


# TRENCHLESSWORKS

THE VOICE OF THE TRENCHLESS COMMUNITY

Official Magazine  
& Media Partner:  **UKSTT**

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Official Publication of the International Society for Trenchless Technology  **ISTT**



## ‘PIPER’ COMPLETES OUTFALL PROJECT

ROBBINS ENTERS A NEW CHAPTER  
NEW GENERATION SHORTER GRUNDOMAT  
PERMA-LINER INDUSTRIES ANNOUNCES THE  
NEW UV LIGHTRAY LR3

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## Beyond the Ordinary



## SPOTLIGHT



UKSTT



# UKSTT AND WESTRADE ANNOUNCE EVENTS PARTNERSHIP

Westrade is pleased to announce its appointment as the UKSTT's exclusive events partner. The agreement, which covers both digital and live events, will see Westrade provide operational, logistical and promotional support to the UKSTT with the Society retaining control of the events' programme development and content.

Commenting on the partnership Dawn Greig Chair of UKSTT said: "Having worked closely with Westrade on a number of events over the years, we are delighted to now formalise our marketing and media partnership. Our natural symbiosis and combined history within the industry makes this an exciting advance in the education and promotion of Trenchless Technologies within the UK. We have already set up regular team meetings and are developing an exciting new strategy to reach our Trenchless goals together."

"The Westrade team is excited to have been chosen to support the UKSTT's ambitious and pioneering events programme" added Westrade's Managing Director, Paul Harwood. "Our organisations' combined experience and expertise, underpinned by a proven track record of working together, is certain to deliver outstanding digital and live events for the UK's trenchless community."

Work on the 2021 calendar is already well underway and kicks off on the 2 June with an ever-popular UKSTT Masterclass at the National Motorcycle Museum in Birmingham. This will be closely followed by one of the social and networking highlights of the year, the UKSTT Gala Dinner and Awards, which is scheduled to take place on 16th June at the East of England Arena and run in conjunction with No-Dig Live 2021.

Planning is also well underway for a series of world-class digital events. These will combine a mixture of online formats and platforms including client webinars, Trenchless Tea Breaks, Trenchless in the Field and mini-masterclass sessions. Watch this space for details of two Tea Break events coming up in March.

The event partnership follows the recent news that Trenchless Works published by Westrade, in association with NoDig Media Services, has been appointed as the as the official magazine and media partner of the UKSTT.

## STOP PRESS

Great news – Trenchless Works has just been confirmed as the new Official Publication of the International Society for Trenchless Technology (ISTT) – more details will follow in the March issue.

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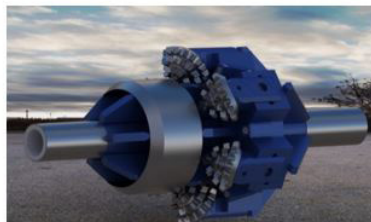


SlimDril are now collaborating with Hunting Trenchless US as the sole distributor of Drill Pipe and associated products within UK and EIRE.

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## What's new.....?



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## Welcome to the team....

Joining us with over 15 years experience in the HDD industry, from Steering Engineer, to Project Management and also a BSc in Civil Engineering and Environmental Management, Gwyndaf Jones joins us as Sales and Technical Support Manager, completing the Operations Department here in Lowestoft. We are delighted to have Gwyndaf on board and with his knowledge and capabilities, feel more confident than ever that we can continue supporting all of our customers globally in Guidance Services, Products & Tooling. You can contact Gwyndaf on [gjones@slimdril.com](mailto:gjones@slimdril.com).



Our LinkedIn page is now up & running with lots of news and updates on projects and special offers. Please visit the SlimDril page and help us reach 1000 followers!

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# 'PIPER' COMPLETES OUTFALL PROJECT



McConnell Dowell recently announced that 'Piper', the microtunnel boring machine (MTBM) and the team have completed tunnelling on the West Coast of New Zealand's South Island for the Westland Milk Products Marine Outfall project.

Piper was fresh from another McConnell Dowell tunnelling project (the Snells Algies Ocean Outfall project) in the North Island, where the team set a new world record of 2,021 m for the longest single drive by a Direct Pipe® MTBM earlier this year.

The project team used this world leading experience, completing the 845 m of tunnelling, and installing the 832 m steel outer casing for the wastewater pipeline in just over one month, two weeks ahead of the construction programme.

The Direct Pipe® tunnelling method was chosen to mitigate the impact of work on the delicate coastal ecosystem. The scope of the works included:

- Constructing a 60 m long, 6 m wide and 7.5 m deep sheet piled MTBM launch trench.
- Completing an 845 m microtunnel Direct Pipe® drive.
- Installing 832 m of steel casing pipe through the Direct Pipe® thrusting technique that remains buried and submerged at the seaward end.

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The Direct Pipe MTBM with the construction crew

"This project will be the first ocean outfall on the West Coast of the South Island and will provide a new ocean discharge point for the treated wastewater from the Westland Milk Products facility."

- Slip-lining installation of an HDPE carrier pipeline into the steel casing pipe.
- An ocean recovery of the MTBM followed by installation of the marine diffuser.
- Construction of an onshore de-aeration chamber and carrier pipe connections.

To retrieve the MTBM, specialist excavation equipment, sourced from Malaysia, was to be used to expose Piper under the seabed. A dive team would then disconnect Piper and tow her to Greymouth Port where she would be lifted from the water.

Once complete this project will be the first ocean outfall on the West Coast of the South Island and will provide a new ocean discharge point for the treated wastewater from the Westland Milk Products facility. Final marine operations are expected to be completed in early 2021.

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# KEVIN SMITH NAMED GENERAL MANAGER OF DITCH WITCH® DIVISION



Kevin Smith, General Manager,  
Ditch Witch Division of The  
Toro Company

A familiar face within Ditch Witch is taking over the helm of the organisation. Kevin Smith has been named General Manager of the recently formed Ditch Witch Division of The Toro Company. Smith is tasked with bringing the businesses of Ditch Witch, Subsite Electronics, American Augers and Trenchor, into one organisation. The products of which will be sold primarily through the worldwide Ditch Witch dealer network.

Dennis Wierzbicki, the previous president of Ditch Witch, has retired and Smith is excited to lead the expanded Ditch Witch Division into the future.

"Ditch Witch and Subsite customers have long enjoyed the localised service and support from their local Ditch Witch dealerships," said Smith. "Those same market-leading benefits from our dealers will now be extended to current and new American Augers and Trenchor customers around the world at one of our more than 175 dealer locations."

Smith has a proven track record in the underground construction industry. He spent 20 years in the Ditch Witch organisation gaining experience in manufacturing, product development, research and development, sales, market development, product management and in direct sales with the dealer organisation. From there, Smith served as president of MTI® Equipment for seven >

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“Each brand has unique, differentiating qualities, and we will leverage our talent and expertise in key market segments, and work closely with our Ditch Witch dealers to deliver an unparalleled, customer experience every day.”

years, where he expanded the brand's presence in the used HDD equipment segment. In 2015, he began leading the Subsite Electronics and HammerHead® businesses, where his leadership was instrumental in driving profitable growth, for both brands, and in developing HammerHead's repair and rehabilitation strategy for the underground utility markets.

“I look forward to leading the Ditch Witch Division and bringing these four brands together as one strong organisation. Each brand has unique, differentiating qualities, and we will leverage our talent and expertise in key market segments, and work closely with our Ditch Witch dealers to deliver an unparalleled, customer experience every day.” Smith said.

Smith is a respected member of the community, currently serving on the board of Harper Industries (in Harper, Kansas), as well as ‘the Association of Equipment Manufacturers 2050 Infrastructure Taskforce’. He also serves on the Utility Expo show board.

[www.ditchwitch.com](http://www.ditchwitch.com)

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# MCELROY MANAGEMENT CHANGE



Vikrant B. Sanglikar, Country Head,  
McElroy India office

"We are excited about our future in India and what McElroy India offers for increased productivity and profitability in the operation of fusible pipeline projects."

McElroy, a leading manufacturer of pipe fusion machines used in the construction of thermoplastic pipelines worldwide, recently announced that Vikrant B. Sanglikar will be joining the team as the new Country Head for its India office.

He replaces Bharath Rao, who left to pursue other entrepreneurial opportunities, after serving successfully as the Regional Director for McElroy India for more than six years.

Sanglikar will oversee market development and business operations in not only India but the surrounding countries including Sri Lanka and Bangladesh. With 30 years of experience in sales, marketing, manufacturing and business development, Sanglikar's career has given him experience in various industrial segments. These include invaluable experience in; chemical process pump manufacturing, oil and gas, petrochemical, pharmaceutical and agrochemical markets.

"Vik is a seasoned professional, growing businesses from greenfield to highly productive and profitable entities." said Peggy Tanner, Executive Vice President for International Market Development at McElroy. "We are excited about our future in India and what McElroy India offers for increased productivity and profitability in the operation of fusible pipeline projects."

One of Sanglikar's most important positions was working as the Country Head-South Asia for Edwards Ltd. They are a leading manufacturer of vacuum pumps and abatement systems, which are sold in chemical, petrochemical, oil and gas, power, industrial, defence, solar and semiconductor markets.

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# ELECTRO SCAN INC. CURED-IN-PLACE PIPE SURVEY FINDINGS

CIPP pipe repair

“Investing in the right equipment to provide the best deliverable has always been kept a top priority.”

Electro Scan Inc. recently announced the results from its Fifth Annual Survey of Cured-In-Place Pipe (CIPP) with findings showing over 5,000 leaks for the twelve-months ending December 31, 2020. The annual survey consolidated results from utilities, licensed contractors, and Electro Scan Services, worldwide.

In 2020, 33% of CIPP showed leakage rates of 20 gal/min (75 l/min) or more, with only 15% achieving zero leakage. This is the lowest level since the beginning of this annual survey. During the year, a 52 in (1,320 mm) diameter CIPP liner was evaluated finding leaks missed by Closed-Circuit Television (CCTV) cameras. Utilities purchasing Electro Scan in 2020, typically added to existing CCTV trucks, with a 60% growth.

## CIPP Assessment projects

Since 2014, Electro Scan Inc. has conducted over 1,500 CIPP assessment projects covering 40 suppliers. CIPP is a widely used method of pipe rehabilitation using a variety of composite materials to reline existing pipes, without digging. Temporarily covering a homeowner's connection, robotic cutters are required to re-open each service, often resulting in new leaks. As a result (according to Electro Scan), lined pipes often leak more after rehabilitation, than before rehabilitation, a situation not discovered using visual inspection. >

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Machine intelligent solution

“Electro Scan represents a machine-intelligent in-pipe leak detection solution that provides pinpoint locations of leaks with 10 mm ( $\frac{3}{8}$  in) accuracy.”

### Machine intelligent solution

Electro Scan represents a machine-intelligent in-pipe leak detection solution that provides pinpoint locations of leaks with 10 mm ( $\frac{3}{8}$  in) accuracy. Results are automatically provided in gallons per minute or litres per second. The continued use of CCTV to accept CIPP as watertight and reduced quality control during the COVID-19 pandemic, may have adversely contributed to the 2020 results.

In 2020, Electro Scan Inc. was commissioned by a leading utility to compare 50-year-old Vitrified Clay Pipe (VCP), 10-year-old CIPP, and recently installed CIPP sites.

Recently installed CIPP represented 35% of total length contributing 50% of the infiltration, with 80% of re-connections substantially leaking compared to only 2% which was found using CCTV. Today, an increasing number of CIPP suppliers recommend owners use ASTM F2550 (The US Standard Practice for Locating Leaks in Sewer Pipes by Measuring the Variation of Electric Current Flow Through the Pipe Wall) for liner acceptance to differentiate their liners from other trenchless solutions.

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**TRENCHLESSWORKS**



# QUICKCONNECT ACQUIRES BOREHEAD

QuickConnect, a manufacturer of pull heads, pull collars, multi-pipe pullers and pipe bursting sleeves, recently announced its acquisition of BOREHEAD®.

QuickConnect offers pull heads that are a safe and efficient way to install underground polyethylene pipe. The pipe allows installation crews to fuse a MJ (mechanical joint) adapter to the pipe above ground, as opposed to a bell hole underground. This removes personnel from hazardous work areas while speeding up the installation process. Another advantage to using the QuickConnect pull head and attachments is there is no cleaning requirement of mud or soil out of the pipe. Crews can simply remove the pull head and it is ready for the next connection.

"This acquisition represents an important strategic opportunity to combine our resources and allow us to offer top technology for trenchless operations," said Clint Baumgartner, QuickConnect Product Specialist.

"I am excited to offer our BOREHEAD customers QuickConnect products for the safe and fast polyethylene pipe installation methods they have come to expect from us," stated Dave Ziola, BOREHEAD President/Owner.

QuickConnect products are designed to make life easier and more efficient for trenchless operators. The QuickConnect team brings years of practical trenchless construction experience to their designs, and the products have been engineered to solve common problems contractors face on the job site every day. BOREHEAD manufactures pull heads and MJ Adaptors.

[www.pullhead.com](http://www.pullhead.com)

"This acquisition represents an important strategic opportunity to combine our resources and allow us to offer top technology for trenchless operations."

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# ROBBINS ENTERS A NEW CHAPTER

Global TBM Company, newly established by industry veteran Lok Home, is proud to announce the recent purchase of substantially all the assets of The Robbins Company.

The company will operate as Robbins, with Mr Home as the President and CEO. The acquisition will result in a seamless transition for several ongoing projects throughout the world, as Robbins renews its commitment to service, quality underground equipment, and outstanding support that its customers have come to expect.

Home said the company has a bright future because of the transaction. "We are starting off the new year with a respectable backlog of orders," he noted. "In 2021 and beyond, our clients can depend on Robbins to deliver high quality machines, and technically superior machines for very difficult projects," he continued. "That is where Robbins really stands out."

Home went on to say that Robbins is starting 2021 with no significant bank or institutional debt. "We have many projects to look forward to," he said. "Robbins is currently delivering Crossover machines and TBMs equipped for challenging geological conditions in many countries including the U.S., Norway, India, China and Canada." The company's conveyor and small boring machine divisions will also continue to deliver equipment worldwide.

Home emphasised that Robbins has always been focused on building the best and strongest machines. He pledged that they will continue to do that. "We still have our strong engineering team, and we plan to continue our many industry involvements including the International Tunnelling Association (ITA) and its associate member organisations. We are glad to be a part of this community and this industry," Home added.

The company expects to continue with exciting new developments including a soon-to-be-unveiled non-circular rock boring machine. Robbins remains focused on creativity and innovation to solve the industry's greatest challenges.

"We still have our strong engineering team, and we plan to continue our many industry involvements including the International Tunnelling Association (ITA) and its associate member organisations. We are glad to be a part of this community and this industry."

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# IMPULSERADAR ANNOUNCES NEW UK DISTRIBUTOR



ImpulseRadar recently announced the immediate appointment of Geomatrix Earth Science Ltd., as its newest distribution partner for the full range of ImpulseRadar GPR (Ground Penetrating Radar) solutions in the UK.

Along with its experienced and excellent team of sales professionals, Geomatrix will be an authorised repair centre for all ImpulseRadar GPR products within the UK.

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“The success of ImpulseRadar and our continued growth is only achievable and sustainable by working with industry leaders who share the same values, and are committed to offering the best customer service”

According to Mats Johansson, ImpulseRadar’s Regional Sales Manager – EMEA: “We are delighted to announce the partnership with Geomatrix in one of the key markets in Western Europe. In collaboration with Geomatrix, our rapid growth will continue as we expand into the UK, seeking to develop further our advanced but easy to use products. Geomatrix embodies the core values at ImpulseRadar with professionalism, excellent customer care and deep knowledge about GPR technology, and our products.”

Chris Leech, Director and Founder of Geomatrix, shared his organisation’s enthusiasm for this new partnership saying: “We at Geomatrix are delighted to be working with ImpulseRadar and are proud to be the UK distributor of their full product line. Our geophysicists and electrical engineers are excited by the real-time sampling technology ImpulseRadar products are designed around. Our team looks forward to supporting customers to determine which system best suits their requirements and assist customers who are new to GPR to become confident at undertaking a GPR survey.”

Brian Wright, Director of Business Development at ImpulseRadar, added: “The success of ImpulseRadar and our continued growth is only achievable and sustainable by working with industry leaders who share the same values, and are committed to offering the best customer service. Geomatrix has a proven track record in this regard, and we look forward to a fruitful partnership as we expand our customer base in the UK.”

Geomatrix is a professional sales, repair, and training provider for the marine and terrestrial geophysical prospection industry. While its primary focus is on the UK market, it has extensive work experience throughout Europe, Africa, the Middle East, Asia, and Australia. The company offers expert guidance in GPR technology application; including survey planning, implementation, and answering technical queries. Geomatrix is the authorised distributor for several major brands of professional geophysical survey equipment.

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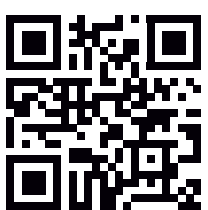


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# VORTEX CMS TECHNOLOGY GETS TRADEMARK APPROVAL

Vortex Technology Group, LLC, a business entity of the Vortex Companies' Products Division, recently announced that it has completed a transfer agreement with Pipeline Renewal Technologies (PRT), to acquire the VeriCure trademark.

With this latest deal, Vortex will now be able to market and sell its recently acquired Curing Monitoring System technology (CMS) under the popular brand name, as well as aligning all manufacturers, distributors, and end users to adopt the technology brand. "VeriCure is synonymous with performance, quality and customer support; all of which are in full alignment with the CMS technology's legacy originally developed and patented in Germany in 2010," said Vortex Companies CEO Mike Vellano. "After we acquired the technology patents and intellectual property from OSSCAD in November 2020, we knew a strong global brand concept was necessary to build on its success."

"We are excited to be working with Vortex to support the CMS product line and carry forward the VeriCure name as the sole brand for the CMS technology," added Richard Linder, President and CEO of Pipeline Renewal Technologies. "We anticipate much greater demand for the VeriCure product, through Vortex's focus on the market and its commitment to an improved supply chain, technological development and customer support."

## Brand Alignment

VeriCure, patented in 19 countries and specifically in the United States in 2012, was developed to continuously monitor a Cured-In-Place Pipe (CIPP) liner's cure temperature during the installation process. After it was initially licensed in the U.S. by a domestic firm, shortly thereafter it was adopted by many of the country's largest CIPP contractors and manufacturers to reduce installation costs and promote quality assurance. Vortex is now focused on expanding the product's field support, developing industry QC standards, and educating the engineering leaders of the trenchless market.

Vortex believes that having the platform of a single brand and a single source of technical support will resonate well with the industry. "Brand alignment for any product, no matter how technologically advanced, is key to our success and we are grateful for the cooperation of Pipeline Renewal Technologies in this effort," stated Andrew Gonnella, President of the Vortex Products Division. "As Vortex launches VeriCure into the future, we aim to transform quality control as the trenchless industry knows it and continue to deliver new efficiencies for CIPP contractors and municipalities alike. We are excited about the growth of VeriCure as we look to further enhance the technology and establish VeriCure as the standard for CIPP temperature monitoring. Through liner warranty partnerships, development of national engineering standards and adoption into contractor SOPs, VeriCure will drive CIPP market growth and reach," added Gonnella.

[www.vortexcompanies.com](http://www.vortexcompanies.com)

"VeriCure is synonymous with performance, quality and customer support; all of which are in full alignment with the CMS technology's legacy originally developed and patented in Germany in 2010."

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# SAERTEX CONGRATULATES HANS JÜRGEN KÖNIG



“Hans has been part of SAERTEX multiCom for over 5 years and he is the company's specialist for the Asian market.”

SAERTEX multiCom® in Germany has announced that the overall operational responsibility for its SAERTEX multiCom® Co. Ltd., Pinghu (China) location and its Asian markets is to be transferred to the company's Director for the Asia-Pacific region, Hans Jürgen König.

Hans has been part of SAERTEX multiCom® for over 5 years and he is the company's specialist for the Asian market. In addition to his new duties in Pinghu, he will head the company's branch in Abu Dhabi (UAE).

SAERTEX multiCom team said it looks forward to a continuing successful cooperation and wishes Jürgen all the best in his new function.

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## SAYING FAREWELL TO LORRAINE SCALE – COLLEAGUE AND FRIEND

It is with great sadness that Drain Trader has to report that Lorraine Scale, long-term Managing Director of the magazine died on the 10th of February 2021. With the cause of the unexpected death still unconfirmed, Lorraine leaves behind her sons Monty, Edward and Archie.

Lorraine was born on the 5th of March 1972, in Cheltenham. Her early career was in office work and having just left her previous employment and knowing the original owners of Drain Trader she helped them out in setting up the office as the magazine was launched.

She and Darek invested in the magazine at an early stage and eventually bought the remaining part of the business when the partner wanted to move to a different occupation.

Lorraine started at Drain Trader in 1998 and headed the company for some 17 years until she left for personal reasons in 2015.

On hearing of Lorraine's passing a number of friends and colleagues that she worked with over her years at the magazine asked to be able to comment.

John Beech of iLine commented that Lorraine was: "a lovely woman with a great sense of humour and good fun. Having taken over Drain Trader her personality made it the success it is today. She passed away far too young and will be sadly missed. May she rest in peace."

Ian Ramsay of IRR Trenchless said of Lorraine: "She was a great character in the industry. She pioneered Drain Trader magazine and grew the magazine and supported the industry at a time when it was really needed. She developed Drain Trader's independent drainage events which included the young trenchless sector, events which in the early days were so well supported. She will be fondly remembered in aiding the growth of the UK Trenchless industry and was always open to new ideas and enthusiastic."

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“She was a great character in the industry. She pioneered Drain Trader magazine and grew the magazine and supported the industry at a time when it was really needed.”

For the NSA (National Sewerage Association) Val Gibbens, Secretary and Treasurer said: “I am sorry to hear of the untimely death of Lorraine. We met in the very early days of the Drain Trader magazine and she worked hard to not only make sure that the publication reached a high standard but that it also had longevity. Her enthusiasm was much appreciated. The NSA sends its sincere condolences to her family and friends.”

Simon Hall currently with S & P Consult GmbH in Germany commented: “I was so sorry to hear that we have lost Lorraine. I knew her for several years in connection with both Drain Trader and the Drainage events the company organised across the country, as well as meeting her at other industry events. She was always very friendly and a pleasure to work with. Since leaving Drain Trader she has been missed by many in the industry and her loss now will be felt by many people that she knew over the years.”

For Westrade Group, Managing Director Paul Harwood said: “Drain Trader has been a long-term supporter of the No-Dig Live event and as such I was fortunate enough to spend quite a bit of time with Lorraine, and would like to think I got to know her pretty well. I always admired her energy, enthusiasm and fun-loving character, which endeared her to so many people. Her engaging personality and in-depth knowledge of the sector is a sad loss to us all and she will be greatly missed.”

Ian Clarke, Editor-in Chief of Trenchless Works magazine (and feature writer for Drain Trader) added: “Lorraine and I were very friendly rivals for many years as I wore different hats in relation to publications in the trenchless and underground construction sectors. In the time we knew each other she was always supportive and full of good humour, even with rivals and was always willing to compare notes and interesting items about the industry she was so effective in serving with Drain Trader. The industry and those magazine readers she served could do with more like her, she will be greatly missed.”

Simon Beverley-Smith, long-term editor of Drain Trader commented in closing: “The driving force behind Drain Trader, Lorraine handed me the reins of a healthy and happy magazine back in 2015, making it easy for me to make the transition. I know that no-one could fill her shoes, but if I do just half as good a job as she did during her 17 years at the helm, then I know Drain Trader will have a long and fruitful future. To Lorraine advertisers, exhibitors and industry leaders were not just customers and clients, she would happily chat on the phone all day to ‘good friends’, many of whom still kept in touch. Lorraine was always the life and soul of every exhibition hall that she graced, and she will be remembered and missed by many. Sue, Anne and I fondly say farewell, and our thoughts are with her boys Monty, Edward and Archie.”

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# SVI GOWNS FOR THE NHS

Folding gowns ready for packing

“After sourcing the correct material, producing a prototype, and seeking approval from the NHS, the sewing team set to work.”

At the beginning of the pandemic, it became clear there was a shortage of PPE for frontline workers. As an innovative UK based manufacturing business, the team at Steve Vick International (SVI) was eager to help.

After investigating with a contact at the hospital, it transpired that they were running critically short of gowns. The SVI in-house sewing department, an essential part of the company's manufacturing process, were well equipped to help. Although being more familiar with sewing products for the gas distribution networks, they did not let that stand in their way and they were only too keen to volunteer their time and talents to help. After sourcing the correct material, producing a prototype, and seeking approval from the NHS, the sewing team set to work. To date, over 2000 gowns have been sewn and sent in batches of between 100 and 200, to the hospital. >

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Gown packed ready for dispatch



Sewing the edge of the gown

"Being an innovative manufacturing company, we have some of the latest technology and equipment which is highly adaptable for use on products outside of the gas and water industries. It was great that our staff were able to adapt and put their skills and equipment to good use during such unprecedented times."

As an active member of its local community, SVI also supported other organisations including, Hack the Pandemic, a pop-up PPE factory based in Bristol, by providing hundreds of 3D printed headbands for face shields. In addition, SVI also helped Dorothy House Hospice collect and deliver charity donations to its shops, and distributed Foodbank deliveries for The Hub, Bradford upon Avon. Crock Harrison, Managing Director at Steve Vick International commented: "When the pandemic started there was an overwhelming response from members of the team that they wanted to do something to help. Being an innovative manufacturing company, we have some of the latest technology and equipment which is highly adaptable for use on products outside of the gas and water industries. It was great that our staff were able to adapt and put their skills and equipment to good use during such unprecedented times."

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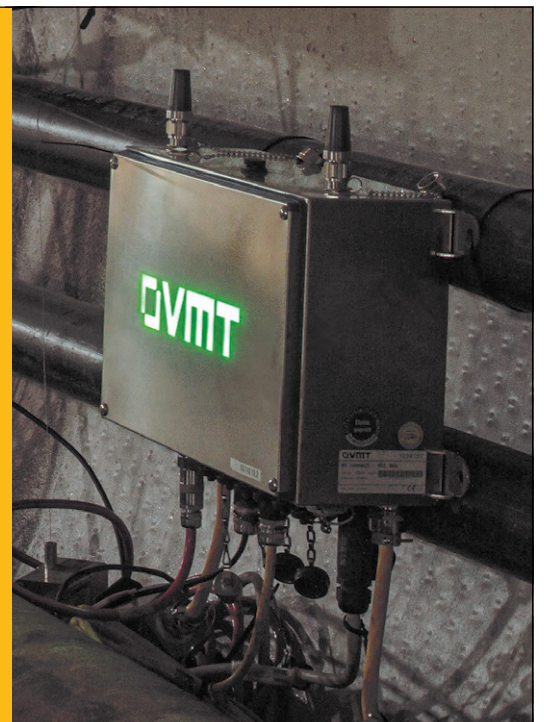


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# NEW PIPELINE FOR ABU DHABI SEWERAGE SERVICES

The Joseph Gallagher Group is pleased to announce the completion of its latest microtunnelling project in Abu Dhabi. Joseph Gallagher International was engaged by Mechanical and Civil Engineering Contractors Company (MACE) LLC to complete a new pipeline on behalf of Abu Dhabi Sewerage Services Company (ADSSC).

The new pipeline will serve local areas and communities in Abu Dhabi and is part of a longer-term plan to support population and infrastructure growth in the region.

Alex Allport Project Manager for Joseph Gallagher said: "This project has not been without its challenges, from significant heat, difficult ground conditions and of course COVID-19, but I am immensely proud of what the team has achieved."

The pipeline was completed using 10 tunnel boring machines, which were ISEKI Microtunnelling Systems and three AVN Herrenknecht machines all owned and operated by Joseph Gallagher Group and maintained directly by its engineers and support teams. >

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The Gallagher microtunnelling machine being lowered in the launch shaft.

“Despite the challenging ground conditions a large part of the project’s success is testament to the resources, support, and agility of the Joseph Gallagher Group.”

### Challenging ground conditions

The microtunnelling machines were set-up for diameters ranging from 600 mm to 2,000 mm and customised to the varying ground conditions encountered. These included gravel, clay/mudstone, gypsum, sandstone, quartz, and sand.

Individual drives varied in length from less than 100 metres to 670 metres. Alex commented: “Ground conditions changed frequently, sometimes within the space of a linear metre, so extreme caution and diligence was always required. We encountered large cavities at various locations, some requiring 800 cubic metres of concrete to fill them. Additionally, significant amounts of ground water were present across the project, all of which heightened the risk of flooding to our machines. It was not unusual to be facing 3 bar of water pressure at the face of the machine.”

Despite the challenging ground conditions a large part of the project’s success is testament to the resources, support, and agility of the Joseph Gallagher Group. This provided a real advantage to the project in terms of addressing any technical difficulties. >

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“The strength of the Group really comes into play on our international projects. We can oversee timelines, resources, and logistics, ensuring everyone is on the same page. The collective expertise that we can draw upon really does set us apart in our Middle East operations.”

Early in the project, NRC Plant Limited (part of the Joseph Gallagher Group) deployed four crawler cranes to support the project, shipping these units from the UK to Abu Dhabi. The cranes ranged from smaller 5 t crawler cranes to a 90 t for lifting the tunnel boring machines into the shafts.

Specialist Plant Associates (SPA – part of the Joseph Gallagher Group) shipped high performance ventilation fans out to the project from the UK to help keep the machinery at as low a temperature as possible. Due to the significant heat at the project locations, maintaining a cool airflow with chillers into the tunnels was vital. SPA also dispatched grout pans which were used to grout the annulus of all 83 tunnel drives.

“The strength of the Group really comes into play on our international projects. We can oversee timelines, resources, and logistics, ensuring everyone is on the same page. The collective expertise that we can draw upon really does set us apart in our Middle East operations.” said Colm Dickey, Project Director for Joseph Gallagher Middle East.

At the height of the project, a multi-cultural team of over 200 people, including support from the UK, our people from Thailand, Egypt, India, Philippines as well as the UAE were all involved in bringing the pipeline to a successful conclusion. Steve Harvey, Group Managing Director, The Joseph Gallagher Group said: “It has been a massive credit to the project team in Abu Dhabi and the support teams in the UK in overcoming some of the biggest changes and challenges that can be faced in the region; and successfully completing the project safely, to a high standard and on time.”

The Joseph Gallagher Group, has other projects currently operating in the region, including Kuwait. Here it will be commencing work on the longest sea-outfall pipeline in the Middle East for WTE Wassertechnik EVN Group, under a joint venture with Al Hassanain. The Umm Al Hayman Wastewater Treatment Plant, one of the world’s largest wastewater projects is being built to treat effluent from southern Kuwait and to supply agriculture and industry with wastewater treated to the highest standards.

[www.josephgallagher.co.uk](http://www.josephgallagher.co.uk)

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# WORK BEGINS ON DELHI METRO PHASE 4

Hindustan Construction Company Ltd. and Vensar Constructions Company Ltd. are gearing up to commence tunnelling on Phase 4 DC-06 of the Delhi Metro in India

A refurbished 6.52 m diameter TERRATEC Earth Pressure Balance (EPB) Tunnel Boring Machine has been delivered to the site for the Line-8 – Magenta Line of the Delhi Metro, in New Delhi, India.

Followed by a successful Site Acceptance Test, the JV began work to install the first tunnel ring segment for constructing a 2.03 km underground extension of the Delhi Metro's 38.235 km Magenta Line (Line-8) from the Viaspuri Park Shaft to Viaspuri Ramp near Keshopur. As part of this tunnelling drive, two tunnels (for up and down movement) with a length of 1,400 m will be bored between Viaspuri and Krishna Park Extension. >

## Tunnel Boring Machine

The Contractor selected the TERRATEC 6.52 m diameter EPB Tunnel Boring Machine with a traditional soil configuration, equipped with a Spoke-Type Cutter Head with a 57% opening ratio which has been proven to be very efficient in excavating this type of soil in previous DMRC Phases. This refurbished machine has previously completed tunnels for Delhi Metro project CC-34 and Lucknow Metro project LKCC-06.

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The Terratec crew on the Delhi project

TERRATEC has designed the CutterHead to allow the cutting tools to be exchangeable for 17 in diameter roller disc cutters, making the TBM able to bore through the D-walls and cope with the presence of any unexpected obstacle on its way, such as old wells or foundations. The geology is composed of silty sand, fine sand and sandy silt and clayey silt.

The segment lining will be made of RC segments with an outer diameter of 6,350 mm, inner diameter of 5,800 mm and width of 1,400 mm. The total distance that the TBM will bore is approximately 2,030 metres.

#### Excavation

The tunnel will be excavated at an average depth of 14-16 m. As the drives progress, the machines will install reinforced concrete Universal-style, pre-cast lining rings – comprising five segments + key. This section includes a 365 m long ramp and approximately 220 m long station, hence roughly 2,100 segments will be installed.

In January 2020, DMRC awarded a contract to the consortium of HCC-VCCCL for building the construction of twin tunnels from the Vikaspuri Park Shaft to Vikaspuri Ramp, with one underground station at Krishna Park Extension under contract package DC-06 of Delhi Metro Phase 4. The work is expected to be completed in 36 months.

After successful completion of Delhi Metro Phase III, Terratec has been chosen again for the first underground tunnel package in DMRC Phase-IV which highlights that Terratec is the first choice for the contractors. TERRATEC's continuing success on projects such as Phase III of the Delhi Metro, Lucknow Metro, Pune Metro, Ahmadabad Metro and Mumbai Metro is a result of tailor-made robust TBM design, prompt onsite assistance, readily available stock of TBM spares and highly-skilled specialised TBM support throughout tunnelling operations.

[www.terratec.co](http://www.terratec.co)

“The segment lining will be made of RC segments with an outer diameter of 6,350 mm, inner diameter of 5,800 mm and width of 1,400 mm.”

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# TRENCHLESS MIDDLE EAST 2021

12th International Exhibition and Conference  
Jumeirah Beach Convention Centre, Dubai, UAE

**Trenchless Middle East 2021 returns to Dubai for its twelfth popular event, focusing entirely on trenchless technology (NDRC) in the Middle East, and North Africa (MENA) regions.**

With megaprojects continuously being planned from Municipalities, authorities and developers, Dubai continues to host some of the most ambitious projects in the world.

Although the latest global crises are adding challenges to their implementation across the construction sector, the use of Trenchless Technology in infrastructure projects continues at a pace across the Middle East. These projects, across the GCC, are vital to progress economic diversification plans.

2021 will also see Dubai host the first World Expo to take place in MENA & SA region.

To be seen amongst the world's leading providers who have already signed up to participate in this prominent event and showcase your innovations, book a stand at the Trenchless Middle East 2021.

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# UNDERGROUNDING POWER CABLES THROUGH ROCK IN MELBOURNE, AUSTRALIA

Limited access space was available for the drill rig launch site

“Whilst only a single bore, the installation was not an easy one and took particular planning to execute successfully.”

Guildford is a small settlement situated on the Loddon River some 124 km north-west of Melbourne, in the State of Victoria, Australia. It is located on the Midland Highway between the towns of Daylesford and Castlemaine. At the last census in 2016 the population of the town was recorded at 333.

As part of works to place underground the town's power supplies to overcome local environmental impacts, the power authority responsible for the area required a new cable duct installation beneath a local rail track. Due to the obstacle of the track an open cut option for the undergrounding work was not possible so a trenchless solution was desired. It was decided to utilise the horizontal directional drilling method. Contractor R&R McClure Excavations Pty Ltd was awarded the contract to plan and execute the project.

Whilst only a single bore, the installation was not an easy one and took particular planning to execute successfully. This was because the bore was over a length more than 100 m for the installation of 110 mm diameter cable duct with a 63 mm carrier duct alongside as a pipe bundle. Not too difficult you may think.

However, the elevation difference between the start and reception pits was 6 m and ground conditions comprised sandstone and ironstone rock near the surface at both ends of the bore with included quartz layers throughout the bore route. >

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The drill head holes out precisely in the reception pit



The Grundodrill 28N+ with the GRUNDOROCK drill head configuration starting the pilot bore



The AMC drilling fluid recycler

## Rock Drill

To ensure the successful installation McClure decided to utilise a Tracto-manufactured 28N+ GRUNDODRILL with a GRUNDOROCK low flow mud motor to drill the pilot bore. This was the preferred configuration because of the PDC drill bit diameter which in this case was selected at 6½ in (165 mm), the low mud flow requirement and short length which offered a good steering angle for the drilling crew to work with. The mud motor was also adaptable to the company's other Tracto-manufactured drills with no modifications needed. The contractor also utilised a drilling mud recycler, an AMC 500R unit, to aid in the handling of the drilling mud. Steering control and bore location monitoring was provided by using a Digi Trak F5 system with a pressure sonde in the drill housing. The installed HDPE pipe was provided on 100 m long coils at the 110 mm diameter required.

Once the launch site had been prepared and the machine set-up completed the pilot bore was started and completed in just 8 hours at a rate of around 3 to 5 minutes per drill rod.

The selection of the correct drilling configuration meant that the pilot bore was all the drilling that was necessary as the diameter of bore was sufficient to pull back the product pipe bundle without the requirement for further reaming. This configuration also meant the impact on the local populous was minimised as the drill rig with the rock drill could be located within a limited easement that was allowed by the planning process.

Ultimately the project was completed to the full satisfaction of the client and without any notable difficulties despite the hard ground conditions.

Commenting on the project for R&R McClure Tim McClure, Managing Director said: "We were very happy to use the TRACTO Grundodrill 28N+ HDD rig and the GRUNDOROCK low flow mud motor at this location. From previous experience drilling in this area we knew that the combination of these two systems would provide an effective and efficient trenchless solution to the project's requirements in the hard ground."

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# NEW GENERATION SHORTER GRUNDOMAT

TRACTO-TECHNIK has launched a new generation of the famous GRUNDOMAT mole to respond to the need for moling in tighter spaces. As the original inventor of soil displacement hammers (moles), TRACTO-TECHNIK claims to be the market leader, thanks to continually refining and improving moling technology over the last 50+ years.

The new range, which comprises of six models, benefits from the same uncompromising quality and precision of existing GRUNDOMAT moles and provides the same punch in a shorter package. Features such as the movable head for pinpoint accuracy combine with options such as servo control to ensure maximum efficiency for trenchless pipe installation.

The new S-range of short GRUNDOMAT moles ranges from 45 mm to 130 mm diameter and is between 9% and 17% shorter than the standard models. >



Short Mole



---

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“The integrated oil-fog lubricator supplies the machine with GRUNDOOIL and at the same time guarantees maximum power and penetration force.”

Every model offers:

- High penetration force and powerful thrust, thanks to the powerful two-stroke cycle and movable head design.
- Minimum air consumption at highest power thanks to innovative piston technology, as well as a sophisticated sealing system.
- Optimum performance through regular service, which includes the replacement of inexpensive slip belts and sealing rings.
- Exceptionally long service life of the chisel, thanks to the bearing bush.
- Easy shifting with a choice of either Servo or Thrust control – (excluding the S45 which is thrust only)

Easy shifting

Servo control has been introduced to simplify shifting between forward and reverse gear with a simple flip of the lever.

The integrated oil-fog lubricator supplies the machine with GRUNDOOIL and at the same time guarantees maximum power and penetration force. A stepped head with two-stroke cycle displaces the soil in three steps with maximum precision and high running stability whilst high penetration force is guaranteed by the concentration of impact energy in the thrust direction onto the sharp cutting edges. For the hardest soil conditions, an interchangeable heavy duty crown head is available. No front machine seal, as well as having no inner and outer chrome-plated housing ensure maximum optimal energy transfer; sustained performance and longevity, whilst smooth outer housing features an easy-to-read wear indicator.

One advantage of the GRUNDOMAT New Generation is that it will never stop or go into reverse in the middle of a job. When a GRUNDOMAT needs a service it will always finish the job in hand first. With servicing and training centres throughout the UK, the aftercare from TRACTO-TECHNIK enables maximum uptime at all times.

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# PERMA-LINER INDUSTRIES ANNOUNCES THE NEW UV LIGHTRAY LR3



LightRay LR3

Waterline Renewal Technology, Inc. (WRT), a portfolio company of Behrman Capital, has announced the launch of the new LightRay LR3 from Perma-Liner Industries (PLI), which incorporates the latest in UV trenchless technology, which will significantly reduce the curing time during installations.

After many months of hard work and dedication from the engineering team, PLI is pleased to announce the launch LightRay LR3. The primary goal during the redesign process was to create the most advanced patch repair and pull-in-place UV system available to the trenchless market today. Many customers were consulted for their feedback on the prior unit and provided valuable input for improvements on the LR3. Key points of feedback in the development of LightRay LR3 included; saving time, increased productivity, less manpower required in the field during installations, and less variability.

## Design Innovation

A modular design and enhanced electrical connections for rapid packer attachment and removal are among the key highlights. Transitions, cast iron, and vertical stacks can all be serviced by LightRay LR3 which easily navigates 45o and 90o bends.

Designed, supported, and built in the USA, the new LR3 comes with a 1-year warranty.

Chris Duda, Vice President of Sales and Marketing said: "I am very pleased with our latest new product release. Many of our customers provided their feedback to the engineering team, who did a tremendous job to incorporate, down to the detail, exactly what our customers were looking for in LightRay LR3. Curing Soon is not just a tagline, it is now a reality with our new UV technology." >

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LightRay LR3

"I am very pleased with our latest new product release. Many of our customers provided their feedback to the engineering team, who did a tremendous job to incorporate, down to the detail, exactly what our customers were looking for in LightRay LR."

The LightRay non-VOC resin is pre-impregnated into the high-performance fibreglass liner and shipped ready to install for No-Dig small diameter pipe infrastructure repairs. Once the install site is prepared, casting times in less than 10 minutes can be achieved, eliminating the risk of premature or prolonged curing times due to temperature variations.

Waterline Renewal Technologies (WRT), through its brands, is a leading provider of engineered products used in trenchless repair and rehabilitation of wastewater/stormwater infrastructure for municipal, commercial/industrial, and residential applications, as well as providing a diverse portfolio of products and services through its brands APM, LMK, PLI, and LightRay.

Since 1975, APM Permaform has produced high-quality products for sewer line repair and seamless manhole concrete pipe restoration and is the foremost provider of spray-on coatings, manhole and larger diameter pipe rehabilitation solutions and anti-bacterial agents for corrosion prevention. The Permaform® system and resourceful solutions make it easy to replace manhole concrete pipes without having to excavate and negatively affect the structural integrity of the area.

LMK is a leading provider for the municipal market that manufactures CIPP technologies, compliant with applicable ASTM standards, industry leading products and proprietary fabricated equipment. Since 1993 LMK has provided all the training and equipment necessary for the successful installation of its products.

PLI is a leading manufacturer and supplier of trenchless pipeline rehabilitation equipment and materials in North America focused on the residential market. Since 1999 PLI has developed systems to rehabilitate existing sewer systems without excavation. PLI offers customizable Pull-In-Place™ and Inversion Lateral packages from basic to turn-key and from ambient cure to heat assist cure.

LightRay manufactures state-of-the-art UV technology for the CIPP industry. This cutting-edge solution offers new opportunities for plumbers and contractors by significantly reducing time and resources needed on the job site. Lowering both risk and cost with fast and high-quality results, LightRay ushers the trenchless industry into the 21st century.

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# NEW, BIGGER, BETTER

In order to place the GRUNDOBURST 800G into position inside the starting pit, a segment of the asbestos-cement pipe, situated at a depth of 1.50 m was removed and disposed of

The amount of supply and disposal pipelines in need of repair and/or replacement is constantly increasing worldwide, urging private and public network operators to decide whether to repair, renovate or replace the defective pipes.

“A service life of 80 to 100 years in perfect static conditions with considerable cost savings compared to open trench methods.”

Here, trenchless pipe bursting provides a sustainable and economical solution by replacing defective pipelines with new pipes using the existing route. Especially with ageing pressure and gravity pipelines that are beyond repair due to typical damages such as cracks, root infestation, misalignment, split sleeves or mechanical wear, pipe bursting is a favourable and proven method for pipe renewal. The result is a new pipe along the existing pipe route which offers a service life of 80 to 100 years in perfect static conditions with considerable cost savings compared to open trench methods. >

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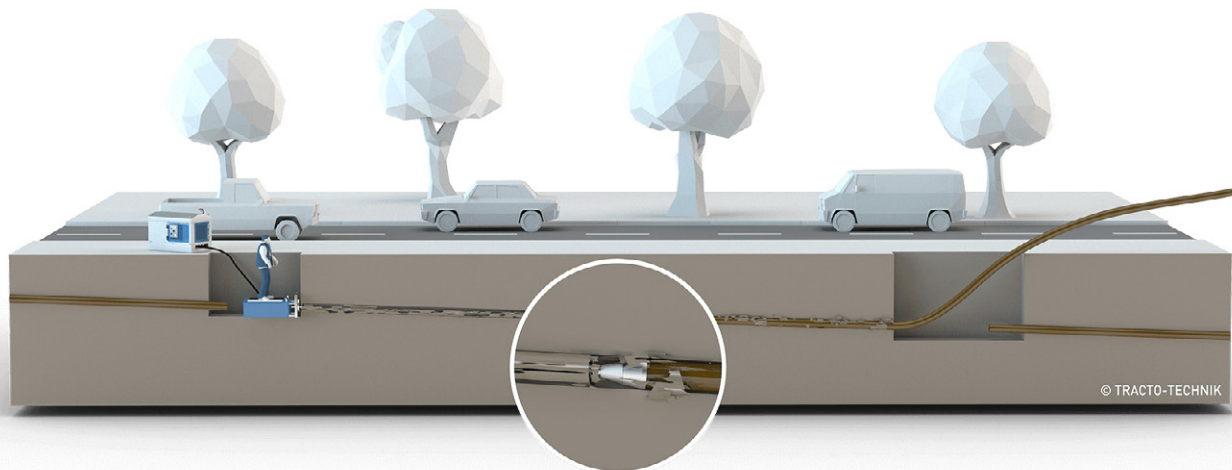
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Inserting the bursting rods is quick and easy



Pushing the QuickLock rods through the old pipe

The pipe bursting method is applicable for almost all types of old pipe materials up to 1,200 mm diameter. The old pipe is broken apart with a bursting head and radially displaced into the surrounding soil, whilst at the same time, the new pipe is pulled into the existing route. This way means that follow-up costs due to soil settlement, groundwater impact and road damage are avoided. Moreover, the network capacity can be adapted as new pipe which can be of equal or even larger diameter of up to 1 to 2 nominal sizes can be installed. This was the case when a severely damaged sewage pressure pipeline was renewed utilising a GRUNDOBURST 800G static pipe bursting system in the German town of Korschenbroich.

### Old sewer has massive leaks

Among other facilities, the Erftverband water management association operates a sewage pumping station in the Korschenbroich region of Liedberg, Germany. From this pumping station foul and rainwater is transported via an approximately 840 m long pressure pipeline along the main L382 road up to a crossing and from there to a wastewater treatment plant. After being in operation for about 40 years this pipeline urgently needed renewal. The ravages of time had clearly left their mark. Severe cracks, invasive roots, damaged sockets and damage caused by corrosion had led to massive leaks causing flooding on adjacent local residential properties. To remedy this once and for all, Erftverband decided to replace the pipe using pipe static bursting and to upsize the pipe diameter by two nominal widths in one go. The project was awarded to contractor Alfes + Söhne GmbH.

At the beginning of May 2020, preparations for applying the pipe bursting method on the 840 m long pressure pipe on the second section were carried out. The pipeline was temporarily shut down, start and target pits were set up and the new PE pipe string for the current 150 m section was placed ready. A day earlier the Alfes team had already sawn off and disposed of a >

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After 150 m the rod string arrives in the pipe installation pit



Connecting the bursting head to the rod string

segment of the original asbestos-cement pipe at a depth of 1.5 m, so that the GRUNDOBURST 800G, manufactured by TRACTO-TECHNIK GmbH & Co. KG could be set-up inside the starting pit. As a very professional company, all applicable safety guidelines and precautions were taken into account during construction.

### New pipe with even more capacity

Managing Director Gerhold Alfes could not miss the chance of attending this jobsite. His company has been specialising in pipe renewal using the TIP method, pipe relining and pipe bursting for many years and is now among the leading German contractors for trenchless pipe renewal and pipe rehabilitation. "The Erftverband", according to Gerhold Alfes, "had very clear ideas regarding this task. In order to protect the trees along this road, the directly adjacent cultivated fields, the meadows and of course, the local residents, anything other than the underground trenchless construction method was out of the question. Also, with a total distance of 840 m the time factor, the protection of the surface, as well as the road surface and the unrestricted access to the L382 road, played a substantial role."

Erftverband made the decision to apply the pipe bursting method for two reasons. "First of all", Alfes explained, "because we are talking about an old asbestos-cement pressure pipe ND 150, where it would make great sense to leave this in the ground. Secondly, a larger diameter was required in the course of the renewal for hydraulic purposes, which is part of the technology and easy to realise with pipe bursting." >

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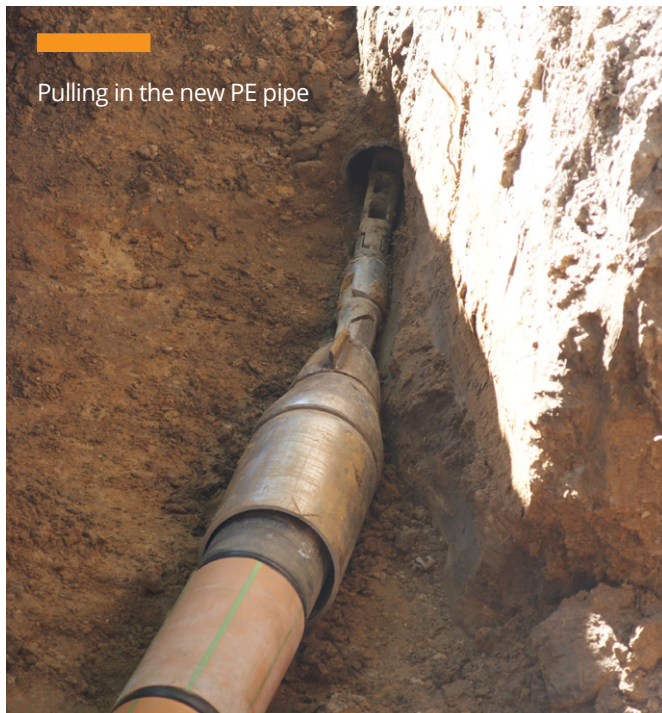
“To protect the trees along this road, the directly adjacent cultivated fields, the meadows and of course, the local residents, anything other than the underground trenchless construction method was out of the question.”

### Ready to go

The GRUNDOBURST 800G and the box containing the QuickLock bursting rods were placed in the approximately 4.5 m long and 2 m wide starting pit ready for action. Almost with the rhythm of a synchronised 8-man rowing team, the rig pushed the rods smoothly and quickly through the old pipeline, mainly due to the Quicklock link coupling, but also the positive force transmission preventing the rods from slipping back. After just under an hour, the lead rod arrived in the target pit after a good 150 m. Two crew members had already attached the new pipe, a PE 100 SPC-RC pipe of nominal diameter 200 mm, wall thickness 11.9 mm, supplied in 12 m single sections by manufacturer SIMONA AG of Kirn, to the bursting head and 240 mm o.d. expander which had 3 blade strips. It was then only needed to connect this assembly to the Quicklock rods.

Then they received the command by walkie-talkie – time to pullback!

In the process, the old asbestos-cement pipes were broken apart and displaced into the surrounding soil. The existing bore path was expanded to 240 mm and the new PE-pipe installed at the same time. The bursting process and simultaneous pulling-in process was just as smooth as the rod insertion process and to the beat of steady rowing strokes. The loose sandy soil was well able to absorb the old pipeline, which was already very old and therefore relatively easy to burst, offering no resistance to the new PE pipe during the pulling in process. >



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Provisionally connecting the newly installed PE pipe to the old asbestos-cement pipe inside the construction pit within the next section, so that the pipeline can start operating again the next day

“The well-organised Alfes team had also renewed the first 450 m long section of the 840 long pressure pipeline using static pipe bursting through its strong team using a highly effective method.”

### Home and dry

After a total of four and a half hours the second, 150 m section of the 840 m long pressure pipe was renewed. The application of the pipe bursting method and the GRUNDOBURST 800G proved to be perfect for this pipe renewal task, as the advantages are unbeatable compared to the open-trenching method:

- Compact design of bursting rig for small starting pits
- Short construction and set-up times
- Fast work cycles with high performance
- Fast thrusting of bursting rods into the old pipe and during installation of new pipe
- Time saving with QuickLock bursting rods, thanks to their quick-link coupling
- Renewal takes place in the existing bore path
- Method is applicable for almost all types of damage and old pipe materials
- Environment, traffic and local residents are only minimally effected
- Considerably lower costs opposed to the open trenching method
- Result is comparable to a complete new installation offering a long service life

The well-organised Alfes team had also renewed the first 450 m long section of the 840 long pressure pipeline using static pipe bursting through its strong team using a highly effective method.

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# RENOVATING SEWER RISING MAINS

Rehabilitation of a DN 500 and DN 400 twin sewer rising main under a busy dual carriageway in the UK

"The Primus Line® system has already proven its suitability for rising mains in numerous installations."

The renovation of sewer rising mains is often delicate. That is why operators are increasingly looking for trenchless rehabilitation methods. One of them is Primus Line® – a tried and tested technology.

Many sewer rising mains have several things in common. They are a critical asset to the asset owner, as it is often complicated to divert the flow for an extended period of time. The accessibility to the pipe is mostly difficult, as the mains run through densely populated or environmentally sensitive areas or under creeks and main roads. The pipelines often have several bends in the run of the main. Faulty sewer rising mains have the potential to cause pollution, damage property and neighbouring services, resulting in significant costs.

Failures on rising mains can be caused by external corrosion, internal corrosion or mechanical failures like leaking joints, longitudinal cracks, etc. In many cases the pipeline is still able to withstand the traffic loads, but not the internal pressure loads. A renovation using sewage lining or slipining with HDPE is often not acceptable due to the significant diameter reduction, the limitation of installing through bends, the pit sizes and the duration of the installation. >

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Primus Line® extends the asset lifetime by 50 years

“McAllister Group installed the complete 650 m length for each of the host pipes in a single installation.”

The Primus Line® system, engineered and made in Germany, offers a solution for this extraordinarily difficult scope. The system consists of a flexible Kevlar-reinforced liner and special end fittings. Primus Line® offers small installation footprint, a wall thickness of only 6 mm, the flexibility to be installed through bends, including consecutive bends, the possibility to reline 500 m and more in only one day, and to achieve installations shots, pit to pit, of 1,000 m and more. In addition, Primus Line® is installed with an annulus, thus the installed Primus Liner will accommodate the operating pressure and will release the host pipe from bearing the internal forces and therefore stop the aging process of the existing main caused by the operational loads and internal corrosion. The Primus Liner is a factory-tested product that is delivered on a transport reel to the construction site. After CCTV surveying and cleaning the existing main, the pre-folded liner is winched in position and inflated using only compressed air. Subsequently, Primus Line connectors are installed and a pressure test completes the installation process.

### Tried and tested technology

The Primus Line® system has already proven its suitability for rising mains in numerous installations. The renovation of a DN 600 sewer trunk main for the City of Gold Coast, Queensland, Australia was even awarded “ASTT Rehabilitation Project Of The Year 2019”.

Within only two working days, a leaking MSCL sewer force main, which runs under a creek, was renovated with the Primus Line® system. The existing pipeline has six opposing bends in a section of only 50 m length and operates with 4 bar/40 m head.

Also a major UK Utility company used Primus Line® for the rehabilitation of a DN 500 and DN 400 twin sewer rising main. McAllister Group installed the complete 650 m length for each of the host pipes in a single installation. The rising mains ran parallel with each other but from different pumping stations, had a number of changes in direction both vertically and horizontally, but more significantly had been overbuilt to extend the original ‘A’ road with a new dual carriageway. The dual carriageway was built on a raised reinforced bank. Each of the rising mains had experienced recent bursts that caused significant local disruption. Traditional open cut methods to replace or repair the mains were considered earlier by the client as a last resort. Excavating near the reinforced bank would have added unnecessary risk and considerable cost to the project.

The combination of strength and flexibility of the Kevlar fabric, the high safety factors on the material and the extended asset lifetime of 50 years and more can make Primus Line® a suitable fit for the rehabilitation of sewer rising mains.

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# VERMEER CORPORATION ENTERS DISTRIBUTION AGREEMENT WITH BRON

The agreement establishes Vermeer dealerships as the exclusive distributor for two of BRON's tracked utility ploughs in the 200 hp (149 kW) and 300 hp (224 kW) class



One of Vermeer's plough units.

"Our products, partnered with the reach and expertise of the Vermeer dealer network, puts us all in a stronger position to support our customers with the tools and service they need to stay productive."

Vermeer Corporation, based in Pella, Iowa, USA recently announced that it has signed a distribution agreement with BRON that gives the manufacturer of utility track ploughs (plows) and plough (plow) attachments the rights to sell its products through Vermeer industrial dealers worldwide. The agreement establishes Vermeer dealerships as the exclusive distributor for two of BRON's tracked utility ploughs in the 200 hp (149 kW) and 300 hp (224 kW) class – providing them with the ability to sell the line of BRON utility plough attachments.

BRON is a family-owned company based in Woodstock, Ontario, Canada. The brand has supported utility and underground infrastructure installation markets for more than 40 years and has reliable, heavy-duty ploughs and attachments that include static and vibratory ploughs, trenchers, rippers, add-on ploughs and more.

Vermeer is teaming up with BRON to support customers who are working to keep up with major global investments in rural fibre and underground infrastructure. BRON's products complement the Vermeer utility plough line-up by providing additional options for heavy-duty ploughs and attachments that are geared for some of the deeper and more extreme installation applications.

"This agreement positions Vermeer to better help our customers capture more of the underground telecom and energy work that will be required to provide more reliable access to critical infrastructure around the world," said Vice President of Environmental and Infrastructure Sales, Dave Wisniewski.

"As a fellow family-owned company, we are excited to deepen our partnership with Vermeer and its dealers around the world," said Robert Hall, president of BRON. "Our products, partnered with the reach and expertise of the Vermeer dealer network, puts us all in a stronger position to support our customers with the tools and service they need to stay productive."

BRON expects its products to be available at Vermeer dealerships in February 2021.

[www.vermeer.com](http://www.vermeer.com) or [www.bronrwf.com](http://www.bronrwf.com)

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# MCELROY DATALOGGER® 7 TRANSFORMS BUSINESS

“We wanted to use the most advanced technology because we felt it had the power to revolutionise our business and create a market advantage and we looked to McElroy for that advantage.”

When Les Klaudt started Fusion Technologies, Inc. (FTI) 20 years ago, he knew he would have to run his business efficiently to be successful in the HDPE pipe fusion industry.

“We wanted to use the most advanced technology because we felt it had the power to revolutionise our business and create a market advantage and we looked to McElroy for that advantage.” Klaudt said.

Now with an extensive background in building HDPE pipelines for a host of industries from energy to municipal to mining, this family-owned, Billings, Montana, USA company continues to embrace technologies that bring additional value to their operation.

## Data Logging

One of the most transforming products has been the McElroy DataLogger, a device that records each step of the fusion process to validate that joints were fused to standard before pipelines are buried and put into service.

FTI data logs every joint on every job. They now have 84,000 joint reports uploaded to their online McElroy Vault™ account which is the equivalent of 800 miles of pipe! >

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McElroy's DataLogger7

"It is a huge risk management tool for us... We have assurance those joints were done correctly, and it is documented."

If a fusion is ever in question, they can go to their Vault account and quickly pull up the report to see if the pipe was fused correctly. That documentation is priceless compared to the costs associated with a failed joint.

"It is a huge risk management tool for us," Klaudt said. "We have assurance those joints were done correctly, and it is documented."

However, Klaudt is not one to automatically go for upgrades; there must be a return on investment. The DataLogger 6 tablet device became a must-have last year when they saw that it could operate so many different business applications. FTI Operations Manager Casey Britton said this is especially helpful because their fusion technicians work independently in remote locations, without direct supervision.

"Paperwork management and organisation are essential due to the documentation requirements of not only the fusion process but also safety and health, equipment transportation, time keeping, equipment maintenance and repair, and reporting expenses such as parts, materials, fuel and lodging," Britton said.

Now they can do this all-in-one place. The DataLogger is not just as a fusion validation tool but has become a personal computer that has helped centralise their business.

"That was absolutely the 'McElroy Advantage' that began to shift our thinking with what a DataLogger could be," Klaudt said. "I think people need to understand that McElroy is in the problem-solving business. They genuinely hear and listen to their customers and I appreciate that."

### DataLogger 7

Before its launch in the Autumn of 2020, FTI had the opportunity to test the new DataLogger 7 android tablet and Klaudt said it has streamlined and enhanced their training programme.

"The Enhanced Guided Workflow with the DataLogger 7 is impressive. If you have somebody go into the field on more of an occasional basis, that guided workflow is fantastic as a reminder of how the process needs to work and it has been a huge help for us in our training and for those of us who are not as frequent as we once were," Klaudt said.

For a company that is data-driven, the DataLogger 7 is ideal. Klaudt said they track their productivity and have become even more productive because it is so easy to use and has helped reduce errors. The real-time FusionGuide™ graph highlights crucial moments in the fusion process, empowering the technician to be able to catch errors and stop the fusion process before having to cut out a joint.

FTI also had the opportunity to implement the McElroy Optimized Cooling™ algorithm which calculates in real-time the best cool times based on material properties, environmental conditions, and heat soak time. >

#### PLATINUM SPONSORS





The DataLogger7 in a tight work space

"We use it immensely and that has been a massive shift for us and has been highly profitable," Klaudt said. "It made our jobs much more efficient when we can reduce that cooling time as per ASTM F2620. That has been a game-changer."

### Extended battery life

One of the most appreciated features on the new DataLogger 7 is the 14+ hour battery life. For FTI, this is huge. Klaudt said he would get calls from fusion techs who realised they had forgotten their charger when they got to their machine on a jobsite. They would drive 45 minutes back to the man camp, tell their boss, grab the charger, and drive another 45 minutes back to the jobsite. That was a lot of time wasted that they will not have to worry about now.

The ability to communicate via the DataLogger 7 SIM card is another key piece for troubleshooting. Klaudt said it has been a confidence booster for technicians when they are out in the field by themselves.

"The Enhanced Guided Workflow with the DataLogger 7 is impressive. If you have somebody go into the field on more of an occasional basis, that guided workflow is fantastic as a reminder of how the process needs to work."

"When you can tap the screen a few times and see the friendly face of our operations manager, there is a sense of relief when that happens," he said. "Having been a technician for a couple decades in my lifetime, it is great to know you have backup."

With an SD card built into the device, their fusion records are automatically backed up as well. As for durability on the job, Klaudt said the DataLogger 7 stood up to the scorching heat and dust of west Texas, as well as effectively coping with the the snow and rain of Montana and Wyoming.

For FTI, the future looks bright since integrating the tools that help them work more efficiently than ever before and they are enjoying the benefits. "It has created a tangible, measurable value for FTI," he said.

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# GLOBESTOCK LAUNCHES NEW G.TRIPOD



Standard and compact tripod comparison

A big advancement on the previous design, the new G.Tripod from Globestock Safety Equipment features a three-pulley head, and an innovative 'compact' size option. The new G.Tripod is an EN795 (class B) + TS16415 anchorage device that is durable and lightweight, providing a secure anchorage for confined space access.

Maximum working load (MWL) is 200 kg for personnel (with a safety factor of 10:1), and 250 kg for loads. It may be used as an anchor by more than one person simultaneously, providing the MWL is not exceeded.

Patrick Evans, Managing Director of Globestock, is excited by the new product launch saying: "We spent a huge amount of time talking to customers, listening to what they want to see in a new confined space tripod. Our design team has created a product that delivers even more than we initially hoped it would. For that reason, we are expecting the new G.Tripod to rapidly become a favourite amongst confined space operatives." >

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## The G.Tripod



“The introduction of a ‘compact’ version of the tripod has already drawn a lot of positive attention. The G.Tripod Compact just packs down so small and smartly compared to what came before. This is massive benefit for operatives who need something that does not get in the way when the equipment is not in use.”

Initially launching with two size options, ‘standard’ and ‘compact’, the GSE230 is suitable for a wide range of confined space access environments. Due to its reduced size, the G.Tripod Compact can be easily stored and transported.

A taller ‘rescue’ version is also in development.

Patrick went on to say: “The introduction of a ‘compact’ version of the tripod has already drawn a lot of positive attention. The G.Tripod Compact is much more compact and physically smarter, compared to what came before. smartly compared to what came before. This is massive benefit for operatives who need something that does not get in the way when the equipment is not in use. It is even possible for the Compact to fit into the boot of a car. What is more, the three-pulley head means that equipment can be attached to any of the legs. The mounting eyes on the underside of the head allow for equipment to be fitted beneath the head, such as a chain hoist. Overall, it is a really versatile, well-designed piece of kit, so we are immensely proud to introduce it to the Globestock range.”

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### PLATINUM SPONSORS



# CEBO CUP TEST

Dave Bell, IDP Fluid Engineer, CEBO UK reflects on what makes a successful drill, and the importance of drilling fluid

“It is great when you are supplied with a Site Investigation or Geotechnical report because you are then able to identify the soil type and recommend the best additives.”

Out of all the elements of drilling, for me, over the years, one part stood out to be the most important, effective, and often overlooked – Drilling Fluids.

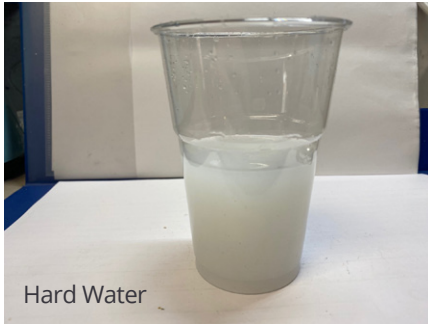
Having now been in the HDD industry for 30 years, I have been fortunate enough to attend the Cebo International 5-day Mud School at least 8 times and have taken many customers with me over the years, to see why, and when we use the various drilling additives, results have been second to none. However, the issue that the operators can face when returning to site is not having the correct testing equipment to put what they have learned into practice. Yes, some of the equipment is expensive, but the difference it will make can save operators money repeatedly in the long term and ensure a far more successful drill. It is great when you are supplied with a Site Investigation or Geotechnical report because you are then able to identify the soil type and recommend the best additives. On a lot of occasions, these reports are not always available. So, what can we do?

I would like to advise some simple, non-scientific ways of testing that you can carry out only using an inexpensive, readily available plastic cup (or cut down water bottle). >

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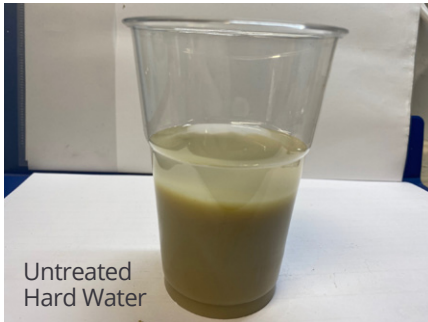






### Mixing drilling additives

The first thing to test is the make-up water. Bentonite and most of our additives will mix and hydrate better when the water has a pH of 8.5-9.5 and the total hardness/Calcium content is below 100 ppm. When Soda Ash is added to the make-up water it can raise the pH and lower the calcium, making the water more suitable.



So, how can users tell if the water is hard and high in Calcium? If some water is placed into a plastic cup and a small amount of Soda Ash is stirred into it, if the hardness (Ca) is low the water will remain clear. If the water becomes cloudy, then it is hard water and users will see Calcium carbonate precipitate.

Hard water that is untreated will cause Bentonite to form a clear water layer on top in the cup, mix tank and more importantly at the top of the bore. Calcium contaminates. Having this water at the top of the bore may cause an unstable bore that can collapse.

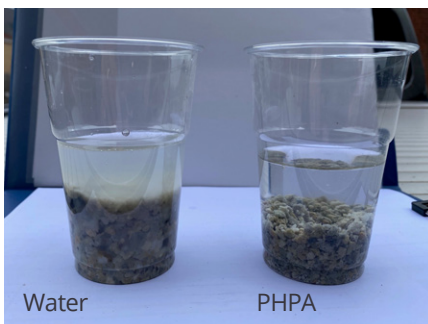


### Soil types

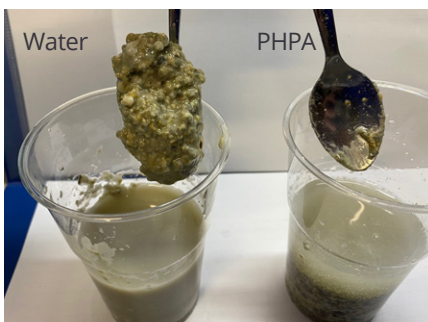
The next step is to try and identify the soil type. Operators can separate soil types into two categories:

#### Reactive and Non-Reactive

Reactive soils tend to be Clays and Shales, when hydrated they can swell, disperse, get sticky or all the above. Any of these can cause users problems down hole so it is nice to see what needs dealing with and mix the correct product to address any problems. If the soil reacts in the cup with water, we know the same will happen down hole.



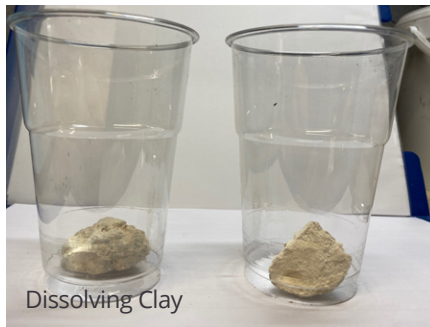
Sticky, swelling clay can stick to the tooling, drill string and product pipe causing a need for high drilling forces. The bore can get plugged off by the swelling, causing down-hole pressure as the drilling fluid now has no way back along the bore and can 'frac out' anywhere. Dissolving clay can disperse, increasing the fluid density, which will increase pump pressures and again could cause a frac out.



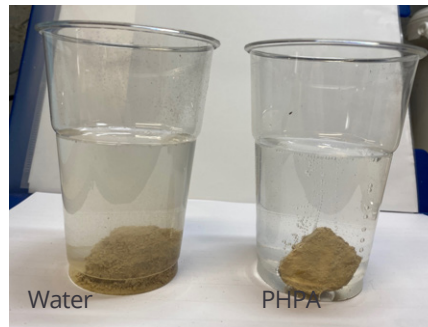
Due to Bentonite being a type of clay (montmorillonite), the dispersed clay particle size is the same making it difficult to recycle with solids control equipment. By placing the soil sample in the cup and adding water, users can see what reaction occurs. If it is a clay, treating with a PHPA (Ez-Mud Gold) will prevent the swelling clay from reacting and getting sticky, and the dissolving clay from dispersing. It will do this by encapsulating the reactive clays. >

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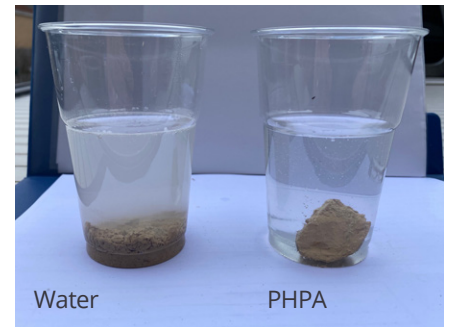


Dissolving Clay



Water

PHPA



Water

PHPA

### Non-Reactive

Sand, gravel, and rock are all non-reactive soils. These can cause users problems as they tend to have a higher porosity. This means the fluid flow in the bore can very easily be lost into the porous formation.

As operators know they mostly drill with a Bentonite when in these types of formation. They require our Bentonite to give Viscosity, have good gel strength, and Filtration control. Viscosity can give borehole stability; good gels will suspend cuttings and the filtration control will seal the borehole with good solids protecting the formation and reducing friction minimising the potential for stuck drill pipe.

So how can gel strength be tested?

Firstly, fill the plastic cup with the mixed Bentonite, then take some soil cuttings from the entry or exit pit of the bore. Stir the soil into the Bentonite and let it stand. If the cuttings stay in suspension it means the gels are fine and the Bentonite is doing its job. If the cuttings have settled at the bottom of the cup, then more Bentonite is required and possibly another additive to increase the gel strength (No-Sag), or is there something wrong with the make-up water, pH, Calcium, Salt (contaminate) content. If this is happening in the cup, it can be guaranteed the same will be happening in the borehole.

Filtration control (filter cake) involves plastering the borehole wall with good solids (Bentonite platelets), maintaining the fluid flow in the borehole, and not losing it into the formation. If operators maintain the fluid loss in the bore, then borehole stability can be maintained, and it can carry out the cuttings. This can be shown by partially filling the cup with sand, pouring water onto it, and watching. The water soaks straight through, i.e., high fluid loss. >



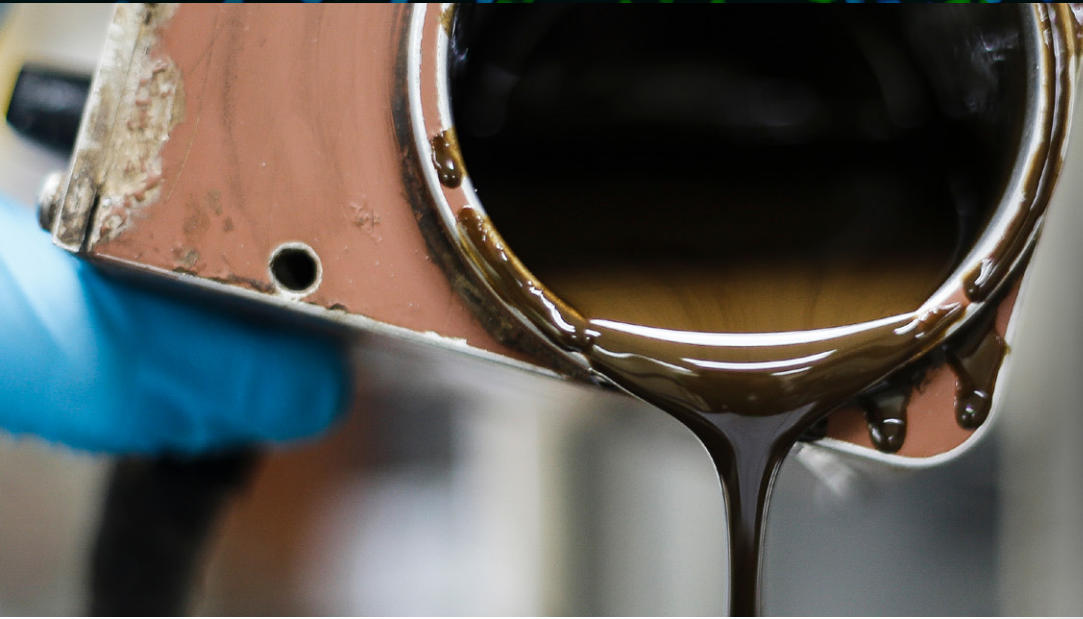
Gel Strength

Sand & Water:  
High fluid lossSand & Bentonite:  
Low fluid loss

#### GOLD SPONSORS



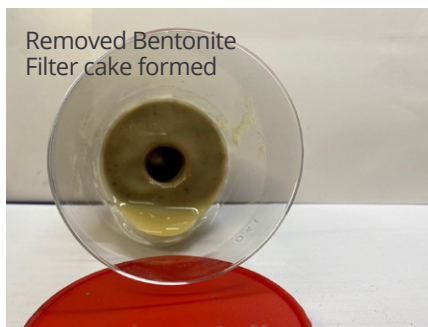




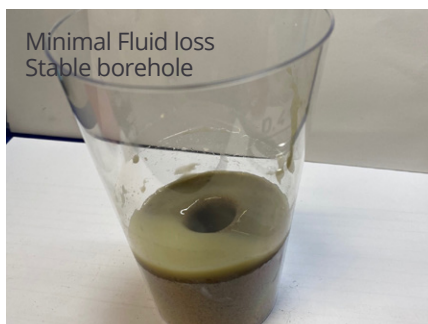
“Tests can be carried out on any jobsite and may help, they are not a replacement for having the recommended testing equipment.”



If the user then places a plastic spoon in the centre and rotates it, when the spoon is removed, the sand will just fill the hole, so no bore as it would collapse. When the cup is partly filled with sand and then Bentonite is poured on it, operators will see the Bentonite just starts to penetrate the sand very slightly. The platelets then form the filter cake and seals off the interface. Operators will see that the rest of the sand remains dry, i.e., minimal fluid loss. If users wish to make the filter cake stronger and tighten the filtrate due to a more coarse, porous soil they can add a PAC polymer to the Bentonite.



One such demonstration that is carried out during the Mud School sessions is called the hole in the sand. Here the tutor places a tube in the centre of the cup, which is partially filled with sand. A Bentonite and PAC mix is then poured into the cup and tube. The tube is then removed leaving the Bentonite to fill the created hole.



If then the Bentonite is removed by carefully pouring it out, it will show a thin film of Bentonite platelets coating the inside of the hole and the surface of the sand. Observers should also note that the sand remains dry.

Cup testing can be an easy, simple, inexpensive way to identify the soil conditions and decide on the best drilling products to use. Although these tests can be carried out on any jobsite and may help, they are not a replacement for having the recommended testing equipment.

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# SOCIETY NEWS


[ukstt.org.uk](http://ukstt.org.uk)

Society News brought to members by Trenchless Works

## UKSTT'S TECHNICAL ENQUIRY SERVICE

An interview with Tom Sangster, UKSTT Council Member and Chair of the Technical & Education Sub-Committee



Tom Sangster, UKSTT Council Member and Chair of the Technical & Education Sub-Committee

Tom Sangster is a Chartered Civil Engineer with 40 years' experience in civil and geotechnical engineering. His experience in trenchless technology covers all regions of the world during almost 30 years in the sector, firstly with Jason Consultants and more recently as Managing Director of Downley Consultants, a specialist consulting engineering company in trenchless technology based in the UK and Switzerland.

**What is the UKSTT Technical Enquiry service?**

The Technical Enquiry service is free and available to everybody through the UKSTT website. Anybody thinking of trenchless technology for a project, or with a problem for which they think there may be a trenchless solution, for example, can submit an enquiry and we will respond to the best of our ability and knowledge.

**How many Technical Enquiries does UKSTT receive?**

Last year we received about 40 enquiries. This is a little fewer than in previous years and we would certainly like to have more.

**What happens when a Technical Enquiry is received?**

Lynn MacLachlan, the Society's Business Development Manager, receives the enquiries in the first instance. We have a filtering system to decide how to respond to them. If there are no concerns with confidentiality or commercial sensitivity they are circulated to the Society's corporate members who can then respond if they wish to do so. This is an important benefit for our corporate members, as Paul Henderson, Business Development Manager, Sewer Renovations from Lanes Group said: "As a >

**"The Technical Enquiry service is free and available to everybody through the UKSTT website."**

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“We can often take knowledge of trenchless technology for granted but it remains relatively unknown across a broad swathe of the civil engineering and utilities sector. The Technical Enquiries Service is a good way to help people solve problems and also to make the knowledge of trenchless technology and its benefits more widely known.”

Corporate member we see great value in the UKSTT Technical Enquiry Service. The enquiries we receive are valuable and relevant and are forwarded on to the relevant team within Lanes to progress further.”

If the enquiry may be commercially sensitive, for example a problem on a particular project, or if it is technically difficult, it is forwarded to me as Chair of the Technical & Education Sub-Committee. I contact the enquirer either for more information or to suggest a solution. This may resolve the query directly or it may then be forwarded to selected members with the right expertise to help the enquirer.

#### Is it a consultancy service?

No. UKSTT itself cannot give consultancy advice related to specific projects. We do our best to help resolve the enquiry or to forward it to members who can do so. These latter may be consultants, in which case the enquirer may engage them to provide professional advice independently of UKSTT.

#### From whom are Enquiries typically received?

Enquiries come from a very wide range of people and organisations. Most are from contractors or consulting engineers that find themselves involved in projects where they think trenchless may be a viable option but need to know more about feasibility. Some are looking for specific product information, and some for market information. They cover rehabilitation and new installation as well as inspection and detection. Several relate to health and safety, and quite a few come from abroad.

We can often take knowledge of trenchless technology for granted but it remains relatively unknown across a broad swathe of the civil engineering and utilities sector. The Technical Enquiries Service is a good way to help people solve problems and also to make the knowledge of trenchless technology and its benefits more widely known.

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# UKSTT COUNCIL MEMBER PROFILES

Over the coming months, Trenchless Works will be working with UKSTT to highlight the knowledge and experience of its Council Members. We shall be looking for a couple of names each month.



Steve Butterworth

## Steve Butterworth

**Q: What is your background and what brought you into the trenchless industry?**

I started my working life in the late 70's progressing across to the No-Dig industry in the late 80's. Over the last 30-odd years I have moved from Site to Office and then onto Technical sales for a couple of different large German companies before finding myself now with Applied Felts as the International Sales Manager.

**Q: How/why did you get involved in UKSTT?**

I had been aware of the UKSTT for many years due to work colleagues being involved with the Council. I nearly joined myself on a couple of previous occasions before becoming a Council Member in early 2019.

**Q: What goals do you want to achieve as a UKSTT Council Member?**

I would like to help in seeing that the Society's goals are reached and to encourage new and current members to get involved more with the Society.

**Q: What do you see as being your own greatest personal achievement in the trenchless industry?**

Hard to pin point this as often others take too much credit singularly when team efforts should actually get the accolades. I suppose when I think about this it does make me proud to think of all the people throughout the world I have trained in different CIPP methods and to still see them on my travels and how they have progressed in the Industry.

**Q: What do you currently see as the industry's most urgent challenges?**

Apart from the obvious environmental obligations we all must try and improve, I think that more effort should be given on improving the sanitation and drinking water supplies within Third World Countries. How I do not know when its main problem is money and who will pay.

**Q: Where would you like to see the UKSTT in 5 years?**

I would like to see all the current UKSTT's aims and goals have been actually achieved. Also, that the Society is seen to be the place to go for the correct technical advice, training and information for any person or company's needs. >

"I would like to see all the current UKSTT's aims and goals have been actually achieved... that the Society is seen to be the place to go for the correct technical advice, training and information for any person or company's needs."

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Jim Albarella  
Trenchless Consultant at G.A.T  
& UKSTT Council Member

“For all members of UKSTT to be able to know that there is always a council member that can assist in any queries that they may have, to promote UKSTT and advise members on what is available in order that they can get the best advice and for their projects.”

## Jim Albarella

**Q: What is your background and what brought you into the trenchless industry?**

It was something of a round-about route. First I was in the Armed Forces (ROYAL NAVY) as a qualified weapons armourer and fire control of weapons systems on HM ships. Then I moved to the Vauxhall Motor Company on the production line. After that it was a move to Pre-Star Ltd which was a supervisor for car industry and then on to W.H. ALLENS Engineering which offered pressure testing of marine gas turbine casings/castings prior to final assembly. Eventually I moved to Tracto-Technik UK and was there from 1988-2017.

**Q: How/why did you get involved in UKSTT?**

During my employment with Tracto-Technik UK I was put forward by Billie Turner to represent the company on UKSTT Council. At the time he was standing down from UKSTT due to work commitments.

**Q: What do you see as being your own greatest personal achievement in the trenchless industry?**

Being able to communicate with customers and meet their needs on trenchless products and applications, also to have been able to travel to different places around the world and to carry out training and assist in projects that customers are undertaking. Furthermore there is the satisfaction of knowing that I have been able to meet customers' expectations as well as also making many friends along the way.

**Q: What do you currently see as the industry's most urgent challenges?**

For all members of UKSTT to be able to know that there is always a council member that can assist in any queries that they may have, to promote UKSTT and advise members on what is available in order that they can get the best advice and for their projects, even if this means suggesting a contractor or supplier to assist with their query.

**Q: Where would you like to see the UKSTT in 5 years?**

I would hope that more contractors, suppliers, and utility companies are involved in UKSTT such as power companies, Gas, renewables such as geo-thermal applications, charging stations for EV. At the moment more of these industries would be welcomed to the Society. UKSTT mainly concentrates on the water industry. There do not seem to be many other companies' involved although they maybe members.

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# GSTT SOCIETY NEWS

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GSTT News brought to members by Trenchless Works

## HIERARCHIES DON'T APPLY WHEN IT COMES TO INNOVATIONS

Dr.-Eng. Klaus Beyer (KB), Managing Director German Society for Trenchless Technology e.V. (GSTT) interviews Eng. Jörg Brunecker (JB) Managing Director Swietelsky-Faber GmbH Kanalsanierung



Eng. Jörg Brunecker (JB)  
Managing Director Swietelsky-  
Faber GmbH Kanalsanierung

With more than 25 years of leadership experience, Jörg Brunecker is one of the highest-profile voices in the sector of trenchless technology.

In an interview with GSTT Executive Director Dr Klaus Beyer, the 54-year-old talks about his confidence in the innovativeness of trenchless construction methods. This includes a high standard of execution, on-the-job safety, as well as client and employee satisfaction which help master the immense current challenges. At his company Swietelsky-Faber GmbH Kanalsanierung, Brunecker puts his faith in motivated employees, flat hierarchies and the conservation of resources.

Jörg Brunecker was born in Oldenburg, northwest Germany, in 1966 and studied urban water management at Oldenburg University of Applied Sciences. He began his career in 1994, when he joined a small construction firm as head of pipe rehabilitation. In 1997 he became European Product Manager for Uponor Anger's rehabilitation division. From 2001 until 2007 he headed the Hamburg branch of Insituform before serving as General Sales Manager Europe for Chevalier Pipe Technologies. From 2009 until 2014 he was an executive director at Insituform, where he was in charge of foreign units, sales and marketing.


Since 2014, Brunecker has been general manager of Swietelsky-Faber GmbH Kanalsanierung. In addition, his role as a committee chairman for international standardisation bodies ISO and CEN makes Brunecker a highly influential voice in the field of pipe rehabilitation. >



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"Our sewer networks are planned, constructed and operated in keeping with accepted codes of practice, and in view of the high replacement value of those systems, the cost effectiveness and efficiency of the technologies deployed plays a very significant role for all of us."

KB: Mr Brunecker, I would like to start by asking what makes trenchless construction and sewer rehabilitation so interesting for you?

JB: When I was a kid, my father used to say: "Son, look for a job in the sewage industry, it will never go out of business." But obviously that was not the only thing that motivated me. The construction industry is full of interesting challenges. In the wastewater sector, a properly functioning infrastructure is essential for protecting the environment and, by extension, our health. It is also a sector in which the implementation of the proper functioning requisite is very well regulated by legal provisions like the EU Water Framework Directive, Germany's Federal Water Act and the water laws of its individual states.

Our sewer networks are planned, constructed and operated in keeping with accepted codes of practice, and in view of the high replacement value of those systems, the cost effectiveness and efficiency of the technologies deployed plays a very significant role for all of us. Then there are the technical challenges and tasks that come up in day-to-day practice and are changing constantly. Last but definitely not least, I am driven by the determination not to lay the burden of protecting the environment and preserving the value of our infrastructure on our children's shoulders, even if I am only a small cog in a big machine.

KB: It is no secret that the high-tech demands made of the process, equipment and materials technology involved with sewer rehabilitation are evolving at breath-taking speed. How do you manage to keep pace with developments?

JB: We have fine-tuned our sensors so that we can identify the short and long-term tendencies in the sector and the market at a very early stage. We work with several external consultants and have set up numerous internal technical task groups whose members are in constant contact with the market players and take a collaborative and sometimes controversial approach in their search for answers.

>

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“Hierarchies do not apply when it comes to innovations; it is the best argument that matters, not a person’s position.”

We are guided by the technical curiosity of our team, which is something I always find refreshing. “There is no such thing as can’t” – I guess you could say that is our motto. On top of that, every member of staff always gets to have their say internally, regardless of whether they are an apprentice, a white-collar worker, a technician or an engineer. Hierarchies do not apply when it comes to innovations; it is the best argument that matters, not a person’s position.

Seeing our staff’s integrity when it comes to our core values and team-oriented spirit of innovation, I cannot help but share their enthusiasm. Every single day, they show me that innovativeness is what we are all about, it is what we live for. They also demonstrate that to the outside world too, in our partnerships with suppliers, institutes and clients. Our innovations are not restricted to R&D either. We are firmly convinced that every single suggestion for improvement helps us move forward, even if it ends up not being implemented.

**KB:** What role does the company’s management play in relation to innovations?

**JB:** In our case the hierarchy certainly plays a role but it is not the measure of all things. My main focus is on making sure our internal values and goals are respected, it is vital for management to lead by example. It is very important to behave with integrity and be an authentic role model. It also goes without saying that you have to respect people’s individuality too, because you cannot just lump everyone together, every leadership personality is different. I believe those are the key factors for a successful company. This basic setup moves our company forward and what is more, it boosts motivation and makes what can often be very hard work a lot more enjoyable.

**KB:** From what you said before, sustainability is very important to you. So how do you practice sustainability in terms of what you do as a company?

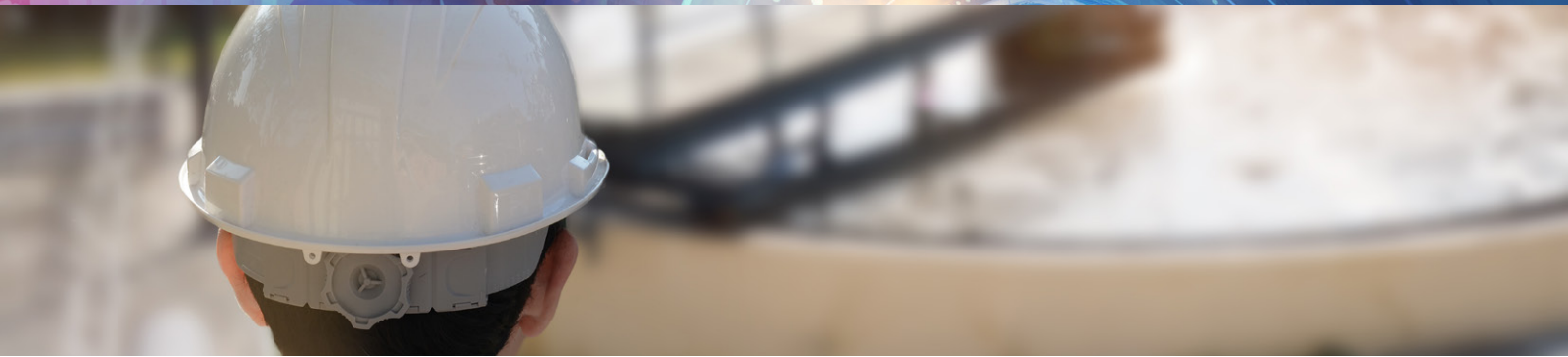
**JB:** As a construction company, we obviously have to make sure we earn money. But that does not mean we neglect our responsibility to the environment. Protecting our environment is very important to us and we always try to contribute to sustainability in any way we can by implementing energy-saving innovations and projects. That sense of responsibility is firmly anchored in our corporate guidelines. At Swietelsky-Faber GmbH Kanalsanierung, we apply those principles in every field of activity and use them to set benchmarks for the suppliers we source our equipment and materials from as well. We have been optimising the energy efficiency of our installation equipment and all our offices for many years now, and the efficiency potential is still far from exhausted. Let me give you an example: Some of our construction plant has already been equipped with high-performance rechargeable batteries as an alternative to diesel-powered generators. As verified

>

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“The young colleagues who start their careers with us are much more focused on sustainability, flexibility and doing meaningful work.”

by our second energy audit according to DIN EN 16247, the various measures we have taken have enabled us to achieve an 8% reduction in fuel consumption in relation to revenue. The substitution of fossil fuels with renewable resources has got underway in the construction sector but there is still a long way to go.

KB: What about the next generation, would you say youngsters have a different perspective when it comes to their professional careers?

JB: With 15 apprentices and trainees, as well as various young engineers and white-collar staff, our company is lowering the average age of its workforce considerably as compared to other firms. In my view, the young colleagues who start their careers with us are much more focused on sustainability, flexibility and doing meaningful work. I think the way priorities have shifted for the young generation is remarkable: social skills and protecting our environment are often more important to them than going all out to climb the career ladder. I respect that.

#### Swietelsky-Faber GmbH Kanalsanierung

Swietelsky-Faber GmbH Kanalsanierung is owned in equal parts by two construction groups, Eiffage and Swietelsky Baugesellschaft, which together employ approximately 80,000 people and generate revenue of more than €20 billion (£17.5 billion/US\$24 billion). In recent years, Swietelsky-Faber GmbH Kanalsanierung has evolved into what is classed as a large corporation of the German business commercial code.

Despite its high volume of state-of-the-art assets for the installation of UV-cured liners, market leadership is not the decisive factor for Swietelsky-Faber Kanalsanierung. The company is driven not by market shares but by its self-defined goals. While a healthy profit is not unimportant, the company aspires to guarantee an excellent standard of execution and the maximum degree of on-the-job safety. The satisfaction of its customers and the welfare of its workforce and the environment are its top priorities. Swietelsky-Faber Kanalsanierung is currently expanding its locations in Europe and will continue to make substantial investments in staff and equipment for the maintenance of wastewater infrastructure.

[www.swietelsky-faber.de](http://www.swietelsky-faber.de)



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### PROGRAMME

#### SESSION 1 GRAVITY SEWER REHABILITATION

KEYNOTE LECTURE: GRAVITY SEWER LINER DESIGN,  
Olivier Thépot, Eau de Paris, France

Design of Liners in Germany according to A143-2,  
Mark Klameth, IKT, Germany

WRc Sewer Rehabilitation Manual - Key Changes in  
Design Methodology, Nick Orman, WRc, UK

External Pressure Tests on Large Diameter Jacking Pipe  
Systems, Högni Jónsson, Amiblu Technology, Norway

"Real-time Monitoring of UV Lamps as Requirement for  
Controlled and Protocolled Curing of Large Diameter  
Liner with Big Wall Thickness", Firmino Barbosa, Reline  
Europe, Germany

Questions & Discussion Dec Downey

#### SESSION 2 PRESSURE PIPE REHABILITATION

KEYNOTE LECTURE: PRESSURE PIPE REHABILITATION,  
John Gumbel, JG Pipeline, UK

Status Quo of the CIPP Product Standards for Water & Gas  
Networks, Ricky Selle, Selle Consult, Germany

Key Design Considerations for PE80 and PE100 Pressure Pipe  
Liners, Steve Brogden, Die Draw Ltd, UK

"Response of a Cured In Place Liner in Cast Iron Water Pipe due  
to Joint Expansion due to Permanent Ground Deformation or  
Seismic Wave" Olivier Thépot, Eau de Paris, France

"A Unique Example of Close Fit Lining Technology for the  
Renewal of Water Pipes along the Bridge "Ponte Punta Penna"  
in Taranto", Federica Fuselli, Rotech Srl, Italy

Questions & Discussion, Dec Downey

Closing Remarks by Conference Chairman, Dec Downey

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# EVENTS AND MEETINGS

## 2021

March 3-4 AUSJET21

Melbourne, Australia.

Details from: <http://ausjetconnect.com.au/>

March 28 April 1 NASTT 2021 No-Dig Show  
Orlando, Florida.

Details from: [www.nastt.org/events/nastt-2021-no-dig-show-orlando-fl/](http://www.nastt.org/events/nastt-2021-no-dig-show-orlando-fl/)

April 16-18 3rd junior talent development  
forum – Star of the Youth Conference  
China. Details from: [www.soy.csstt.org.cn](http://www.soy.csstt.org.cn)

April 19-25 RO-KA-TECH 2021

Kessel, Germany. Details from: [www.vdrk.de](http://www.vdrk.de)

April 20-23 bauma CONEXPO INDIA

Delhi, India. Details from: [www.bcindia.com](http://www.bcindia.com)

April 21-23 No-Dig Poland

Kraków, Poland. Details from:  
[www.nodigpoland.pl](http://www.nodigpoland.pl)

No-Dig Roadshow 2021

Glasgow, Scotland.

Details from:

[www.nodiglive.co.uk/glasgow-roadshow-2021](http://www.nodiglive.co.uk/glasgow-roadshow-2021)

Trenchless Middle East 2021

Dubai, UAE.

Details from: [www.trenchlessmiddleeast.com](http://www.trenchlessmiddleeast.com)

June 13-16 RETC

Las Vegas, USA. Details from: [www.retc.org](http://www.retc.org)

No-Dig Live 2021

Peterborough, UK.

Details from: [www.nodiglive.co.uk](http://www.nodiglive.co.uk)

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European No-Dig Conference

Peterborough, UK. In conjunction with No-Dig Live  
2021 Details from: [www.nodiglive.co.uk](http://www.nodiglive.co.uk)

June 16 Trenchless Romania

Bucharest, Romania.

Details from: <http://trenchless-romania.com/>

June 20-24 Singapore International Water Week  
Marina Bay Sands, Singapore.

Details from: [www.siwv.com.sg](http://www.siwv.com.sg)

September 15-18 Geofluid

Piacenza, Italy. Details from: [www.geofluid.it](http://www.geofluid.it)

October 5-8 No-Dig Down Under

Sydney, Australia

Details from: [www.nodigdownunder.com](http://www.nodigdownunder.com)

October 13-14 8th NSTT No-Dig Event

Nijkerk, The Netherlands.

Details from: [www.no-dig-event.com](http://www.no-dig-event.com)

November 16-17 (NEW DATE) Trenchless Asia 2020  
featuring the ISTT International No-Dig

Kuala Lumpur, Malaysia.

Details from: [www.trenchlessasia.com](http://www.trenchlessasia.com)

## 2022

April SAO Paulo No-Dig Show

Sao Paulo, Brazil. Details from: [www.saopaulonodig.com.br](http://www.saopaulonodig.com.br)

May 30-June 3 IFAT 2022

Munich, Germany.

Details from: <https://www.ifat.de/en>

June 17-24 North American Tunnelling Conference  
(NAT) 2022

Philadelphia, USA.

Details from: <http://natconference.com/>

May Trenchless Asia 2022

Manila, Philippines

October 3-5 No-Dig Helsinki 2022

Helsinki, Finland

Details from: [www.nodighelsinki.com](http://www.nodighelsinki.com)

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](mailto:editorial@trenchless-works.com)

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