufacturing of the drilling rigs towards serial production, the R & D team developed the next generation. The strategy also had a ripple effect across other products in the range, including the pit launch rigs that became today's successful GRUNDOPIT family. An eco-system of innovation directional drilling technology permeated and experience from larger equipment was implemented in the smaller machines and vice versa.

Stronger and Smarter HDD Rigs

Customers' desire for larger and more powerful HDD rigs was the driving force behind the development of the GRUNDODRILL 20S in 1997, the first drilling rig with a swivel magazine. The latter represents another milestone in TRACTO history and it rightly fills its inventor, Elmar Koch, with immense pride to this day: "With this unique magazine, drill rods can be swivelled into the carriage, which saves space and works faster." he said.

The next generation came along in 2003 with the addition of the GRUNDODRILL 15N and its semi-automatic drill rod handling system. This HDD rig was equipped with electronic control, allowing bore processes to be carried out fully automatically for the first time. This machine represents a revolution in the development of drilling rigs. With increasingly precise, integrated detection systems it shaped the future of directional drilling. >

The latest generation of GRUNDODRILL JCS/ACS rigs combines maximum automation and premium-quality equipment.

Machines were not only becoming 'more intelligent' but also had a more appealing and design. TRACTO started working hard on machine designs in 2005 and it was showcased in the launch of the compact and powerful GRUNDODRILL 25N, the first machine with a GRP cover. When the latest JCS/ACS generation was designed in 2016, TRACTO employed professional industrial designers who not only looked at individual elements, but also the entire machine concept from a design perspective and provided valuable advice. In addition to ease of use and more safety, the design was also the foundation for series production, another milestone in TRACTO's history.

Next level HDD

Equally important in the evolution of the product range was the development of the GRUNDODRILL 18ACS, which enabled TRACTO to offer machines not just for jet drilling, but for rock drilling for the first time. Sales figures for this impressive rig have already reached triple figures.

Following the success of the 'King of Rock' 18ACS, all models of the new GRUNDODRILL generation were designed to be used as a Jet Condition System (JCS) for jet drilling or as an All-Condition System (ACS) for rock drilling. The concept offers even more innovative features, for example remote-controlled drilling and an integrated detection. "We have integrated the innovations of the last 20 years and enhanced the drilling rigs even more. This is the first HDD rig worldwide merging detection data and machine control." according to CTO Meinolf Rameil. "The integration of the DCI-detection display into the concept of the new generation GRUNDODRILL is an outstanding feature that sets new standards in the market for the horizontal directional drilling technology. By merging the drilling rig and the detection technology into one unit, all relevant data is brought together centrally, and the control of the drilling process is simplified even further." But digitisation and automation offer even more solutions for adapting HDD technology to future requirements. >

"There are several challenges to be faced in future. Legal requirements around planning, quality and implementation are becoming more complex in the long term. Precise documentation of the bore process with all data being logged is becoming increasingly important."

En-Route to Autonomous Drilling

There are several challenges to be faced in future. Legal requirements around planning, quality and implementation are becoming more complex in the long term. Precise documentation of the bore process with all data being logged is becoming increasingly important. A shortage of skilled workers is slowing the growth of the drilling industry. Contractors and manufacturers alike suffer from having insufficient drilling rig operators compared to purchase orders. TRACTO is the first manufacturer to provide an answer and it lies in digital integration, i. e. merging mechanics, steering information, detection data and the experience of the bore rig operator.

This highly automated operating concept has set the scene for autonomous drilling. To make it possible, TRACTO is using artificial intelligence and sensor technology, e. g. for automatically detecting obstacles in the ground. Future HDD rigs will assist the operator even more and expand the capabilities of HDD technology even further.

RSP LAUNCHES NEW SUCTION EXCAVATOR

The new ESE8 suction excavator.

RSP UK has launched its new and innovative Suction Excavator in the ESE 8 – mounted onto a Mercedes Benz AROCS with an 8 m^3 container. The new model is set to transform and optimise suction excavator use within the industry. The dual tipping function and 20% increase on the working range versus other models make this first in its class.

The technology was launched at Bauma in October 2022 by RSP Germany and the first ever unit has recently been brought to the UK.

Lloyd Gardener, Director of RSP UK, said of the launch: "We are delighted to be bringing the ESE 8 to the UK market. As a global company, it is our mission to invest in our technology, innovation and products to ensure they represent the best solutions for our customers and our industry."

The ESE 8 has many additional advantage features versus other models including:

- Modular construction including additional storage between the cab and superstructure
- New fan housing doors for improved access for maintenance
- A new cooling system
- Four stainless steel lockers for additional storage

The new truck can be seen in action on video, click here: https://youtu.be/3DAj4dFGNAc

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CONTRACTORS GUIDE TO SEWER AND DRAIN INSPECTION CAMERAS

Trenchless inspection is now starting at the very beginning of the drainage system.

S1E recently produced a Guide for those who may be ready upgrade their inspection capabilities? Users know that scoping out drains and mainline pipes with a camera is an effective way to detect any problems in the sewer lines. With high-quality inspection cameras, users can confidently identify the source of any problems or soon-to-be problems before they become bigger problems or costly repairs.

Why use drain inspection cameras?

Before starting cleaning, cutting and rehabilitating pipe, there is a need to identify and see what the problems are, such as a blockage, a cracked or broken pipe or tree root infiltration.

Without the availability of an inspection camera, users may be looking to dig up a site area just to inspect the pipeline, which would not only be a costly excavation process and could lead to some property damage that is going to have to paid for.

Drain inspection cameras are an incredibly useful tool that can instantly identify and diagnose issues within drains and other areas of the sewer industry.

An inspection camera can save both time and money, as once the exact problem or problems have been determined, the sewer line can be repaired more efficiently and in a shorter timeline. Moreover, with a high-quality inspection system, users can benefit from other features such as:

- Video recording
- Inspection log
- Audio recording
- Data storing and sharing >

High-tech cameras are now an integral part of the pipeline inspection industry.

What are the range of Inspection Cameras available?

For a clear view of your underground services, S1E stocks and distributes high-quality inspection systems and cameras that have all been tried and tested in the field to produce impressive results.

The company's inspection cameras and pipeline locating range include push rod cameras from RIDGID and crawler camera systems from IBAK.

RIDGID Inspection Cameras Reels

RIDGID's range of reel inspection cameras offer a number of features to help diagnose a blocked or broken pipeline, with a long length of cable to inspect plenty of drain coverage. The Seesnake® range from RIDGID is a push-rod inspection camera featuring TruSense and TiltSense technology and is compatible with its range of monitors and recorders.

With push-rod cables, there is a good balance of stiffness in the cable but also flexibility to navigate turns and bends in pipes. Featuring a self-levelling camera head that keeps the image upright, the TruSense technology provides advanced sensors to convey valuable information about the in-pipe environment, and the TiltSense is an on-camera inclinometer to provide the camera's degree of tilt. Offering bright, clear in-pipe imaging in difficult lighting conditions RIDGID's range of inspection cameras are giving more clearly defined detail of pipe characteristics.

S1E offers the RIDGID SeeSnake® Compact2 with VERSA Camera System which includes:

- The Compact 2 comes in the popular Compact form, combining a small package and all-in-one monitor capability (when used with the SeeSnake CS6x Versa monitor)
- The Compact 2 has a 100 ft (30 m) flexible push cable, providing a good ability to fit in smaller diameter pipes and navigate through tight turns.
- Self-levelling camera head provides an image that is always upright.
- Quick-release docking system for fast, efficient job setup with the SeeSnake CS6x Versa monitor. >

"Before starting cleaning, cutting and rehabilitating pipe, there is a need to identify and see what the problems are, such as a blockage, a cracked or broken pipe or tree root infiltration."

- Tilt the monitor to the desired viewing angle while docking or remove it for convenient jobsite placement.
- The sturdy metal frame provides a solid base that makes it easy to push and retrieve the cable.

More information can be found at: SeeSnake® Compact2 With VERSA Camera System (s1e.co.uk)

RIDGID Hand-held Inspection Cameras

Hand-held cameras are very useful and versatile as they are typically cordless to allow for more portability. RIDGID® hand-held inspection cameras reduce the amount of time it takes to detect and diagnose the unreachable. Using a camera and light source attached to a flexible cable, these cameras send live images back to a high-visibility digital LCD display.

S1E offers RIDGID's micro CA-350x Inspection Camera which can:

- Easily record still images and videos of problems in hard-to-reach areas.
- Connect to a mobile device for a live second screen and instant file sharing of pictures and videos.
- Comfortable pistol grip design, large screen, best-in-class image quality and easy-to-use interface.
- Illuminate dark spaces with four bright LEDs on the rugged aluminium 900 mm imager head.
- Wireless recording of audio commentary on video inspections with a Bluetooth™ headset.
- Free RIDGID VIEW App for iOS™ and Android™

More information can be found at: micro CA-350x Wireless Inspection Camera (incl. Battery 12V) (s1e.co.uk)

IBAK Modular Crawler Camera Range

IBAK is one of the largest manufacturers of sewer inspection systems and is known for high quality worldwide. It was the first company to launch a TV sewer inspection system back in 1957. IBAK has a range of inspection systems and camera heads to suit any type of work, they are extremely high definition and their built-in LED lighting is high-performance. The IBAK inspection system range includes:

- MainLite crawler systems, available in portable or vehicle-mounted options
- PANORAMO 3D manhole inspection cameras
- MicroLite and MiniLite push-rods
- The ASPECTA manhole pole camera >

Information and a correct understanding of the problem is key to selecting the right solution.

IBAK's camera heads are made of high-quality components for sewer inspection systems. Each camera is suitable for a range of sizes and applications and compatible IBAK components can be connected to form a full working system. In some cases, components are interchangeable, for the perfect fit for every job, due to the modular nature of IBAK systems.

IBAK camera heads are flexibly deployable with push-rod systems or camera tractors, they vary in the ability to pan, rotate and tilt, but always give a clear picture with HD resolution and powerful LED lighting. With a wide choice of sizes and features, users will not be stuck in finding the right inspection camera with IBAK.

S1E offers IBAK ORION / ORION L / ORION 3 models which offer:

- All-rounder pan and tilt camera for DN100 to DN600
- Can be used as a push camera or attached to any of IBAK's camera trucks.
- Enhanced features for improved suitability within larger pipes (larger aperture, excellent light sensitivity, 3 x zoom).
- Can rotate endlessly around its own axis and its panning function allows a view in all directions, even backwards in branch pipes.
- UPC function (upright picture control) to view correct orientation in any position.
- Built-in sensor for pipe measurement and a location transmitter.

IBAK's range of Sewer Inspection Camera Heads can be viewed at: IBAK Camera heads for inspection cameras (s1e.co.uk)

There are many different Drain Inspection Cameras available for use, and there can be a lot to consider when trying to choose the right one. S1E's experienced sales team members will be happy to help and guide customers both existing and new to the best inspection camera for their needs. Email: contact@s1e.co.uk

AI PLATFORM ACCELERATES EFFICIENT RESOURCE MANAGEMENT

Pipe inspection hardware has made significant advancements over the years. The question is has the same progress been made with how the pipe inspection data is processed and how utilities use it for investment decision making.

For decades the 'science' of pipeline inspection using CCTV has relied not just on good quality video capture equipment but also upon highly-trained, skilled and experienced personnel. As the traditional inspection proceeds, these operators view the imagery live, stopping the process every time they see what may be a pipe defect. Using their experience, they then have to judge what type of defect it is enter manually the defect code and any other information they feel may be relevant. This can be a very time-consuming process, limiting the amount of surveying that can be achieved in one shift.

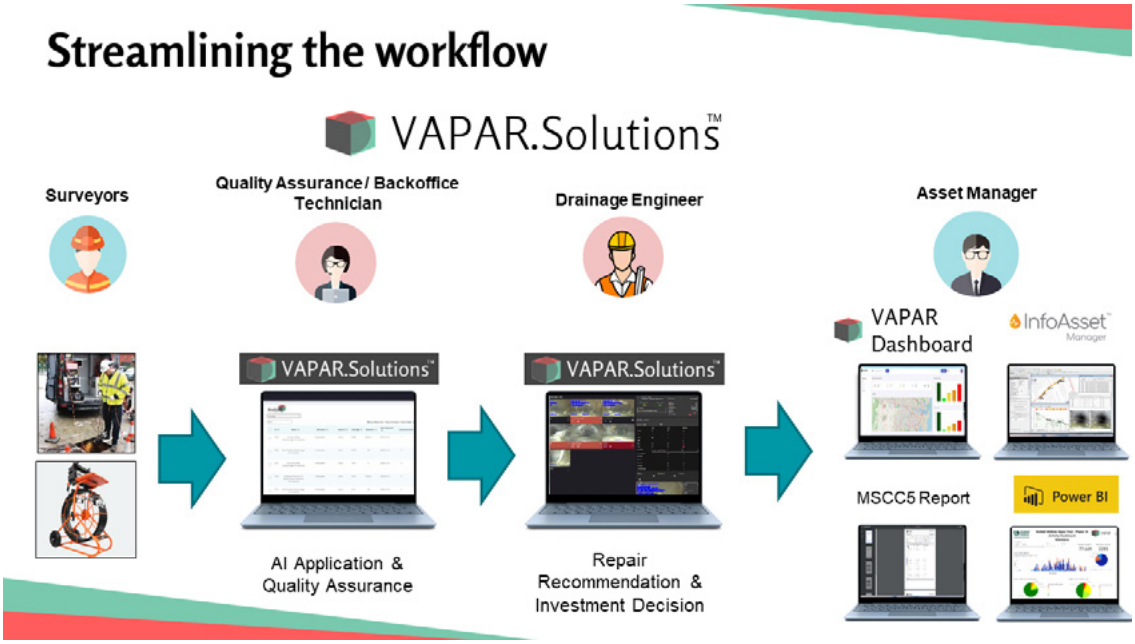
Now, however, modern computing capabilities can accelerate this process considerably as can be seen with the AI Software Platform now available from Australia-based VAPAR Innovation Pty (VAPAR).

Development

Started by two young engineers in Sydney, Australia, VAPAR has developed an Artificial Intelligence (AI) Platform that can accelerate the survey-to-decision-making process around pipeline management. The platform is designed around a collaborative intelligence approach that blends AI and human engineering inputs to allow sewer inspections and investment decisions to be completed in days, not weeks. In this way it can provide the fastest way to the correct asset investment decision for sewers and drains.

Using experience of pipeline surveying and modern computer techniques, the AI Platform was developed using historical data from numerous existing surveys to 'educate' and 'populate' the AI software with the necessary information that allows it to recognise, highlight and categorise pipeline defects automatically. The Platform also recommends suitable repair options for an Engineer to confirm, from the various options currently available both traditional and trenchless. >

Vapar's AI cloud-based system streamlines workflow to reduce the time and cost between a survey being needed and an investment decision being made.



As part of the development process, VAPAR submitted the AI Platform idea to UK-based water company United Utilities' 'Innovation Lab' in 2019. Innovation has been a core value at United Utilities (UU) for many years, with the objective of making services better, safer, faster, and cheaper for customers. Establishing the water industry's first 'Innovation Lab' provided the mechanism for UU to present customer challenges and allowed ideas to be submitted from across the world.

The collaborative partnership between UU and VAPAR, facilitated by the Innovation Lab, allowed the AI platform to be tested in a live operational environment and gain insightful feedback. This led to VAPAR being awarded a multi-year contract by United Utilities in 2022.

The success of the UU/VAPAR collaboration has also led to a technical partnership between UK-based CCTV manufacturer Minicam and VAPAR which is exploring vertical integration between the AI Platform and CCTV hardware to generate additional time and financial efficiencies.

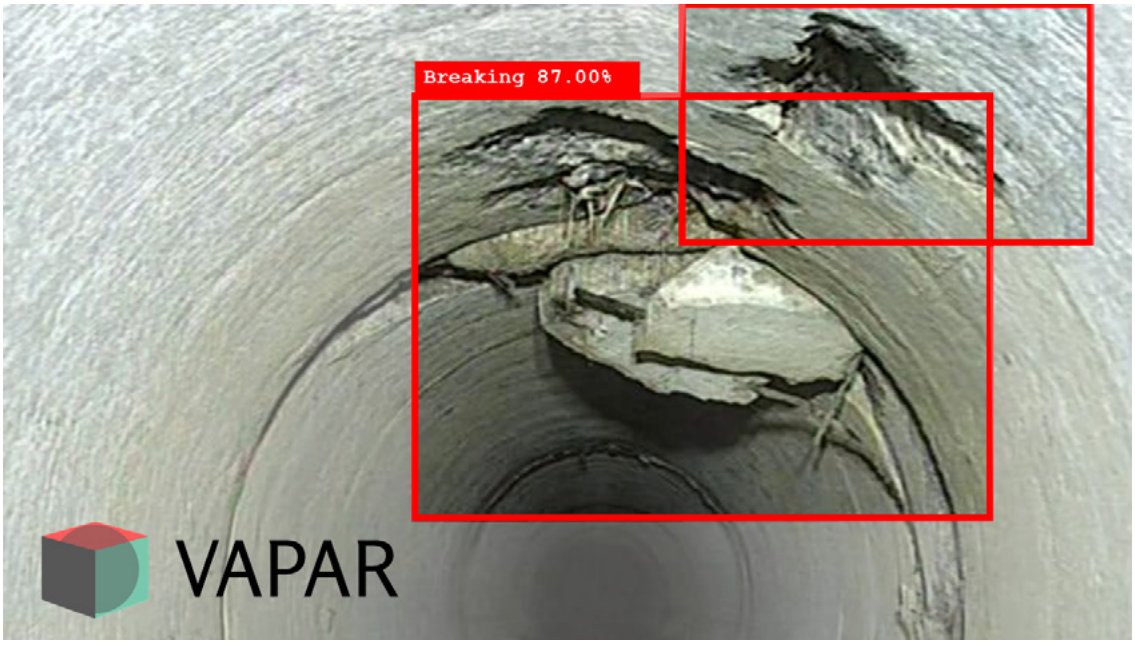
The Process

Using the AI Platform as a primary analysis tool for CCTV video footage eliminates the need for the traditional stop/start methodology of current surveys. More survey footage is delivered in a single shift by allowing the camera to continuously progress through the pipeline being inspected and it reduces the need for a highly-qualified and experienced operator on site.

Once the video footage has been collected, it is transferred to the VAPAR Cloud Storage facility where it is analysed by the AI Platform, highlighting and coding any observed defects using the coding system for the appropriate region. The footage is then available to a human engineer for checking to ensure the coding is correct. The proposed potential project solutions, if any are required, are also available to the engineer enabling a faster and consistent solution decision. Within the process, the client's engineer still has the final decision with the data presentation enabling consistent investment decision-making regarding any repair/replacement recommendation.

At the time of writing, the accuracy and productivity of the AI system, which has developed over time, shows the percentage of AI-identified images has now increased from its initial 54% to 91% currently. This improvement was achieved through an 'Explainable AI' solution, data visibility, and learning how to work with the AI outputs. >

AI provides a consistent and cost-efficient approach to identifying pipe defects and the subsequent investment requirement. The AI never gets tired!!



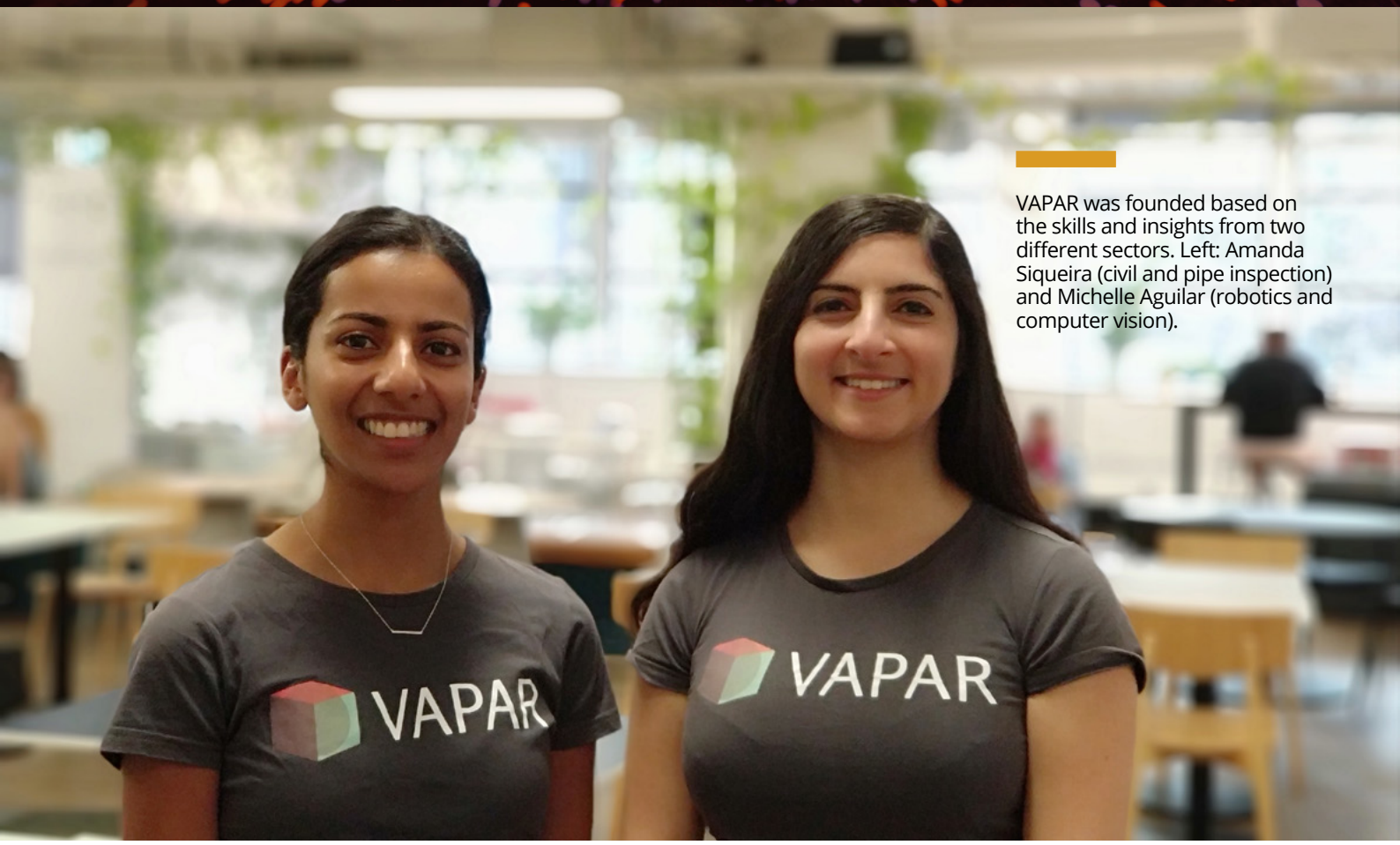
This has largely been thanks to the work completed within the UU Innovation Lab environment, the live environment this has made available and the feedback thereby obtained. As the system continues to develop and efficiencies improve further, this accuracy is also expected to continue to increase accordingly.

Stakeholders are now using the data from VAPAR's AI Platform to optimise their routine maintenance processes further. For example, they can now focus the engineer's time on assets with a poor condition or which could not be surveyed, where previously all surveys had to be looked at. Furthermore, access to central inspection data has allow the routine maintenance to be optimised and reduce the volume of cleansing by 20%.

Benefits

The work that VAPAR has undertaken within the UU Innovation Lab structure has demonstrated that the AI Platform can deliver real change to business by being able to create value by:

- Reducing contracting costs by eliminating traditional on-site coding requirements, so that more footage can be recorded during a single day's work.
- Offering a process that allows all CCTV surveys to be coded so providing information to be used for understanding asset health and investment planning. Currently, many reactive CCTV surveys are not coded.
- Having all data stored in one location, which enables engineers to understand asset health better and to enable improved contract management by having greater visibility of the contractor's performance.
- Allowing the time between survey completion and any investment decision to be completed in days, not weeks. This removes the need for long planning lead times and their associated cost, plus it reduces the probability of repeat flooding or pollution events.
- Reducing the need for specialist skills in the field, with these skills applications now being focused and completed off-site.
- Optimising planned cleansing programme frequencies by approximately 20%, by not cleaning serviceable pipes, without impacting flooding and pollution performance. >



VAPAR was founded based on the skills and insights from two different sectors. Left: Amanda Siqueira (civil and pipe inspection) and Michelle Aguilar (robotics and computer vision).

The AI Platform has also enabled the successful deployment of proactive inspections which has led to the technology being used for reactive inspections. In UU's case, this has included the processing of some 17,000 historic reactive inspections in 12 days to inform the UU's PR24 business case.

Future Outlook

Given that current estimates are that some 12 million kilometres of gravity sewer and drainage pipe exist worldwide, and that this length is continually increasing as populations increase, these assets will likely be inspected and surveyed several times over their lifetime. This has of course led to the advent of the pipe inspection industry, which, like all other industries, is continually looking to deliver a more efficient service. UU and VAPAR have demonstrated that AI and Cloud computing can deliver efficiencies to this industry and VAPAR has already secured contracts with other UK water companies and organisations in Australia and New Zealand. Furthermore, VAPAR is undertaking trials in the United States and with the UK Highways sector.

As with UU's case of analysing the stored 17,000 inspections, this system could also enable water companies and authorities around the world to update their own asset knowledge to a degree not previously possible with traditional analytical processes.

The ability of VAPAR to reduce both the cost and time to complete pipe inspections makes it economical to inspect more of the sewer and drainage network, providing a better understanding of asset health and how it changes over time. This knowledge enables a more proactive approach to asset management and an improved service to customers and the environment, as well as proactively supporting the investments of stakeholders.

Ultimately, VAPAR's AI Platform enables companies and their engineers to cost-effectively and efficiently manage the industry's most precious resource, Time.

Email: info@vapar.co

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A MESSAGE FROM THE CHAIR

Keh-Jian (Albert) Shou,
Chairman, ISTT

Hi ISTT members!

As you may be aware that ISTT has updated the members of committees, with the new nominees from our Affiliated Societies. I believe the committees, with the new blood, will make our society even better than before. In addition, we are now calling the applications for the Grant programmes that will be supported by the regional support fund.

As you may know, we will have more funds than last year, to the tune of US$30,000, to boost the activities in different regions. Please prepare and submit your proposals to make trenchless technology more prosperous in your areas. In addition, to further reflect the possible application of trenchless technologies, we will have a webinar related to Earthquakes. We will have an ISTT webinar by Professor Tom O'Rourke on 12 May, 2023, he will talk about 'Hazard Resilient Infrastructure and Lessons from the Turkey-Syria Earthquake' and I believe it will be an excellent lecture. Please register in advance through the ISTT website.

I have just visited JSTT and will attend the ITTC2023 held by CSTT and found great potential to have good No-Dig events in the post-pandemic era. As you may know, we will have many International and regional No-Dig events this year, such as 26th ITTC, Suzhou, China in April; NASTT 2023 No-Dig Show, Portland, 4th Trenchless Latin American Conference, Cartagena, Colombia, followed by 2023 Trenchless Asia, Kuala Lumpur and Italia No-Dig Live 2023, Milan in May. I plan to attend and witness the excitement of these activities.

The preparation of International No-Dig Mexico, to be held between 17 and 18 October, 2023 in Mexico City, is well underway. To encourage and allow more attendees, we have extended the call for abstracts to 1 June, 2023. Please be aware that we will have other activities like ISTT Awards as usual, please prepare and submit your applications. In addition, to make sure you can travel in a smooth way, please kindly book your ticket and hotel as early as possible, since I believe it will be a big event after a long silence during the pandemic.

ISTT is trying to provide more services to its Affiliated Societies through its website. We have provided and will provide more technical and non-technical material. Please kindly keep watching our new developments, and feel free to provide us your comments or suggestions. I am looking forward to seeing you soon in our webinars and the various No-Dig events held in different places.

With my Best Wishes!

Keh-Jian (Albert) Shou

Chairman, ISTT

ISTT WEBINAR ANNOUNCED

Topic: Hazard Resilient Infrastructure and Lessons from the Turkey-Syria Earthquake

Presenter: Tom O'Rourke

Organisation: Cornell University

Date: 12 May 2023

Time: 10:00 am US EST (16:00 CEST) Duration: 1 hour

Non-Members can join our webinars (no fee required). Recorded videos and Presentation files are for ISTT members only (after member login). No certificates will be issued.

Resilient underground infrastructure can accommodate large ground deformation from earthquakes, hurricanes, floods, adjacent construction and subsidence. Professor O'Rourke will describe how ten new pipeline and conduit systems have been developed and commercialised using a protocol of large-scale tests and fault rupture experiments. Contributions from trenchless technology are discussed. The development and validation of analytical models for the soil-structure interaction of these systems are also described. Lessons learned from the Kahramanmaras, Turkey earthquake are summarised with respect to ground deformation effects on underground infrastructure.

Attendees may register for this webinar at:
https://www.istt.com/index/webapp-registrant-form/id.19

Tom O'Rourke is the Thomas R. Briggs Professor of Engineering Emeritus at the School of Civil and Environmental Engineering at Cornell University, USA. He is a member of the US National Academy of Engineering, Distinguished Member of ASCE, International Fellow of the Royal Academy of Engineering, Member of the Mexican Academy of Engineering and a Fellow of the American Association for the Advancement of Science. He has authored or co-authored over 430 technical publications and has received numerous awards for his research. His research interests cover geotechnical engineering, earthquake engineering, underground construction technologies, engineering for large, geographically distributed systems, and geographic information technologies and database management.

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- Be part of the region's only industry specific exhibition and conference with a proven track record that truly demonstrates Trenchless/No-Dig technology and its capabilities
- Be seen alongside influential supporters representing Latin America

Submission of Abstracts DEADLINE EXTENDED to 1 June 2023

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istt.com

AFFILIATED SOCIETIES

ISTT Affiliated Societies around the world

Austrian Association for Trenchless Technology (AATT)
c/o TU Wien Resselgasse 5,
1040 Wien, Austria
Phone: +43 664 5184084
Email: office@grabenlos.at
Web: www.grabenlos.at

Brazilian Association for Trenchless Technology (ABRATT)
Alameda Santos, 1773 – Jardim
Paulista Sao Paulo
01419-002 Brazil
Phone: +55 11 983893450
Email: hrosas@abratt.org.br
Web: www.abratt.org.br

Australasian Society for Trenchless Technology (ASTT)
18 Frinton Place Greenwood,
6024, WA, Australia
Phone: +61 (0)8 9420 2826
Email: jeffpace@astt.com.au
Web: www.astt.com.au

Bulgarian Association for Trenchless Technology (BATT)
Kaprinka Lake Village Kazanlak
6100, Bulgaria
Phone: +359 2 4901381
Email: info@batt-bg.org
Web: www.batt-bg.org

China Hong Kong Society for Trenchless Technology (CHKSTT)
Tsimshatsui Post Office 91499 Kowloon
Hong Kong
Phone: +852 9201 1952
Email: chkstt@gmail.com
Web: www.chkstt.org

China Society of Geology – Trenchless Technology Committee (CSTT)
No 29 Xueyuan Road,
Haidian District,
Beijing, China
Phone: +86 10 6899 2605
Email: yan64843889@126.com
Web: www.cstt.org

Chinese Taipei Society for Trenchless Technology (CTSTT)
3F, No 92, Roosevelt Rd., Sec. 4,
Zhongzheng Dist, Taipei City, 100
Taiwan
Phone: +886 2 2362 0939
Email: zoradcrc@gmail.com
Web: www.ctstt.org.tw/en_index.asp

Czech Society for Trenchless Technology (CzSTT)
Bezova 1658/1 ,147 14 Praha 4 Czech
Republic
Phone: +420 244 062 722
Email: office@czstt.cz
Web: www.czstt.cz

Danish Society for Trenchless Technology – NoDig Infra (DKSTT)
Odinsvej 29 Silkeborg Denmark
Phone: +45 50894489
Email: tina@juul-consult.dk
Web: www.nodiginfra.dk/nodig-infra/startside

Finnish Society for Trenchless Technology (FISTT)
c/o Sari Pietilä, Haapasuonkankaantie 10
90830 Haukipudas, Finland
Phone: +358 504132484
Email: info@fistt.net
Web: www.fistt.net

French Society for Trenchless Technology (FSTT)
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Fontenay Sous Bo, France
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Email: contact@fstt.org
Web: www.fstt.org

German Society for Trenchless Technology (GSTT)
Kurfürstenstr. 129 (Building:
German construction association)
Berlin, Germany
Phone: +49 30 81 45 59 84
Email: beyer@gstt.de
Web: www.gstt.de

Italian Association of Trenchless Technology (IATT)
Via Ruggero Fiore, 41 Rome Italy
Phone: +39 06 39721997
Email: iatt@iatt.info
Web: www.iatt.it

Iberian Society for Trenchless Technology (IBSTT)
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PTLA 28027, Madrid, Spain
Phone: +34 913 202 884
Email: ibstt@ibstt.org
Web: www.ibstt.org

ISTT International Society for Trenchless Technology

istt.com

AFFILIATED SOCIETIES

ISTT Affiliated Societies around the world

Japan Society for Trenchless Technology (JSTT)
3rd Floor, Reed-C Bldg., 2-11-18,
Tomioka, Koto-ku, Tokyo 135-0047 Japan
Phone: +81 3 5639 9970
Email: office@jstt.jp
Web: www.jstt.jp

Latin American Society for Trenchless Technology (LAMSTT)
Medellín Highway (Calle 80) KM3.5
via Bogotá-Siberia south side, Bogotá
Terrestrial Cargo Terminal, Office C-12,
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Phone: +57 1 8764675
Email: cistt.arlex.toro@lamstt.org
Web: www.lamstt.org

Malaysia Association for Trenchless Technologies (MATT)
No 44, Jalan Dungun, Damansara Heights,
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North American Society for Trenchless Technology (NASTT)
22722 29th Drive SE, STE 100,
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Netherlands Society for Trenchless Technology (NSTT)
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Email: info@nstt.nl
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Polish Foundation for Trenchless Technology (PFTT)
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Email: parkaa@tu.kielce.pl
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The Russian Society Trenchless Technology Association (RSTT)
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Email: gnb.06@mail.ru
Web: www.s-gnb.ru

Southern African Society for Trenchless Technology (SASTT)
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Email: director@sastt.org.za
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Singapore Society for Trenchless Technology (SgSTT)
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Scandinavian Society for Trenchless Technology (SSTT)
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Turkish Society for Infrastructure and Trenchless Technology (TSITT)
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Phone: +380 50 3953280
Email: trenchless.as@novatec.ua
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United Kingdom Society for Trenchless Technology (UKSTT)
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Phone: +44 (0)192 651 3773
Email: admin@ukstt.org.uk
Web: www.ukstt.org.uk

2023

TRENCHLESS EGYPT

TRENCHLESS EGYPT

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Email: pharwood@westrade.co.uk or shillyard@westrade.co.uk Telephone: +44 (0)1923 723990

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www.trenchlessegypt.com

APRIL 14-18 | PROVIDENCE, RI

NO-DIG SHOW 2024

See You Next Year in PROVIDENCE

2024

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NASTT Events Calendar

NASTT NO-DIG SHOW

Since its inception in 1991, NASTT's No-Dig Show has been the premier North American conference and trade show for the trenchless technology industry. Thousands of professionals from around the globe attend to learn new methods and systems that will save money and improve infrastructure. This conference provides attendees an opportunity to learn trenchless methods, network with peers and gain knowledge from vendors during exhibit hall hours. NASTT's No-Dig Show is the ideal event for municipalities, contractors and engineers.

Upcoming Conferences, Courses & Events

April 30 - May 4, 2023
NASTT 2023 No-Dig Show
Portland, Oregon, USA

April 30, 2023
Introduction to Trenchless Technology – New Installations
Portland, Oregon, USA

April 30, 2023
Introduction to Trenchless Technology – Rehabilitation
Portland, Oregon, USA

May 3, 2023
Municipal Sewer Grouting Good Practices Course
Portland, Oregon, USA

May 3-4, 2023
CIPP Good Practices Course
Portland, Oregon, USA

May 3-4, 2023
HDD Good Practices Course
Portland, Oregon, USA

May 3-4, 2023
New Installation Methods Good Practices Course
Portland, Oregon, USA

May 3-4, 2023
Pipe Bursting Good Practices Course
Portland, Oregon, USA

June 28-29, 2023
New Installation Methods Good Practices Course
VIRTUAL

September 28, 2023
Gas Distribution Good Practices Course
VIRTUAL

October 17-18, 2023
39th International No-Dig Mexico
Expo Santa Fe, Mexico City, Mexico

October 23-25, 2023
No-Dig North 2023
Edmonton, Alberta, Canada

November 16, 2023
Municipal Sewer Grouting Good Practices Course
VIRTUAL

December 13-14, 2023
Pipe Bursting Good Practices Course
VIRTUAL

April 15-17, 2024
NASTT 2024 No-Dig Show
Providence, Rhode Island, USA

March 30 – April 3, 2025
NASTT 2025 No-Dig Show
Denver, Colorado, USA

April 30–May 4, 2023
Oregon Convention Center
Portland, Oregon

April 15-17, 2024
Rhode Island Convention Center
Providence, Rhode Island

March 30 - April 3, 2025
Colorado Convention Center
Denver, Colorado

SPONSORSHIPS:

There are a variety of sponsorship opportunities for every price range:

- Welcome Breakfast Table Sponsorships
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For more information and the latest course offerings, visit nastt.org/training/events.

To sponsor or exhibit at any of these events, please contact NASTT:
888-388-2554

SOCIETY NEWS

ukstt.org.uk

Society News brought to members by Trenchless Works

WELCOME FROM THE CHAIR

Ian Ramsay, Chair, UKSTT

As Easter is now over and we move further into spring and new budgets, I thought this was an apt time to explain more about the UKSTT Council, who we are, what we do and how things are arranged. Some readers may not be familiar with the organisation or its function and activities and I hope this will make it clearer.

The UKSTT Council is composed of 20 volunteers who give their time for free, to support the ethos of the Society. In addition, we employ a full time Associate Director, Lynn Maclachlan and a part time Membership Engagement Manager, Linda Lamb. Income is generated through membership fees, regional events and the Annual Awards Dinner.

UKSTT was formed in 1993 and incorporated the existing UK based members of the International Society for Trenchless Technology (ISTT). ISTT was established in the UK in September 1986 with the objective to advance the science and practice of trenchless technology for the public benefit. Once fully established, the ISTT affiliated with regional trenchless Societies throughout the world and to date there are 28 Affiliated Societies that follow the same ethos.

UKSTT Council members are elected for a 3-year term, which can be extended. All UKSTT members can apply to serve on the Council provided they have been a member of the Society for a minimum of 12 months. The Chair and Vice Chair positions serve a two-year tenure, with all elections taking place at the Annual General Meeting towards the latter part of the year.

The UKSTT Council meet 4 times a year in person. In order to cover the volume of business the Council is split into various sub groups. These subs groups have regular virtual meetings that take place through Zoom or Teams. There are 3 main sub-groups Technical and Education, Membership Services and the Policy & Strategy committee. These sub-committees have their own Chair and Vice Chair and they report directly to the main Council.

In addition, the UKSTT enjoys good relationships with other organisations such as Future Water Association, the Pipeline Industries Guild and the NADC where we support each other and join forces to deliver joint events. The Technical Group is heavily involved with standards, as well as looking after the day-to-day UKSTT technical enquiries service.

All-in-all, we have a very active Society and dedicated Council all of whom give up their free time to support the organisation.

I always welcome people who are interested in supporting the Society to contact me directly, I'm always happy to discuss ideas and offer support.

SOCIETY NEWS

Society News brought to members by Trenchless Works

ukstt.org.uk

NO-DIG ROADSHOW DUBLIN 2023

The exhibition area at the Dublin event.

On the morning of 21 March, 2023, the team from Westrade Group, Paul, Kathryn, Austin and Kelly, were at the Castleknock Hotel in Dublin, Ireland early to welcome everyone to the show. Delegates were welcomed with a coffee and the opportunity to take an early look at the exhibition viewing area before the conference began. A contingent from the UKSTT Council was there consisting of Chair, Ian Ramsay, Past Chair Dawn Greig, Programme organiser Shauna Herron, Leon Woods, Phil Steele, Jason Smith and Lynn Maclachlan who were all available to discuss the Society's plans with current and potential new members.

The conference programme, focussing on the role of trenchless technology in delivering major programmes for Irish Water and Northern Ireland Water, started at 9:45 am with UKSTT's event organiser Shauna Herron welcoming everyone to the morning session. >

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NO-DIG ROADSHOW DUBLIN 2023

The speakers from the conference sessions in Dublin.

UKSTT was honoured to welcome speakers: Conor Delaney - Irish Water, Ronan Royston – Ward & Burke, Tom Coleman – USA/USSR, John Griffin – Northern Ireland Water, Gerard McColgan – Dawson WAM, Jack Hutton – Good Friday Robotics, Shauna Herron – Aegion, Orla Crothers – Northern Ireland Water, Ross Henderson – O'Connor Utilities Ltd, Paul Griffin – Irish Water.

The programme was scheduled to include plenty of breaks to allow time for delegates to network and visit the exhibition area. UKSTT members who were exhibiting at the roadshow included Amiblu Norway AS, Cues Inc, Hermes Technologie GmbH, Imerys, Mammoth MTS, McAllister Bros Ltd, Picote Solutions, Radius Systems, Relineeurope GmbH, RSM Lining Supplies Global Ltd, Sanivar UK, Steve Vick International, Tracto-Technik UK Ltd, UIS Utility Innovations Services and VAC EX Limited.

The roadshow was attended by a number of industry professionals, including representatives from Irish Water & Northern Ireland Water. Event sponsors were UIS Ltd & Reinert-Ritz GmbH.

The show was a resounding success, and all parties are looking forward to the next one in Glasgow, Scotland on 15 June 2023.

Thanks go to Westrade Group for organising a great event, UIS Ltd and Reinert-Ritz for sponsoring the show, Northern Ireland Water and Irish Water for their supporting and lastly, but certainly not least, to the UKSTT technical committee for compiling a great programme.

NO-DIG ROADSHOWS 2023

2023
NO-DIG ROADSHOW

After a very successful first event in Dublin this March, join us at the following locations for our series of Roadshows and the UKSTT Annual Awards taking place in November!

NO-DIG ROADSHOW GLASGOW

DoubleTree by Hilton Westerwood
Spa & Golf Resort

Thursday 15 June 2023

NO-DIG ROADSHOW & UKSTT ANNUAL AWARDS BRISTOL

De Vere Tortworth Court, Wotton Under Edge

Wednesday 29 November 2023

To book please contact:
Gary King, gking@westrade.co.uk or +44 (0)1923 723 990

www.nodigroadshows.co.uk | +44 (0)1923 723 990 | Kathryn Boi kboi@westrade.co.uk

The No-Dig Road Show series is organised by Westrade Group Ltd and supported by the United Kingdom Society for Trenchless Technology (UKSTT)

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EVENTS AND MEETINGS

2023

April 30-May 4: NASTT 2023 No-Dig Show
Portland, Oregon
Details from: www.nastt.org/no-dig-show/

May 3-5: 4th Latin American Trenchless Congress
Cartagena de Indias Convention Center,
Cartagena, Colombia
Details from:
https://4tocongresotrenchless2023.lamstt.org/en/

May 17-18: Trenchless Asia 2023
Kuala Lumpur Convention Centre, Malaysia.
Details from: www.trenchlessasia.com

May 24-26 May: Italia No-Dig Live 2023
Novegro Exhibition Park
Details from: https://eventiiatt.it

June 15: No-Dig RoadShow Glasgow
DoubleTree by Hilton Westerwood Spa & Golf Resort,
Glasgow, Scotland
Details from: www.nodigroadshows.co.uk

July 4-6: São Paulo No-Dig Show
Av. Dr. Dante Pazzanese, 120 - Vila Mariana, São Paulo
Details from:
www.abratt.org.br/eventos/sao-paulo-no-dig-show-esta-definido/

September 13 – 14: ASTT NO-DIG Downunder
Brisbane Convention and Exhibition Centre
Details from: www.nodigdownunder.com

October 17-18: International No-Dig Mexico 2023
ISTT's 39th International No-Dig Conference
and Exhibition
Expo Santa Fe, Mexico
Details from: www.no-digmexico.com

October 31-November 1: No-Dig Turkey 2023
Conference and Exhibition
Istanbul, Turkey
Details from: www.nodigturkey.com

November 1-3 November: 18th International
ACUUS Conference
Singapore
Details from: www.acuus.org

November 8-9: Trenchless Egypt 2023
Cairo International Conference Centre
Details from: www.trenchlessegypt.com

November 8-9: STUVA-Expo 2023 in Munich
Messe München, Messegelände, Hall C1
81823 München, Germany
Details from:
www.stuva-expo.de/en/start-stuva-expo-2023.html

November 29: No-Dig RoadShow Bristol
& UKSTT Annual Awards
De Vere Tortworth Court, Wotton Under Edge
Details from: www.nodigroadshows.co.uk

2024

18-19 November: International No-Dig
Dubai 2024
ISTT's 40th International No-Dig Conference
and Exhibition
Dubai World Trade Centre, Dubai

If you have an event, course or meeting scheduled and would like to add it to this listing please forward details to: editorial@trenchless-works.com