

TRENCHLESS

The voice of the trenchless community

Works



HDD TECHNOLOGY FOR TOMORROW

- TRACTO's digital revolution in drilling

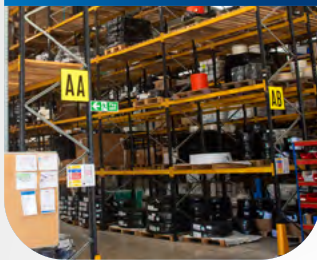


DISCOVER THE FUTURE OF TRENCHLESS TECHNOLOGY AT NO DIG LIVE 2024



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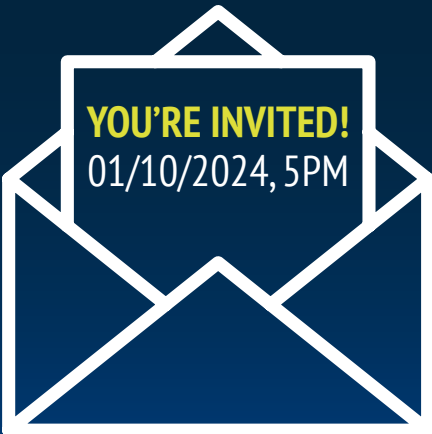
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Editor's Welcome

Paul Harwood

A message from Paul Harwood, Managing Director Westrade Group, and publisher Trenchless Works.

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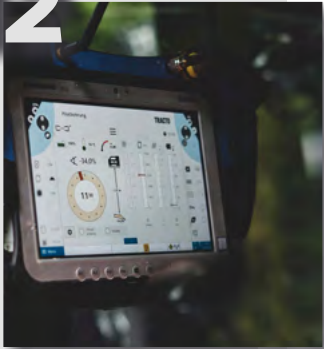
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United Felts re-launches patent-pending EnviroCure®-Felt

United Felts has announced the re-launch of its EnviroCure felt, a pioneering enhancement in Cured In Place Pipe (CIPP) technology, which now has patent-pending status.

Described as ‘the only liner of its kind’, EnviroCure felt uniquely maintains the strength of traditional CIPP liners while significantly reducing styrene emissions, setting a new standard for environmental responsibility and durability in the trenchless rehabilitation industry.

Mike Vellano, President and CEO of Vortex Companies, the parent company of United Felts, highlighted the broader impact of EnviroCure felt, remarking, “With EnviroCure felt, we are giving the industry a sustainable lining option that addresses the crucial issue of styrene emissions while ensuring our products stand the test of time. This innovation is part of our commitment to supporting the maintenance of aging infrastructure with solutions that are both effective and conscious to evolving asset owner requirements.”

Matt Timberlake, President of United Felts, expressed enthusiasm about the product’s capabilities, stating, “EnviroCure felt represents a significant leap forward for our industry. This made in America technology allows us to offer our clients a product that does not compromise on strength or environmental impact. By maintaining the

integrity of traditional liners and significantly reducing emissions, we provide a solution that meets the rigorous demands of modern infrastructure projects without sacrificing performance.”

EnviroCure-Felt uses a unique impermeable polymer coating technology to create a barrier that prevents styrene emissions, meeting regulatory standards and significantly improving job site safety. The liner is designed for ease of installation using traditional methods, ensuring that it can be integrated seamlessly into existing operations without additional equipment or training.

This re-launch follows extensive third-party testing, confirming that EnviroCure emissions are consistently below 1 part per million, surpassing industry expectations and regulatory requirements. The liner is suitable for a wide range of applications, from municipal sewer rehabilitation to industrial pipeline maintenance.

“ This innovation is part of our commitment to supporting the maintenance of aging infrastructure with solutions that are both effective and conscious to evolving asset owner requirements.



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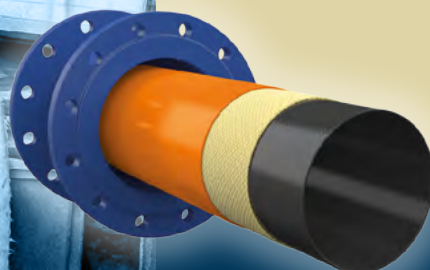
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RSM to host exclusive stand party at No-Dig Live 2024!

RSM Lining Supplies Global Ltd, leaders in trenchless technology solutions, are thrilled to announce an exclusive stand party at No-Dig Live 2024. This premier event will be held on RSM's stand, H16 on Tuesday 1st October from 5pm.

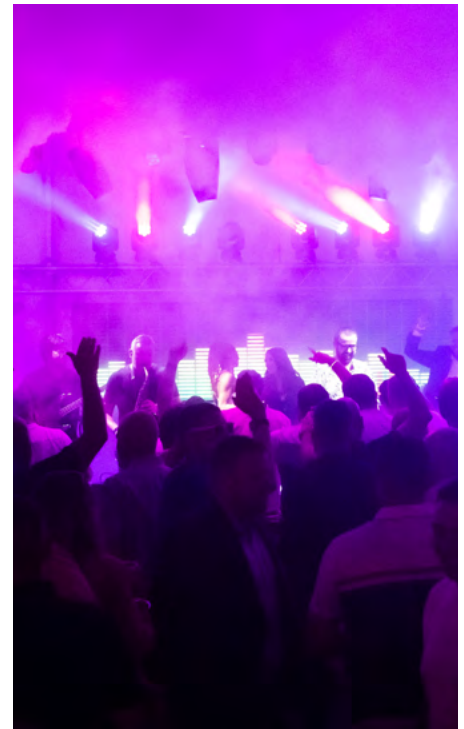
RSM is a leading provider of innovative trenchless technology solutions, committed to advancing the sewer rehabilitation industry through supplying top-quality materials & equipment, investing in cutting-edge product development, and offering excellent training & consultancy services.

Paul Harwood, Managing Director Westrade Group and event organiser of No-Dig Live, commented, "RSM are part of the No-Dig Live footprint and their presence at this event is always well received by visitors and industry peers. They bring a vibrant energy to the show,

and I am sure the party will be a fantastic new addition to the RSM experience".

Phil Steele, RSM's Sales Director, said: "We are incredibly excited to be hosting a stand party at No-Dig Live! This event offers a fantastic opportunity to connect with our clients and partners, showcase our innovative products, and celebrate the advancements in our industry. Most importantly, it allows us to express our heartfelt thanks to our customers for their loyal support over the years!"

To join RSM for an evening of networking, innovation and celebration, see details below:



Tuesday 1 October, at 5pm – 9pm, RSM stand H16, No Dig Live 2024, NAEC Stoneleigh.

This is a registration only event click here to register: <https://www.rsm-web.com/join-the-biggest-party-of-no-dig-live-2024/> to secure your space.



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TRACTO's digital revolution in drilling

As in many industries, TRACTO's long-term goal is defined as progressive automation up to, and including autonomous drilling. Whilst the long-term strategy fully involves customers, on the way there, increasingly sophisticated support systems are being developed for many drilling subprocesses, and these in turn rely on an exceptionally large amount of data.



Already today, TRACTO's HDD rigs extensively use digital data processing

All processes related to drilling itself are becoming increasingly digital.

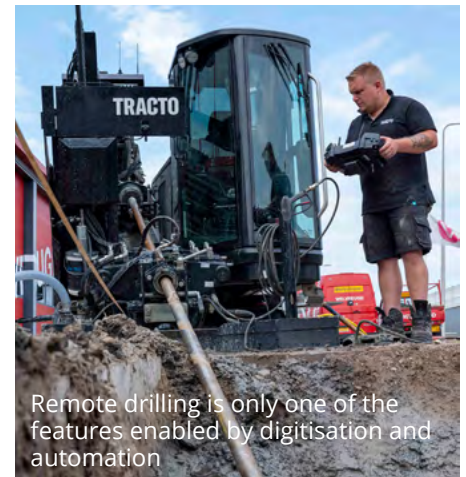
This includes, for example, the planning, monitoring and documentation of the drilling process. TRACTO's HDD rigs have long been equipped with the option of data acquisition and already store a lot of data in the cloud, including the location of the machine, but also status and maintenance messages that are important for the maintenance of the machine and can ultimately be used by the contractor.

Michael Stinn, Head of Digital Business at TRACTO says: "When I joined the company, TRACTO was already much further along in many areas of digitisation than many other companies in the engineering sector. Nevertheless, a complete restructuring of the digital area is now necessary, which connects all departments like an umbrella organisation and can bundle the constantly growing data packages that

are available everywhere and make them available to everyone involved. Ultimately, all departments are involved in the path to the drilling technology of the future, and the company is keen to involve its customers in this process.

'Trenchless platform' to bundle digital products for customers

The Digital Business unit's next major goal is to create a 'trenchless platform' that will manage and monitor all the customer's machines (of all brands) in about 3-5 years' time. We want to know and understand the customer's daily challenges and technical problems so that we can find the right digital solutions," explains Stinn. To this end, many discussions were held with customers during the TRACTO Hands On Days in April, many of whom were very motivated to go digital together with the German manufacturer.



Remote drilling is only one of the features enabled by digitisation and automation

Working with users on digital development

There are already several digital products available from TRACTO for trenchless construction that have been developed in-house. Here too, TRACTO's focus is on offering solutions that really make life and work easier for No-Dig users. The 'Future Community', through which users are actively involved in the development processes, plays a key role here. Members of this interactive network can contribute ideas for future products or test the functionality and practicality of digital development statuses. >

“When I joined the company, TRACTO was already much further along in many areas of digitisation than many other companies in the engineering sector. Nevertheless, a complete restructuring of the digital area is now necessary, which connects all departments like an umbrella organisation.



The ORFEUS radar will soon enable automatic obstacle detection while drilling

Digital solutions already simplify processes for contractors

The digital 'Quick Planner3D' is an easy-to-use tool for rapid planning and three-dimensional visualisation of even the most complex drilling routes. The manufacturer-independent application guides the user through each step and automatically queries the relevant factors. It recognises the location, evaluates the topology, considers known obstacles and calculates the optimum drilling path from the start pit to the target pit. The planned route can be adopted or modified at short notice to suit the conditions on site. A digital wizard allows even inexperienced users to professionally plan and check the feasibility of drilling routes.

With the 'Commander', TRACTO offers a self-developed app for the management of

GRUNDODRILL drill rig fleets, with the help of which contractors can monitor the location of their machines at any time, which makes an active contribution to theft protection. Key figures such as operating status, operating hours, performance parameters and historical machine data for each drilling rig can also be recorded. The contractor can use this data to better plan the deployment of its HDD fleet, identify optimisation potential and increase productivity.

Each individual drilling operation must also be documented for the client: The 'Boredata' app is used to store all the detailed drilling data shown on the rig display for drilling data documentation in accordance with DVGW GW 321. The Boredata app is integrated into the control system of all TRACTO HDD rigs. The data being collected automatically also makes this task much easier for the contractor.

Finally, for surveying NODIG sites with a smartphone, there is the externally developed 'Vaira' app. Survey data is captured with the smartphone's camera, a data set is created and transferred in real time to GIS systems or as a digital construction file to the client. The VAIRA app is particularly suitable for measuring sites with NODIG systems that do not have digital recording systems on board.

The future of drilling technology

Elmar Koch, head of TRACTO's R&D division, explains that the aim of increasingly autonomous drilling is to achieve more safety, higher efficiency, greater freedom for contractors, more sustainability and complete documentation through maximum automation. The path to autonomous drilling involves a number of intermediate stages, ranging from assisted drilling, which is currently in use, to semi-autonomous and partially autonomous drilling, and finally to fully autonomous drilling. According to Koch, this process is very similar to the development path to autonomous driving that the automotive industry has been following for years with various assistance systems.

TRACTO's HDD drilling rigs already use a variety of support systems such as cameras, GPS and sensors. Comprehensive data is also analysed and evaluated to support the operator during the drilling process. The ORFEUS system, which is still under development, will soon make it possible to detect unexpected obstacles in the drilling process using radar antennas in the drill head. This drill head radar will make the HDD process even safer and is an important step towards autonomous drilling.

To really understand their customers' requirements, TRACTO actively involves them in developing future digital solutions



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ADVANCED TRENCHLESS TECHNOLOGY

Herrenknecht returns to the Gotthard tunnel

Herrenknecht have presented a tunnel boring machine, built to drive the second tube of the Gotthard Road Tunnel, to a delegation from the construction company Marti Tunnel AG and the Swiss Federal Roads Office (ASTRA).

For 45 years, the Gotthard Road Tunnel has been a key piece of infrastructure for European north-south traffic through the Alps. Used by around six million cars and trucks a year, it runs for 16.9km between Göschenen

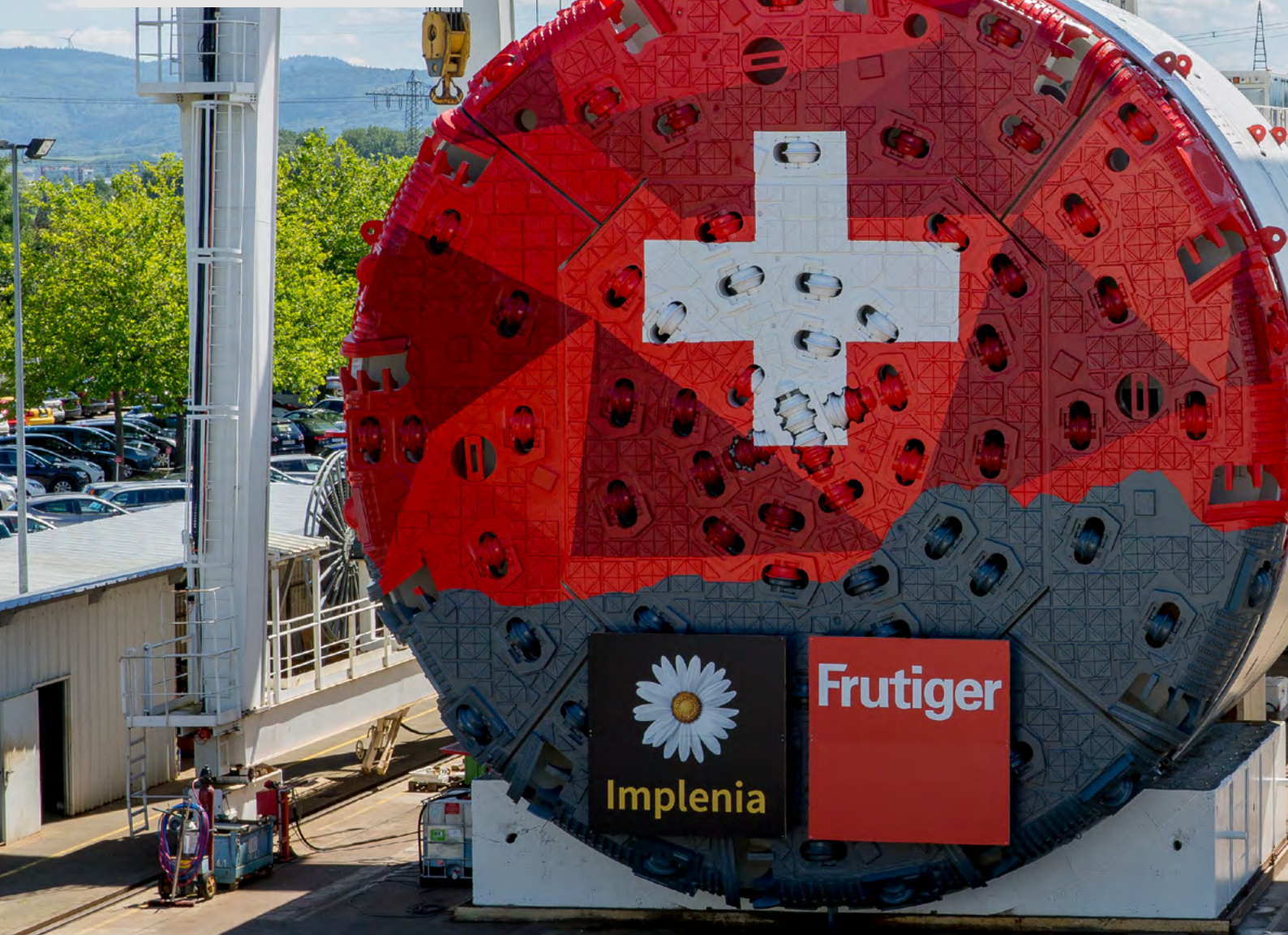
in the Swiss canton of Uri and Airolo in the canton of Ticino.

ASTRA has commissioned the construction of a second parallel tube to ensure that traffic can continue to flow while the existing tunnel is closed for renovation. Once all the work has been completed,

one tunnel will be available for southbound traffic and the other for northbound – a significant improvement in safety compared to the previous operation with two-way traffic in one tube. >



The Herrenknecht Single Shield TBM (Ø 7,400mm) for the southern access tunnel



Specialist for the rock of the Alps

The diameter of the Single Shield TBM for the southern construction section is 12,310mm. The cutterhead is driven by 16 electric motors, which have a total output of 5,600kw or around 7,600hp. To put this into context, a current Formula 1 car has around 1,000hp.

As a Single Shield TBM, the machine specialises in driving through the hard rock of the Alps. Granite, gneiss and slate are the main types of rock that will be encountered on the 7,755m long southern tunnelling section. Following its technical acceptance, the machine will now be dismantled, and the

components transported to the construction site in Airolo (Ticino). There, the TBM will be reassembled so that the miners from Marti Tunnel AG can start driving the main tunnel from the south as planned in March next year.

Fault-free to the fault zones

According to preliminary geological investigations, the tunnel builders expect a geological fault zone in both the north and south of the planned route for the main tunnel. Due to the rock characteristics, the decision was made to excavate the two fault zone sections using conventional blasting before starting the mechanised main tunnel drive. In order to reach the fault zones in the mountain,

access tunnels were driven through the rock. Mechanised tunnelling technology was also used for the access tunnels. Marti Tunnel AG successfully completed the excavation of the southern access tunnel with a Herrenknecht Single Shield TBM (Ø 7,400mm) in August 2023. The machines for the main tunnel will later be pulled through the two fault zones that have already been excavated.

Herrenknecht also supplied a Gripper TBM (Ø 7,030mm) and a Single Shield TBM (Ø 12,225mm) to a consortium of Implenia Schweiz AG and Frutiger AG for the two northern construction lots (main tunnel and access tunnel). The excavation of the northern access tunnel was completed in April 2023. >

The Herrenknecht Single Shield TBM (Ø 12,225mm) for the northern section of the main tunnel



On July 30, 2024, the Herrenknecht engineers presented the tunnel boring machine (Ø 12,310mm) for the southern section of the new Gotthard road tunnel tube to the delegation from the construction company Marti Tunnel AG and the client ASTRA.



The Champions League of tunnel construction

Four Herrenknecht machines were also used at the Gotthard tunnel from 2003 to 2011 to excavate a total of 85km of tunnel for the world's longest railway tunnel to date. The delivery for the Gotthard Base

Tunnel is one of the outstanding milestones in Herrenknecht's company history. This was confirmed by the company's head of project management, Matthias Schwärzel, who is proud to be returning to the Gotthard with Herrenknecht technology and said: "Tunnel construction in the Alps and especially on the

Swiss St. Gotthard always has an emotional component for us. We are looking forward to working with the miners on the construction site."



The Herrenknecht Gripper TBM (Ø 7,030mm) for the northern access tunnel

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PERFORATOR's new micro drill rig series



The demand for environmentally friendly and advanced trenchless technologies is growing every year with potential new applications across the field of infrastructure development. Emerging and high-growth markets like district heating, telecommunication networks, underground power cables, solar power, and charging infrastructure for e-mobility all require smart solutions that can be delivered with minimal disturbance to society and the environment.

PERFORATOR's TAIFUN series is proven to be highly versatile when it comes to the trenchless laying of service pipes and the longitudinal installation of all types of underground pipes. The compact design is suitable for all inner-city applications as well as crossings in transport infrastructure, such as roads or railway lines. >

TAIFUN 15 auger boring method (ABM)



There are various possible applications within the growing range of tasks in infrastructure development such as supply networks for gas and water pipes, sewage and rainwater drainage systems, drainage networks and flood relief systems, district and local heating networks, telecommunications networks (FTTH and FTTX), underground cables (high- to low-voltage grids), connections in solar and wind farms, charging infrastructure for e-mobility, and geotechnical applications in tunnelling and well construction, as well as special mining applications.

In addition to the wide range of applications, the TAIFUN series can also be used for a variety of trenchless drilling methods.

Horizontal pressing with expansion part

Whether unguided or guided, the impact drill rig can be used to lay pipes with a diameter of up to 160mm in displaceable soils over a length of up to 50m. During percussive boring, the rod is pressed into the ground as far as the target range while the soil is

displaced and the product pipe is pulled in with it during retraction. In the guided version, walk-over positioning technology is used for directional control.

Horizontal auger boring method

The drilling equipment is used to drill uncased boreholes with a diameter of up to 280mm and over a length of up to 25m. The augers must be fitted with a supporting edge for this purpose. After drilling, the product pipe is pushed or pulled in. For cased boreholes, a casing pipe remaining in the soil or a recoverable casing pipe is installed at the same time as the augers. The casing pipes are then pushed out with the carrier pipes and reused. The auger boring method is also suitable for DTH percussive drilling in unconsolidated and solid rock.

Horizontal directional drilling (HDD)

Directional drilling equipment enables pipes of up to 280mm in diameter and 100m in length to be laid using the HDD method.

The system is controlled using walk-over locating technology. After the pilot bore, the expansion bore is carried out using a backreamer and the product pipe is pulled in.

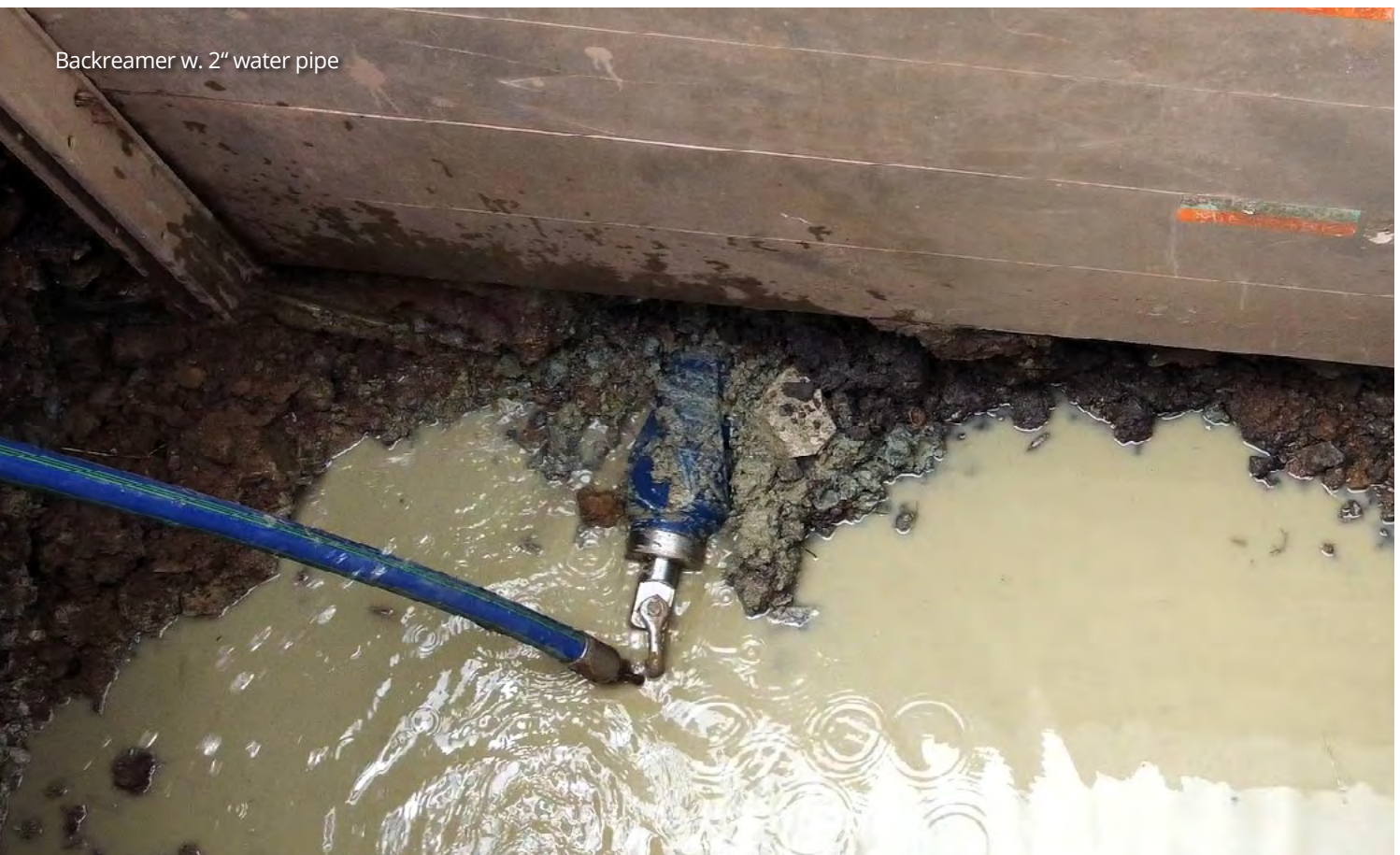
Pilot pipe jacking with soil displacement (Taifun 15 only)

In the first step of this method, a pilot pipe string is jacked by displacement. The position is measured using an optical-electronic navigation system (OEN). Directional corrections are generated via a pilot drill head with a control surface. In the second step, a casing pipe (or, alternatively, a recoverable casing pipe) is then installed and the pilot pipe is pushed out at the same time. In the third step, carrier pipes can be pushed or pulled in.

Special applications are also possible. "Berlin" construction method from circular shafts as well as the use of collectors with an internal diameter ≥ 1250 mm for the subsequent construction of service pipes or surface drainage systems. >



Universal Micro drill rigs	TAIFUN	5	15
Jacking shaft	[m]	L=1.3/1.7 Ø=1.5	L=1.6/1.9 Ø=2.0
Thrust force	[kN]	54	142
Pullback force	[kN]	54	142
Max. stroke (rack)	[mm]	745/1.240	890/1.140
Max. Torque	[Nm]	980	1.000/3.100
Max. spindle speed	[rpm]	80	160/60
Height of machine axis	[mm]	315	320
Auger connector	[mm]	HEX32	HEX32/41
Max. pipe OD*	[mm]	219	280
Max. pipe length basic frame	[mm]	500/1.000	500/750
HDD rod length	[mm]	500/1000	750/1.000
Length	[mm]	1.205/1.700	1.560/1810
Width	[mm]	718	790
Weight	[kg]	270/290	675/725
Power pack	[-]	Mini excavator HS-1.19D/ HS-1E	Mini excava- tor HS-1.37D/ HS-1E
*Depending on soil / Data subject to change. PERFORATOR does not take any liability for printed errors and/or mistakes.			



Backreamer w. 2" water pipe

The TAIFUN series stands out above all thanks to its versatile range of applications and processes, while also offering significant advantages:

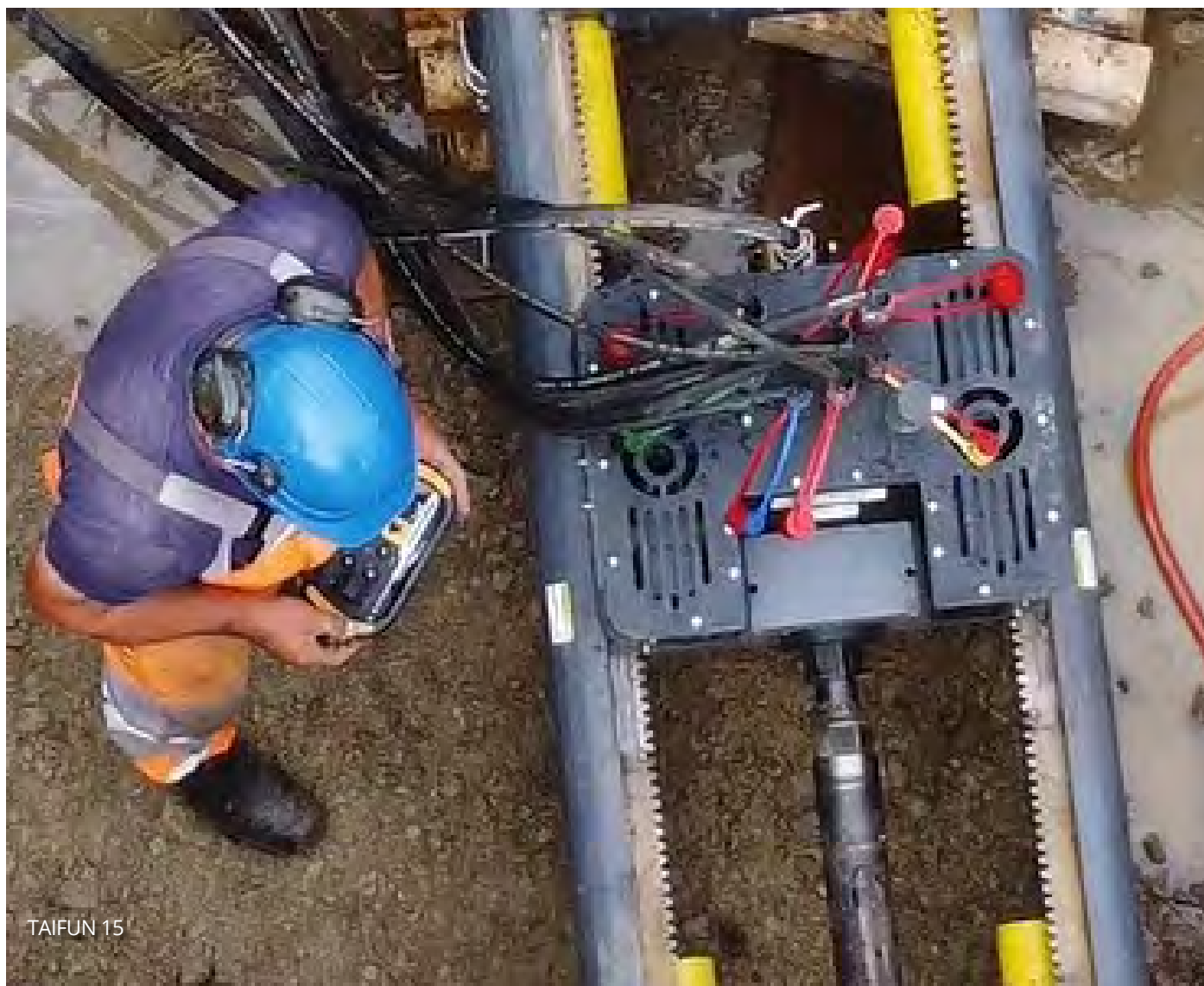
- Reduces investment in different machine types.
- Less maintenance and repair work than with multiple machines, no need for multiple inspections for accident prevention regulations.
- Minimises the amount of training required for the drilling crew. Frequent use prevents application errors.
- Only one transport concept required.
- The hydraulic station is not required for use with mini excavators (required performance must be guaranteed).

- Simple operating concept via hydraulic control block; the TAIFUN 15 even offers this with radio remote control.
- Quick and easy conversion between the various drilling variants.
- Front and rear supports ensure that the machines are optimally aligned; the TAIFUN 15 even has the option of hydraulic alignment.
- The rack and pinion ensures fast, continuously variable movement of the drill carriage within the jacking frame.
- Direct-drive rotary motors ensure steady torque delivery and high rotational performance. The TAIFUN 15 has a two-stage rotary drive with up to 160 rpm at 1000 Nm, or 60 rpm at 3100 Nm.

TAIFUN 5 f. sewer lateral



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TAIFUN 15

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McBreen Enviro UK tackle infiltration challenges

S1E support McBreen Enviro UK to successfully address ground water infiltration with K-Prema Mechanical Seal.



In Gloucester, McBreen Enviro UK faced an issue involving groundwater infiltration into a newly installed, unconnected sewer network. This network, comprising 120-meter-long sections of 1500mm diameter concrete pipes, was experiencing rapid water ingress, threatening the new drainage systems integrity and functionality.

A comprehensive CCTV drain survey, confirmed groundwater

infiltration at several joints along the network. This was communicated to the Client.

The challenge was to find a cost-effective repair method as traditional non dig repair techniques involving extensive machinery were too expensive, as well as a repair to suit a large diameter pipe and suitable for operations to be carried out in a confined space. >

McBreen Enviro UK install the K-Prema Internal Pipe Seal System in unconnected sewer network.



Collaborating with S1E Ltd: Specialist Suppliers of Trenchless Technology, it was recommended to use mechanical pipe seals from the K-Prema range. The K-Prema Internal Pipe Seal System includes a large EPDM rubber sleeve and retaining clamping bands made of high-grade 304 stainless steel, suitable for a range of applications, including sewage, water, oil, and air.

Following a meticulously clean and preparation of the pipe, the dedicated technicians from McBreen Enviro UK, undertook a challenging 60m ascend to the infiltration points within a

massive 1,500mm diameter concrete pipe. Their commitment to efficiency and safety was evident at every stage of the project, with a rescue team on site and risks efficiently assessed.

Despite the large pipe diameter and long lengths of the pipe, the team installed six 1,500mm internal mechanical pipe seals, with each pipe seal. The K-Prema solution minimised disruption to the system and avoided extensive excavation, as well being significantly more cost-effective than traditional repair methods, meeting the client's budget constraints.

“ The success of this project was down to how simple and easy it was for the team to install the K-Prema seals. When you're up against tight deadlines it's important to be using solutions that are efficient as well as reliable.



The K-Prema Internal Pipe Seal System includes a large EPDM rubber sleeve and retaining clamping bands made of high-grade 304 stainless steel.

Even with the challenges posed, the efforts from McBreen Enviro UK team, ensured a successful project completion, with a second phase due to commence in the following weeks.

- Versatility: Suitable for a range of large diameter pipes; the K-Prema mechanical seal can be used on an array of pipe materials, including concrete, steel, cast iron, PE, glass fibre, and others. >

Features and benefits of K-Prema Mechanical Internal Pipe Seal include:



- **Durability:** Manufactured from WRAS-approved material, the K-Prema seal ensures long-lasting performance, even in challenging environmental conditions.
- **Reliability:** Withstanding internal pressures of up to 20 bar, the K-Prema seal provides a reliable solution for sealing infiltration points and preventing future leaks.

McBreen Enviro UK commented: "The decision to choose the

K-Prema mechanical seal was a strategic one; for its cost-effectiveness, ease of installation, and compliance with the Water Authority specification. S1E's support throughout the project was invaluable, from their expertise in the product and the seamless supply."

They continued, "The success of this project was down to how simple and easy it was for the team to install the K-Prema seals. When you're up against tight deadlines it's important to be

using solutions that are efficient as well as reliable."

In conclusion, the collaborative effort between S1E Ltd and McBreen Enviro UK demonstrates how innovative solutions and a commitment to excellent service can overcome complex infiltration.

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UV CIPP's history From invention to today

By Börje Persson, Managing Director of JBP Composites S.L

Since its introduction in the early 1970s, Cured-in-Place Pipes (CIPP) has been a widely used trenchless technology for pipeline rehabilitation, experiencing consistent annual growth. While felt and resin liners have existed for half a century, 2025 marks the 40th anniversary of the first commercial UV Light-cured CIPP installation.

This article delves into the history and first installation of UV CIPP liners, tracing their origins, key developments, and the pioneering efforts that led to their commercialization. From the inventor Vollmar Jonasson to the competitive advancements by industry giants like Insituform, we explore the journey that has shaped UV CIPP technology.

Pioneering technology

In September 1985, the first commercial Inpipe liner was installed at a campsite in Vilhelmina, Sweden, 300 km south of the Arctic Circle. Börje

Persson, a young engineer at the time, was tasked with designing the installation equipment and performing the installation of a 42-meter DN 150 mm gravity concrete host pipe.

Swedish inventor Vollmar Jonasson pioneered the development of a glass fibre liner that could be factory-produced, impregnated, and transported without risk of pre-curing, requiring only protection from daylight. The impregnated glass fibre sleeve, protected by thermoplastic foils, was inverted by air, and a single light trolley was manually installed and pulled through the pipe by an electric winch. The first patent for this technology, focusing on tubular braided reinforcement, was filed in Sweden in 1978 and later in the U.S. in 1986.

During the mid-1980s competition was limited. Insituform and its partners monitored closely progress of Jonasson's development of the UV Curing method. Jonasson



Vollmar at the site of that first installation 39 years ago, at the campsite in Vilhelmina

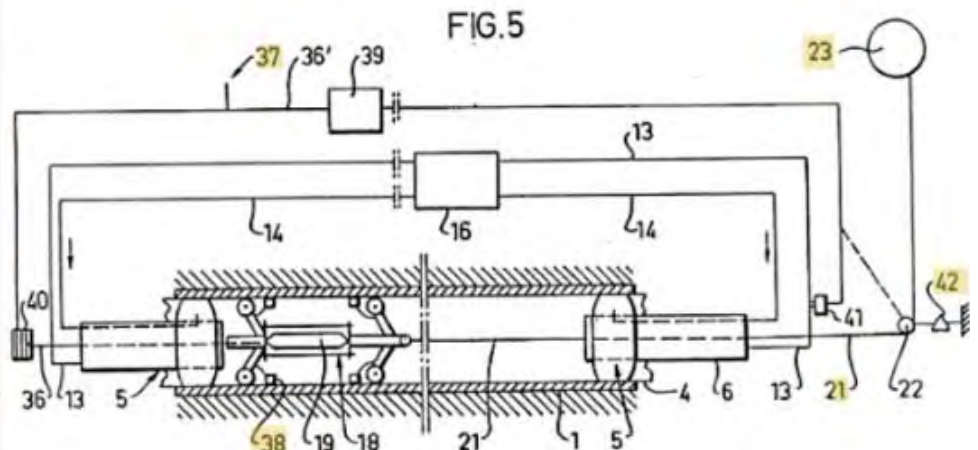
gained their first patent for the UV method in the autumn of 1983. However, Insituform's water-submerged light train technology was less efficient due to water absorption of UV radiation. In 1985, Inpipe successfully installed its first DN 150 glass fibre liner, marking a significant achievement for the inventor and investors.

This breakthrough prompted Insituform to launch a research project in 1985/86 to cure their water-inverted felt and resin liner using UV light. By 1986, Insituform offered light-cured liners as an alternative to hot water-cured ones.



The actual tool "invrängnings dorn" used for the ever first commercial installation 1985

1983 Patent (ESO 0 122 246) Method and Design diagram



Inpipe AB was established in 1986/87, taking over VJ_System AB and building a factory in Vilhelmina, which became the centre for research, development, and production. Licensed installers in Sweden, Norway, Denmark, and Germany helped accelerate the development of the Inpipe Liner.

Technological evolution and material improvements

The early installation technology involved inverting liners with water towers for felt and resin lining and air inflation for glass fibre liners. The Inpipe liner was installed using a tool called a cone, fixed at the inversion side manhole by a rubber packer, and manually pushed through with a membrane to maintain internal pressure. This method required a person to be in the manhole during installation, often resulting in exposure to talcum powder used for lubrication.

As the technology evolved, a 90-degree elbow replaced the initial cone tool, allowing feeding from the top while maintaining pressure. Material and liner improvements were constant, driven by increased market activity. Initially, the resin for the Inpipe liner was co-developed with ASEA, later known as ABB, using a thixotropic styrene-based polyester thickened with magnesium oxide to ensure even wall thickness during curing.

In 1988, through a joint venture, Inpipe and BASF worked together to improve the resin. They came up with the light-curable isophthalic acid-based resin "A 400," which was an unsaturated polyester resin that became stiffer when it dried. The Palatal P92, an enhanced

version, became one of the most widely used resins for relining. The unique braided glass fibre reinforcement design allowed for flexible liner diameters, increasing ring stiffness without additional wall thickness. However, expanding the diameter shortened the liner, causing inner tubing wrinkles that were later resolved with thermoplastic material changes.

Market introduction

Inpipe designed the installation equipment, with local production in Vilhelmina and Skellefteå. Once the factory was operational, Inpipe sought installation partners in Scandinavia and Germany. By 1987, with strong investors and leadership, the new Inpipe factory focused on diameters up to 400 mm to cover most potential rehabilitation projects.

In mid-1988, Per Aarsleff, Insituform's Danish partner, began promoting UV cured technology. Around the same time, Mr. Moll and the German company Softlining introduced UV cured glass fibre-reinforced liners to the German market, initially produced by Röders.

In 1989, at No-Dig International in Hamburg, Germany, Inpipe partnered with the Japanese company Toa Grout to explore market introduction possibilities. Meanwhile, Insituform's Memphis-based research facility developed reinforced felt and resin liners and a new UV curing system to replace hot water. Despite technological challenges, Insituform demonstrated UV curing in a 610 mm diameter pipe in Germany and Belgium, promoting the technology as a special application alternative. >



Picture from the magazine "Underground" December 1987 "Insituform drew a crowd at the congress centre with a demonstration of its light cured technique"

Over the years, continuous improvements in materials, installation techniques, and collaborative efforts with chemical companies have refined UV CIPP technology, making it a preferred choice for efficient and reliable pipeline repair. Today, the industry celebrates UV CIPP liners for their durability, cost-effectiveness, and environmental benefits, demonstrating their relentless pursuit of innovation.

The provision of UV CIPP liners and related technologies has

become a very competitive, and arguably dominant part of the trenchless sector. The list of significant liner producers with international reach - Brandenburger, BKP Berolina, Insituform, Impreg, Reline Europe and Saertex, to mention just a few - is a testament to the progress, development, and global adoption of UV CIPP.

As the 40th anniversary of the first commercial installation approaches, recent research estimates the global rehabilitation market is worth US\$ 4.8 billion, growing at an

estimated rate of 4.7% per annum. CIPP methods account for 45% of this (US\$ 2.16 billion) where approximately 40% to 50% is installed in the USA. Since its inception in the 1970s, CIPP and more latterly UV CIPP's legacy is indisputable, and undoubtedly can look to the future with confidence and further exciting innovations.



UV-CIPP cured liner, Spanish project

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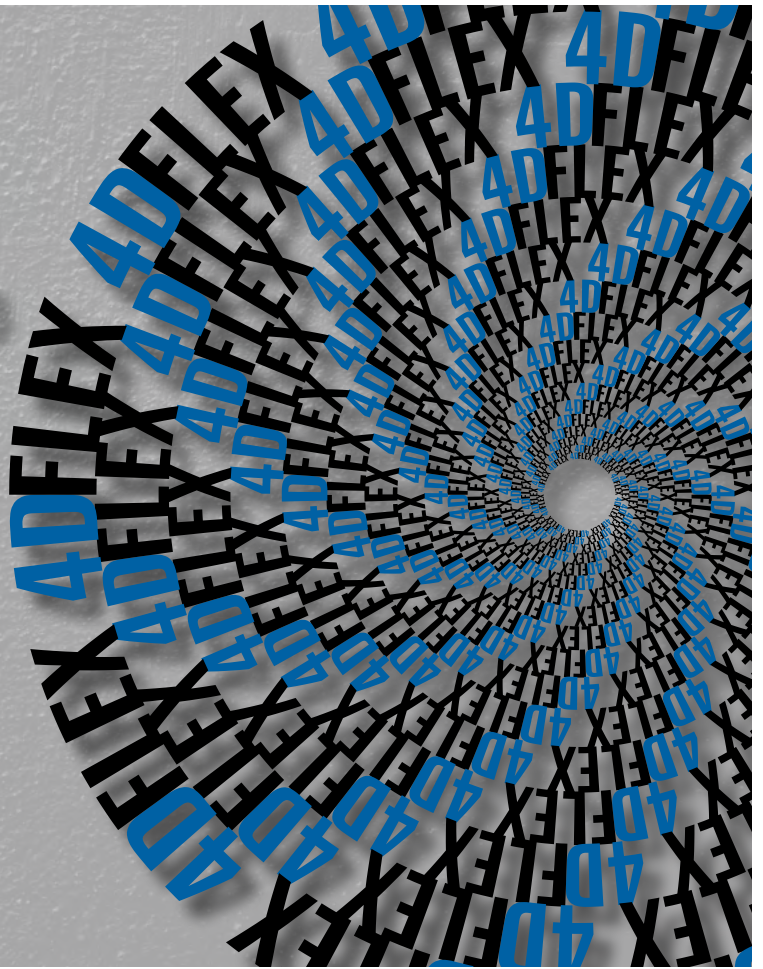
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Paris CIPP project is a towering success

The Eiffel Tower is synonymous with the Paris skyline and became the symbol of the Olympic Games which took place in the French capital this summer. The Eiffel Tower is however more than just a landmark and viewpoint. It hosts three bars and restaurants for visitors, including the legendary Jules Verne, a Michelin-starred restaurant by Frédéric Anton on the second floor. Naturally, this area needs to be serviced by utilities infrastructure including pipe networks to supply drinking water, protect from rainwater, and remove wastewater.

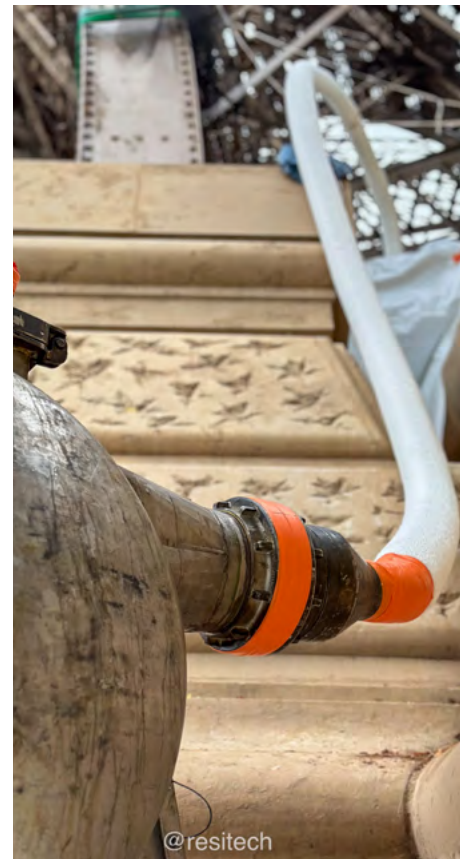
Prior to the Olympics taking place, inspection of the waste and drain network within the tower highlighted areas

that urgently needed sealing to prevent issues during this prestigious event. Access however was going to be a challenge as the system was built over 150 years ago and had become dated and prone to leaks. As the most popular tourist attraction in France, the tower is also heavily protected by the French Government. Furthermore, the imminent start of the Olympics schedule meant that the completion date was critical, adding further pressure.

Resitech, a company based near Nice, undertook a full evaluation of the network detailing both the pipe configuration and producing a full condition assessment to ensure they could provide a long-term fix with the minimum of disruption.



The programmed that was developed and delivered included mechanical cleaning and pipe brush coating (supported by Picote training) together with a CIPP solution which utilised a flexible liner to navigate the complex system of bends. The team completed the work two days ahead of schedule and were able to line, clean and coat over 350m of DN 75mm-150mm cast iron pipes providing a long-term and trenchless solution for this iconic Parisienne landmark.



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What now for water?

By Tim Farley, Sanivar UK

As the dawn breaks on a new political era, it is interesting to reflect on the absence of Water in the electoral debate. Only the Liberal Democrats directly addressed the need to change how we manage our most valuable natural resource and even the Greens were conspicuously silent on the issues of leakage and pollution. One is left to conclude that the water sector is either politically insignificant or that it is the elephant in the room, too big for either of the main parties to address.

Despite political indifference our sector faces major challenges that demand changes in approach and strategy:

- Climate change, increasing value of resource and posing

- Demography, altering consumption patterns and increasing demands on infrastructure.
- Ageing assets, increasing vulnerability and risk of failure
- Funding, a broken model that undervalues water and imposes restrictions on investment.
- Regulation, inhibiting innovation and investment.

The cumulative effect of these challenges will be to demand a new approach to Asset Management over the next five-year period, Water Company Business Plans collectively call for more investment with three main outputs at the top of agendas:

- Leakage and resilience of supply

- Lead Replacement
- Pollution and refurbishment of wastewater infrastructure

Before the Final Determinations the demand for investment in critical water infrastructure will exceed the outputs that can be achieved from traditional refurbishment and replacement technologies and that new trenchless technologies will need to be adopted as business as usual to meet the cost challenge and programme requirements.





Pipe Lining has a key role to play in AMP8 and independent research has shown that Trenchless rehabilitation can save up to 75% in costs and reduce CO2 emissions by up to 97% when compared to Open Cut replacement (Appeldorn : based on 150mm diameter refurbishment).

Lining also delivers other operational benefits:

- Speed – lining requires minimal excavation allowing for greater efficiency with installations of upto 1.5km possible in a single shift.
- Total Installed Costs –

lining reduces the need for infrastructure diversions, traffic management and logistics associated with open cut refurbishments.

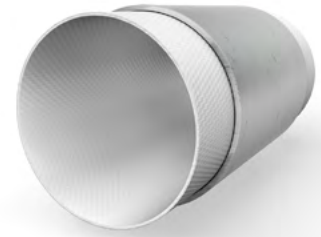
- Societal Costs – lining reduces asset downtime (meeting the new 3-hour target) and is generally less disruptive and safer than open cut.

Although lining has been used over several AMP periods the full benefits are yet to be realized and new technologies such as UV curing and Sanivar UK's SaniTube pull through liner are game changing options that provide greater flexibility and efficiency than traditional CIPP systems that involve lengthy curing times and extensive pipe preparation.

SaniTube is a pressure pipelining system suitable for operating pressures up to 24 bar. The flexible liner is winched through the existing pipe and then inflated with compressed air and held under pressure through bespoke end couplings. The liner has many benefits over conventional CIPP systems:

- Non cure methodology that maximises install efficiency and reduces costs associated with length cured systems
- Flexibility, with wall thicknesses of <5mm allowing for navigation of bends
- K efficiency (0.007) improving flow rates
- Condition tolerances, requires minimal pipe preparation and cleaning
- Rapid and efficient install at 6m per minute

The liner has already been used across Europe for 20 + years on water, sewage and gas networks. To date adoption in the UK has been restricted to use on Wastewater networks with Rising Mains being a key area of interest. Regulatory barriers and the inability of DWI to agree



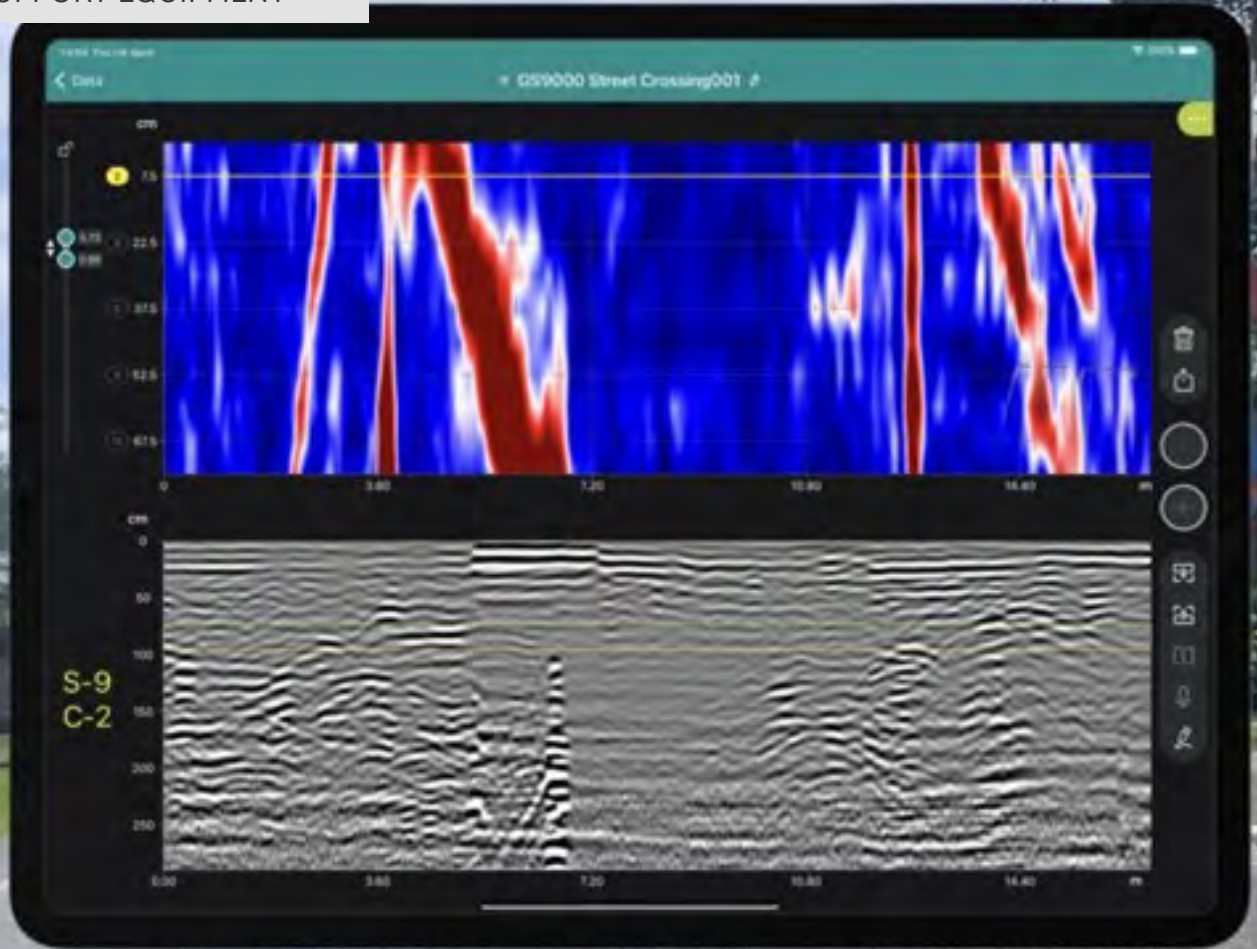
or provide a testing facility for this and other innovative technologies to achieve Reg 31 status enabling use on potable networks means that key outputs relating to water leakage cannot currently be addressed in UK.

It is ironic and disappointing that solutions that directly address the need for change are blocked by bureaucracy and regulatory incompetence. Perhaps more worrying is Labour's promise to empower OFWAT to hold Water Companies to account for pollution incidents. Financial penalties only place further constraints on refurbishment budgets and act as a red flag for institutional investors, factors that alongside ageing infrastructure will inevitably lead to more asset failures unless new techniques are adopted.

SaniTube offers a great solution for Rising Main refurbishments in AMP8, and it is hoped that it will be adopted as BAU on reactive programmes that deliver sustainable and cost effective solutions rather than the current practices of patching up networks on a reactive basis. Fitting a repair clamp is an admission of failure but exposing a main does provide an opportunity to assess condition and develop a proactive response that minimizes disruption and future proofs networks at a proportionally lower cost.

UKSTT Member





Exciting new advancements in live utility detection

Gorka Santamaria, Senior Product Manager Geomatics at Screening Eagle Technologies, discusses the latest developments in GPR and the benefits they deliver.

Utility surveys with Ground Penetrating Radar (GPR) have played a crucial role in construction over the past three decades. The technology delivers a non-invasive way to detect utilities like carrier pipes and lateral connections, making it a valuable tool onsite. The development in GPR has advanced significantly over the past few years, bringing exciting new capabilities for trenchless applications.

Thankfully, recent advancements in GPR have eliminated some of the biggest

challenges and limitations of the technology. For example, when using conventional GPRs, engineers needed to manage the famous “trade-off” between data resolution and scanning depth. This adds extra pressure to choose the appropriate antenna frequency for the best chance of a successful investigation. The data results then often required hours of post-processing and expert level GPR skills to interpret.

This common trade-off became obsolete with the use of Stepped Frequency GPR, making

it possible to scan with several frequencies using just one antenna. Interpreting the results also became faster and easier with visualisation of the data on an iPad.

Now, the most recent developments in multichannel GPR are taking things to a whole new level for utility detection in trenchless construction. Yet, while the technology is becoming more advanced, the way we use it is becoming much simpler. >





Reliable, real-time data

Utility mapping is essential for many areas of trenchless construction including successful pipe bursting or replacement projects. Utility maps act as guidance to make sure the new pipe follows the exact path of the existing one, without damaging surrounding utilities. This is why it is critical to achieve accurate and real-time results from the GPR survey.

The latest multichannel GPR delivers a highly dense data set compared with conventional single channel GPR. Simply walk with the GPR unit and you will start creating a 3D map of the underground. Paired with precise GNSS corrections, the map results are accurately georeferenced to the exact location, and the data can be visualised in 100% real-time. This makes it easier than ever to see what lies below the ground, and suitable for field technicians without a vast experience in the usage of GPR.

Significant savings

Efficiency on the job site, doesn't just equate to potential time and money saved for the team and stakeholders, it can also reduce greenhouse

gas emissions of every project. Using high resolution subsurface imaging from the latest multichannel GPR like the GS9000, it is possible to plan the most efficient excavation path.

An optimised excavation plan can minimise the length or depth of excavation and lower the amount of waste that needs to be transported, thus reducing the emissions associated with its removal.

Streamlined projects

From damage prevention and excavation path planning, to assessing the condition of existing buried pipes for CIPP rehabilitation, modern multichannel GPR now makes utility detection more efficient from start to finish.

With traditional single channel GPR, the process often looks like this:

- Collect data in the field
- Use specialised software at the office to post-process the data
- Use complex algorithms to remove noise, enhance signals and create understandable visualisations
- Analyse the post-processed visualisations

- Generate a report and share

With multichannel GPR like the GS9000, the process looks like this:

- Collect, analyse and share data in the field

It really is that simple. With no waiting time and no guesswork, projects become much more streamlined. The real-time insights help to avoid unnecessary costs and enable faster decision making.

Instead of only dedicated specialists being able to use the GPR and interpret the data, the latest system makes it possible for the whole team to collect valuable data with ease. The intuitive iPad Pro software enables even the most complex data sets to be viewed in an understandable way. All results and reports can be sent to colleagues in just a click.

Adopting new utility mapping technologies like multichannel GPR can seem daunting, but with the learning curve getting shorter, the benefits of the technology for trenchless applications are becoming undeniable. The long-term returns in terms of cost savings, increased project success, and reduced risks make it a wise investment.

As the technology continues to mature, we can expect to see even more incredible advancements in the years to come. But along with the increase in demand for trenchless construction, comes the increase in demand for simplicity in the field. Ultimately, multichannel GPR is proving that complex challenges don't always require complex solutions.

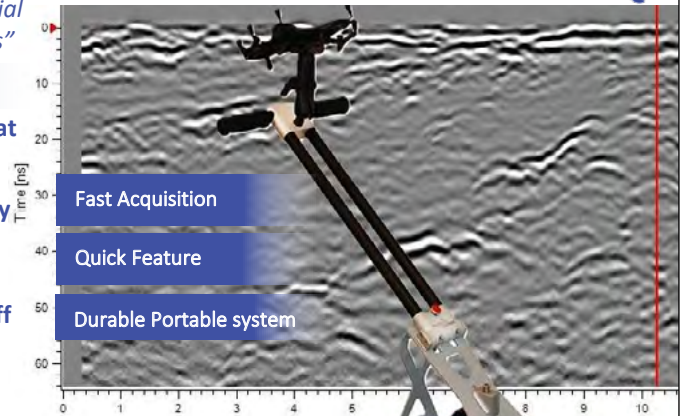
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Training: Its important role in promoting trenchless technology

By Frank Reilly - JBP Trenchless Training Director



Frank Reilly
Director JBP's Trenchless,
Training Programme

In the evolving landscape of infrastructure maintenance, trenchless technology has emerged as a game-changer. It provides efficient, cost-effective, and less disruptive solutions for maintaining and rehabilitating water and wastewater pipelines. However, the widespread adoption of trenchless methods is contingent upon one critical factor: training. Appropriate training is essential to equip professionals with the skills and knowledge required to make informed choices and decisions and to implement trenchless techniques effectively, thereby promoting their use across the sector.

Building Competency and Confidence

One of the primary benefits of trenchless technology training is that it develops industry professionals' competencies. The intricate nature of

trenchless methods—ranging from horizontal directional drilling (HDD) to cured-in-place pipe (CIPP) lining—requires a deep understanding of both the technology and the practical challenges encountered during projects. Comprehensive training programmes should provide a combination of hands-on experience and theoretical knowledge, enabling operators, engineers, and contractors to gain the confidence needed to undertake complex projects.

When professionals are well-trained, they can execute projects more efficiently, with fewer errors and less downtime. This proficiency not only enhances the reputation of trenchless methods but also encourages more companies and municipalities to consider these solutions for their infrastructure needs.

This was a significant driving factor behind JBP's launch of its Trenchless Training programme back in 2015, which at that time primarily focused on sewer condition assessment and the use of CIPP rehabilitation

methods. Without the training courses delivered in Malaysia in 2015 and in subsequent years to build know-how and competencies, the adoption of CIPP as an effective and beneficial rehabilitation method would almost certainly not have progressed at the pace it has.

Elevating industry standards

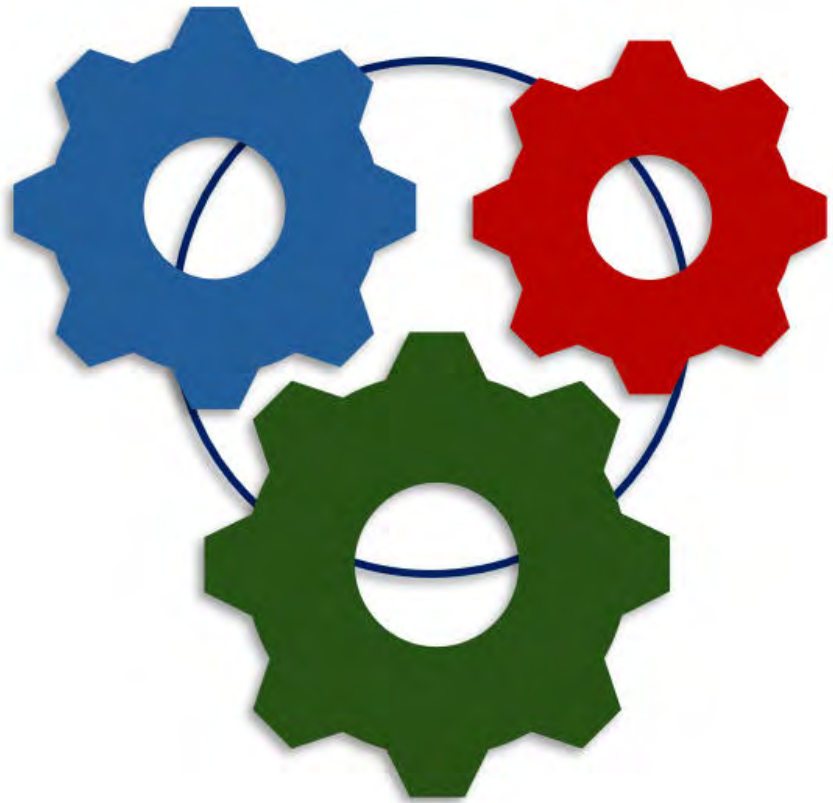
Training is also instrumental in establishing and maintaining high standards across the trenchless technology industry. Given the complexity of trenchless methods—such as microtunneling, pipe bursting, and CIPP lining—industry-wide standards ensure consistency, quality, and reliability in project outcomes. Comprehensive training programmes designed to align with these standards and equip professionals with the necessary skills to meet rigorous industry benchmarks will enhance the credibility and trust in the advanced trenchless methods and technologies being used. By adhering to standardized procedures and best practices learned through training, the trenchless industry



can deliver projects that consistently meet or exceed expectations, which in turn will promote broader adoption of trenchless technologies and long-term success in infrastructure maintenance and rehabilitation.

Driving innovation and adoption

Training plays a crucial role in driving innovation within the trenchless industry. As new technologies and techniques emerge, ongoing education ensures that professionals remain up-to-date with the latest advancements. This continuous learning not only enhances individual skill sets but also promotes the broader adoption of new and innovative solutions. Companies and organizations can stay ahead of the curve by investing in training and offering their clients the most efficient and effective solutions available.



Promoting industry growth and awareness

Awareness and education directly contribute to the growth of the trenchless industry. Training programmes serve as a powerful tool for raising awareness about the benefits of trenchless methods, both directly and indirectly, among a broader audience. When this wider audience understands the cost savings, environmental benefits, and reduced disruption offered by trenchless technology, they are more likely to support its implementation.

Moreover, training initiatives often lead to certifications that validate the expertise of professionals in the field. These credentials can enhance the credibility of trenchless solutions, making them more appealing to potential clients and fostering trust in the technology.

A cornerstone of its growth and success

Training is not just a supplementary aspect of the trenchless industry; it is, I would suggest, a cornerstone of its growth and success. By building competency, enhancing safety, driving innovation, and promoting awareness, training programmes play an indispensable role in the advancement and acceptance of trenchless technology. As the industry continues to evolve, the importance of robust and comprehensive training will only become more pronounced, ensuring that trenchless methods remain at the forefront of infrastructure maintenance and rehabilitation.

In the next issue: Ramping up for AMP8 – skilling up to meet future challenges.

www.trenchless.training



Manila hosts largest Trenchless Asia ever staged

Trenchless Asia is rapidly becoming the world's fastest growing trenchless technology event

Visitors to last month's Trenchless Asia event in Manila were rewarded with news of several new large-scale pipelaying and rehabilitation projects together with updates on some of the region's biggest and most high-profile water and sewerage projects.

Maynilad Water, a major provider responsible for maintaining and operating over 600km of sewer lines, took the opportunity to brief delegates on the 27.5km Laguna Lake (and the Laguna Lake Road Network) crossing as well as construction of its 23km CAMANA Conveyance System. Detailed updates were also given on several Manila

Water sewerage projects which comprise over 122km of trenchless methodology.

The event kicked off with a brilliantly well attended opening ceremony with representatives from several key players in the Philippines utilities sector including Metropolitan Waterworks & Sewerage System (MWSS) and Maynilad Water Systems, Inc. Following a warm welcome from Mr Peter Eric Pardo, Chief of Staff, Office of the Mayor of Pasay City the floor was handed over to Mr. Reynaldo Faustino, Director IV, Bureau of Research and Standards, Department of Public Works and Highways (DPWH) who delivered

a highly engaging keynote. His presentation emphasised the scale and scope of utilities investment in the region and the vital role trenchless technologies have to play in minimising its impact on residents, businesses and the environment.

Throughout the event the appetite for information and knowledge was clear with over 650 people attending the plenary sessions which detailed the latest trenchless innovations and their application across Asia and around the world. Over the two days a lot of emphasis was placed on enabling exhibitors, visitors and delegates to network and build relationships. Nowhere



was this more evident than in the superbly well attended drinks reception at the end of the first day.

Commenting on the success of the event, Westrade's managing director, Paul Harwood said: "It was amazing to see so many of the region's asset holders and utilities providers together in one location and even more exciting to witness their desire to increase the use of trenchless technologies and leverage the associated commercial, environmental and social benefits.

I'd also like to take this opportunity to personally thank

our Platinum Sponsors Digital Control, Drillto, PipeSolution Inc, USAE, Vermeer and XCGM. Without their support, the event would not have been possible. Thanks also to everyone who exhibited, visited or supported the event in any way. I look forward to seeing you all again next year when we return to the beautiful city of Kuala Lumpur."

It has also now been announced that Trenchless Asia 2026 will be taking place in the vibrant Thai capital, Bangkok. This is bound to be another extremely popular location and more details will be made available in due course.



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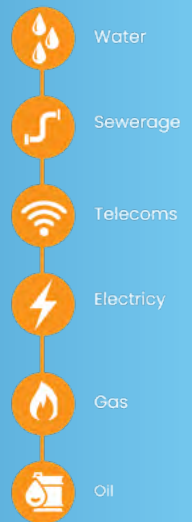


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UKSTT Annual Awards Dinner 2024

Join us for the annual UKSTT Awards Dinner at No-Dig Live on the evening of Wednesday 2 October 2024 in partnership with Westrade Group Ltd.

CLICK TO BOOK TICKETS NOW

Venue: Hall 1, NAEC Stoneleigh Park CV8 2LZ
 Dress Code: Black Tie with an 80's twist
 Date: Wednesday 02 October
 Time: 7.00pm till late
 Tickets: Member Standard Rate £240 + VAT
 Non Member Standard Rate £250 + VAT

On arrival, guests will enjoy an 80's style drinks reception before sitting down to enjoy a fantastic 3 course meal. The event will showcase and recognise this year's best performing and most innovative trenchless technologies.

Why not sponsor one of our awards or have the chance to raise a toast to our guests at the drinks reception! We also have the opportunity for one table to host our guest speaker The Rev Richard Coles. For further details about our sponsorship opportunities, please contact Trevor Dorrell on tdorrell@westrade.co.uk or +44(0)1923 723 990



Further details are available -

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SOCIETY

Society News brought to members by Trenchless Works
ukstt.org.uk



Ian Ramsay, Chair, UKSTT

A message from the Chair

Well as the year progresses at least we have had some reasonable weather or should I say reduced rainfall. This will give temporary relief to the network, but considering the bigger picture the whole lack of investment within the water and waste water networks are not going away. There is a new Government and with all their other issues, the waste water networks don't seem to be high on their list of priorities. OFWAT seem keen on fines due to pollution issues and highlighting the issues with lack of investment. Not sure yet of the timescales but there are a lot of rumblings.

We at UKSTT, along with the NADC feel very strongly about this and are discussing making a presentation/lobbying to Government flagging up and discussing in more depth the lack of investment and the technologies, skills existing giving long term economic advantages and long-term cost savings. This is in the planning stages, and we have reviews in August. Watch this space. Interestingly the Water Quality in Paris is also being questioned and races during the Olympics have been delayed because of this. Not only does this show that other countries have an issue, but their investment in infrastructure and innovation is questionable. It is only when it effects day to day that the out of sight out of mind mentality changes.

Another passion of mine is to support young and new industry engineers. A lot of us in the past have had mentors who supported us and guided us through our careers. It is essential to ignite the passion, fuel innovation and people who care and make a difference. The UKSTT, through our Technical & Education committee, Iain Naismith and Silvana Alfieri are setting up a program to provide a platform for new to the trenchless industry. It will be launched at No-Dig Live, and you will see further details in the weeks to come. This program will support and help anyone new to the industry, get a better insight into the technologies, systems and hurdles with the aim of growth and engagement. I think this has been lacking in the past and to have a definitive program with structure will be a massive benefit for the industry, please keep your eyes open for information and if you would also like to support or get involved, make sure you come to No-Dig Live and contact the UKSTT for details.

We are all keen to celebrate everything and everyone in our industry at the UKSTT Gala Dinner and Awards Ceremony on the 2 October during No-Dig Live 2024. We'd love to see you there. Thank you to all who entered and good luck to all the finalists.

Ian Ramsay, Chair, UKSTT

Jo Parker receives the UKSTT's Trenchless woman of the year award

UKSTT interviews Jo Parker about her career and work in trenchless technology



1. What does it feel like to be recognised for what, for those of us that know you, has been a significant part of your working life?

It's just amazing, especially as, being realistic, I am nearer the end of my work than the beginning!!

2. What does the Award mean to you personally, and to your family?

For me it's very special as I've always felt passionately that trenchless solutions should always be the preference. It's a shame my Dad isn't here to see this as he was the one who first suggested civil engineering to me as a career and my parents were always very supportive. I must also give a mention for my husband Neil who is also unfailingly supportive as well – and does enjoy a chance to travel to some of the No-Dig International events!

3. What was your background and experience originally and what brought you into the trenchless industry?

I studied Civil Engineering at Leeds University and went straight into the water industry after I graduated as it was just after the first reorganisation of the industry with a huge workload so very exciting.

I really became interested in trenchless when I was made Head of Network Asset Management at what is now Affinity as avoiding digging up the road seemed the sensible thing to do.

4. What has been your most challenging trenchless experience over those years?

Managing the Section 19 renovation programme was very challenging as everything needed to run on time as there were strict requirements about the notice you had to give customers. The other challenge was relining a trunk main in Harrow Wealdstone. By choosing to reline it did mean we had to take one of the twin mains out of service completely which meant very careful risk assessment, but we completed the project at a fraction of the cost of open cut and with considerably less disruption.



5. Can you detail your specific actions or activities related to the advancement of trenchless technology during your career?

I've always been interested in the issue of buried asset records as accurate records are essential to be able to choose the most appropriate trenchless technique. I was pleased to establish a trade body for buried asset surveyors which made a substantial contribution to PAS 128 and after much pushing and several false starts we have a National Underground Asset register which still uses some of the approaches developed in a research project I managed 20 years ago!

6. What do you see as being your own greatest personal achievement in the trenchless industry?

I think the work of raising the profile of repairs in the water industry and getting people interested in the concept of low dig or no dig repairs. We now have techniques coming through and some major research projects which I'd like to think was partly down to me nagging people and presenting at leakage conferences!

7. Have you any now or when you started in trenchless, did you have any role models in the industry?

I don't know about 'role models' but I have had some wonderfully supportive people in the industry. I was very lucky to get to know Ted Flaxman way before I got interested in Trenchless Technology. John Heavens was incredibly supportive when I started up as an independent consultant and Norman Howell has been and still is incredibly supportive. I still miss Ted and John.



8. What do you currently see as the UK's and the industry's most urgent challenges and where do you hope to see the trenchless industry in the next 10 to 20 years?

The UK's challenge is to restore the huge network of water and sewage pipes in this country to a proper working order and to recruit the staff to do that. So much expertise has been lost over the past few decades and we need to restore the trenchless industry in water to where it was 20 years ago. I'd like to see much more use of robotics. I hope in 20 years that youngsters will see the industry as something they want to join

because of its progressive and hi-tech image.

I think one of the good things I've seen recently is that people now recognise the strong link between trenchless and sustainable construction so I hope this will promote the use of trenchless techniques. I also hope that the diversity in the industry will improve – women are starting to be more visible and that's what's so great about this award – it all helps - but there's a long way to go and still a lot of work to do for other less well represented groups. We can't afford to ignore pools of talent wherever they are.





CHARITIES

UKSTT are proud to be supporting two Charities at this year's Gala Dinner & Awards Ceremony



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The MND Association focuses on improving access to care, research and campaigning for those people living with or affected by MND in England, Wales and Northern Ireland.

<https://www.mndassociation.org>

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2024



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Featuring the UKSTT Annual Dinner & Awards Ceremony
1-3 October 2024
 NAEC Stoneleigh Park, Warwickshire
www.nodiglive.co.uk



TRENCHLESS MIDDLE EAST 2024

5-6 November 2024
 Jumeirah Beach Hotel, Dubai
www.trenchlessmiddleeast.com



TRENCHLESS ASIA 2025

21-22 May 2025
 KL Convention Centre, Kuala Lumpur, Malaysia



NO-DIG ROADSHOW SERIES 2025



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NO-DIG LIVE 2026

29th September – 1st October 2026
 NAEC Stoneleigh Park, Warwickshire



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International Society
For Trenchless Technology

SOCIETY NEWS

ISTT News brought to members by Trenchless Works

A message from the Chair



Keh-Jian (Albert) Shou,
Chairman, ISTT

Dear ISTT members

I wish you have a good time in your summer/winter break. You may be aware that we have many national, regional, international No-Dig events early this year, and will have more in the following few months, so please do not forget to check the ISTT event calendar in the ISTT website. As you may remember, since late last year, I have attended the No-Dig events in Berlin, Jinan(China), Changsha(China), and Paris. Other good news is that we will soon have the 1st No-Dig Asia Pacific, to be held in Hong Kong 31 October to 1 November, an Asian regional event with technical conference and exhibition.

It is worth noting that the bi-lateral and multi-lateral cooperation between European societies and between Asian societies help a lot in developing new technologies and good business. Through the regional events, like 2023 Trenchless Latin America, 2023/2024 European No-Dig, 2023/2024 No-Dig Turkey, and the 2024 ITTC, the organizing societies successfully attracted the spotlight by integrating the governing sector, consultants, contractors, suppliers in trenchless business, also created more cooperation between the affiliated societies in their region. Obviously, the demands and challenges in different regions also create different good opportunities. I strongly suggest you consider

to attend the regional No-Dig conferences as it will be the major trend in the next few years.

I would like to remind you that we will hold our International Council Meeting and deliver the ISTT awards during Trenchless Middle East in Dubai. Before that, we will hold our online Trustee meeting in early September. In addition, we will soon have more new ISTT educational webinars, the coming one is "The Role of Emerging Technologies in Realizing Smart Buried Infrastructure" by Prof. Kenichi Soga of UC Berkley, on 4 September 2024, 14:00 GMT. I believe his talk will show us the advances of technologies that will be change our industry. Please do not forget to check the notice and register in ISTT website. On the other hand, please kindly be patient about our website as it is now under an overhaul process, and will open to the members in late Oct. In addition, we have updated our newsletter, I hope that you will like it. ISTT keeps improve our services to our affiliated societies, please feel free to give us your precious comments or suggestions.

With My Best Wishes!

Keh-Jian (Albert) Shou
Chair, ISTT

ISTT commits to new ISTT Website

By Trevor Gosatti, ISTT Executive Director



At a recent Board meeting the ISTT Board committed to develop a new website for the ISTT. The ISTT has engaged EventMagix, based in Turkey to complete the development of the new website and an advanced database to complement the website and its services.

The new website will contain many new features for the Affiliated Societies and their members, hopefully providing many more opportunities to promote trenchless technologies around the world. Some of the new features include:

- A corporate booth facility for existing corporate members where the entity's products and services can be displayed via video, brochures and WhatsApp.
- The ability to "upgrade" the basic corporate booth to a higher level virtual corporate booth providing the corporate entity to promote its goods and services to a global audience. The additional features include video, brochures, presentations, business cards, WhatsApp and other media.
- The website will have enhanced "Charts & Description" pages highlighting the benefits of trenchless technologies to industry.
- Enhanced pages providing past conference papers, etc will be provided.
- A next level database facility will assist Affiliate Societies to have member data included and allow members in the database to access all the features of the ISTT website.
- It is planned for a Single Sign On (SSO) for the member login process.
- The database will allow a more improved search function for corporates and the goods and services they offer to industry.

Work on the website is underway and planned to be ready for posting at the end of October 2024.

Trenchless Middle East 2024

By Trevor Gosatti, ISTT Executive Director

Trenchless Middle East 2024 will be a two-day Conference and Exhibition held at the Jumeirah Beach Hotel Dubai, UAE on the 5-6 November 2024.

Trenchless Middle East 2024 (TME) is an ISTT supported event that is extremely important for the region. It will contain an exhibition of trenchless industry products and services in the exhibition hall. The event will also have

a conference program where the stakeholders exhibiting can present their products and services to conference attendees.

The ISTT is planning a number of events around TME and encourages the ISTT Affiliate Societies and their members to take the opportunity to attend TME and be involved in the ISTT Events. The planned events are:

- The ISTT International Council Meeting to be held on the 4th November 2024.
- The ISTT Chair's Reception incorporating the ISTT Awards
- ISTT Website Training
- ISTT Strategic Planning session



New approaches to the life cycle management of wastewater infrastructure



ISTT Webinar

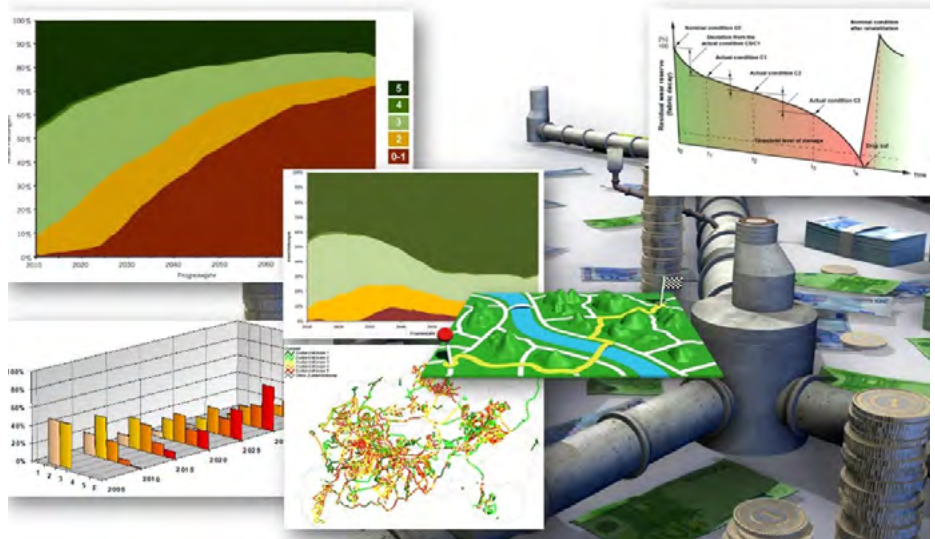
Category: Asset Management

Presenter: Dr.-Ing. Robert Stein

Organisation: Stein & Partner GmbH/STEIN Ingenieure GmbH, Germany

Date: 18 November 2024

Time: 4:00 GMT, 09:00 US EST, 15:00 CEST



Over the past 18 years, there has been a paradigm shift in the asset management of urban drainage systems in Germany. It was realized that the technical and financial data used for asset management was insufficient for developing efficient investment and rehabilitation strategies to maintain the value of urban drainage systems. Specifically, there were quality deficits in technical data related to damage and condition assessments and in financial data related to book values and remaining book values.

The webinar introduces a new approach to asset management that allows for a differentiated economic analysis to develop efficient, demand-specific rehabilitation and investment strategies. By fully assessing the economic impact of rehabilitation strategies, this approach facilitates consensus among all technical, financial, and political stakeholders involved in the decision-making process.

About Dr.-Ing. Robert Stein

Dr.-Ing. Robert Stein is the Managing Associate of Prof. Dr.-Ing. Stein & Partner GmbH and Managing Director of STEIN Infrastructure Management GmbH. His business activities include the provision of integrated services in the areas of municipal finances, fees and investments. He and his team develop, optimize and implement integral asset management concepts, methods and systems and their monitoring for municipal infrastructure systems. So far, he has helped more than 40 municipalities to administer and manage their water and wastewater infrastructure systems. The total replacement value of these systems is estimated at 80 billion €.

Since 1995, he has published more than 100 publications,

reports, expertise, and feasibility studies. He is the author of the reference book "Wertermittlung von Abwassernetzen (Asset Valuation of Sewer Networks)," Trenchless Technology for Installation of Cables and Pipelines – 2nd Volume: Horizontal Directional Drilling (HDD), of the chapter on pipe jacking works (ATV DIN 18319) and co-author of the 4th edition of the international bestseller "Instandhaltung von Kanalisationen" (Rehabilitation of Drain and Sewer Systems) as well as of various technical articles.

[Register here](#)

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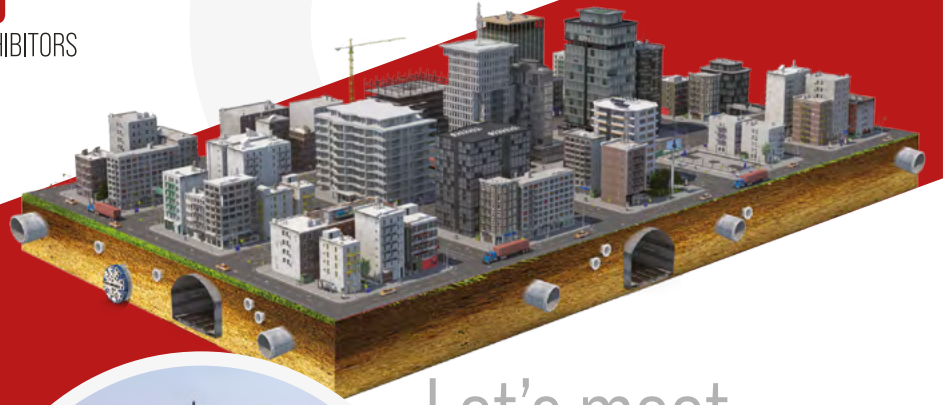
Theme: **Earthquake Resilient
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Cevdet Yılmaz, Deputy President of Türkiye, 05 February 2024

Figures from 2023 Event

1405 PARTICIPANTS
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39 EXHIBITORS
26 NATIONAL COMPANIES
13 INTERNATIONAL COMPANIES



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Green, smart & trenchless | The future of infrastructure

Event details: Kitzmantelfabrik in Vorchdorf in Austria
October 17, 2024

grabenlos.2024
Fachkonferenz der ÖGL



A compact day with expert lectures, practical examples, and networking. For those arriving the day before, there will be a get-together on the eve at the Kitzmantelfabrik.

Trenchless 2024 is the annual expert conference of the Austrian industry platform ÖGL (Austrian Association for Trenchless Pipeline Construction). Meet experts from the trenchless construction industry, representatives from the public

sector and municipalities, experts from the supply industry, and civil engineers. As special guests, we also expect the industry's next generation this year, in the form of engineering students, technical high school students, and young professionals.

Trenchless 2024 offers all participants a day filled with expert lectures on theory and practice focusing on green, smart & trenchless. In addition to the lectures, the trade exhibition provides a compact

overview of innovations in process technologies and materials surrounding the future of urban infrastructure.

www.grabenlos.at

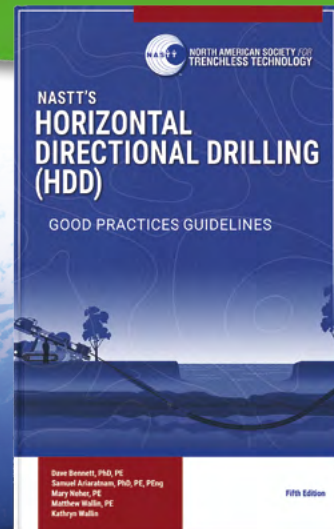
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NASTT UPCOMING EVENTS

September 4

FREE HDD Webinar Presented by Kimley-Horn
Virtual

September 18-19

HDD Good Practices
Virtual

October 15-16

Western Regional No-Dig Conference
Pomona, California, USA

October 23-24

Southeast Regional Conference
Atlanta, Georgia, USA

October 28-30

No-Dig North 2024
Niagara Falls, Ontario, Canada

November 11-12

8th Annual Northeast Regional Chapter
Conference
Sturbridge, Massachusetts, USA

November 13-14

CIPP Good Practices
Virtual

November 14

RMNASTT Trenchless Elevated 2024
Sandy, Utah, USA

December 12

Gas Good Practices
Virtual

March 30 – April 3, 2025

NASTT 2025 No-Dig Show
Denver, Colorado, USA

October 27-30, 2025

NASTT 2025 No-Dig North & ISTT International
No-Dig
Vancouver, British Columbia, Canada

March 29 - April 2, 2026

NASTT 2026 No-Dig Show
Palm Springs, California, USA

For more information and the latest course offerings, visit <https://nastt.org/training/upcoming-events/>



The background of the advertisement is a photograph of a construction site at dusk. In the foreground, there is a large, dark pile of earth or sand. In the middle ground, several large, cylindrical rebar cages are stacked, made of a complex network of steel reinforcement bars. The sky is a mix of blue and orange, suggesting the time is either dawn or dusk. The overall scene is industrial and focused on construction.

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Web: www.ukstt.org.uk

EVENTS AND MEETINGS

2025

2024

September 17–18 CzSTT Conference and Exhibition on Trenchless Technology

Hotel Palcát, 9.května 2471, Tábor, South Bohemia,
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October 1-3 No-Dig Live 2024:

Featuring the UKSTT Annual Dinner & Awards Ceremony
NAEC Stoneleigh Park, Warwickshire
www.nodiglive.co.uk

October 17 Grabenlos 2024 in Austria:

Kitzantelfabrik in Vorchdorf, Vorchdorf, Austria
www.grabenlos.at/de/grabenlos-2024.html

October 23-24 No-Dig Turkiye 2024:

Featuring 8th Water Loss Forum
WOW Istanbul Hotel and Convention Center
www.nodigturkey.com

October 31-November 1 First No-Dig Asia Pacific International Conference & Exhibition 2024:

Chiang Chen Studio Theatre, The Hong Kong Polytechnic University
Email: CHKSTT24@nhetravel.com

November 5-6 Trenchless Middle East 2024:

Jumeirah Beach Hotel, Dubai
www.trenchlessmiddleeast.com

November 28-29 First Ecuadorian Congress of Trenchless Technology:

Convention Center - Hotel La Quinta by Wyndham
Quito, Ecuador
Email: dir.ejecutiva@lamstt.org
https://1ercongresoecuadorianotsz2024.lamstt.org/en/

January 11-12 Italia NO DIG Live 2025:

Parco Esposizioni Novegro (Segrate - Milan)
Email: iatt@iatt.info
www.iatt.it/en/home-page/

February 5-6 The Finnish No-Dig Conference 2025:

Vanajanlinna, Hämeenlinna, Finland
Email: info@fistt.fi
https://fistt.fi/save-the-date-5-6-2-2025-fistt-kansallinen-vuosikonferenssi-2025/

April 23-25, 28th International Trenchless Technology Conference:

Suzhou International Expo Center, China
www.cstt.org.cn/

May 21-22 Trenchless Asia 2025:

Kuala Lumpur Convention Centre, Malaysia

October 2 No-Dig Roadshow and UKSTT Awards:

Location to be confirmed
www.nodigroadshows.co.uk

October 27-29 International No-Dig 2025:

Vancouver Convention Center
Email: info@istt.com

November 5- 6 No-Dig Turkey 2025 Conference and Exhibition:

WOW Convention Center
Email: ytorun@akated.com
www.nodigturkey.com

Autumn 2025 Trenchless Middle East 2025:

Kingdom of Saudi Arabia

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