


# TRENCHLESSWORKS

THE VOICE OF THE TRENCHLESS COMMUNITY

ISSUE 202 JUNE 2023

Official Magazine & Media Partner:  **UKSTT**

Official Publication of the International Society for Trenchless Technology



## PIPE CUTTER APPROVED BY NGN

HOT TEMPS ARE NO MATCH FOR NUCURE

PROKASRO - GAME CHANGING INFORMATION  
TO INCREASE UV PERFORMANCE

SPONSORED BY:  
**TRACTO**

SUPPORTED BY





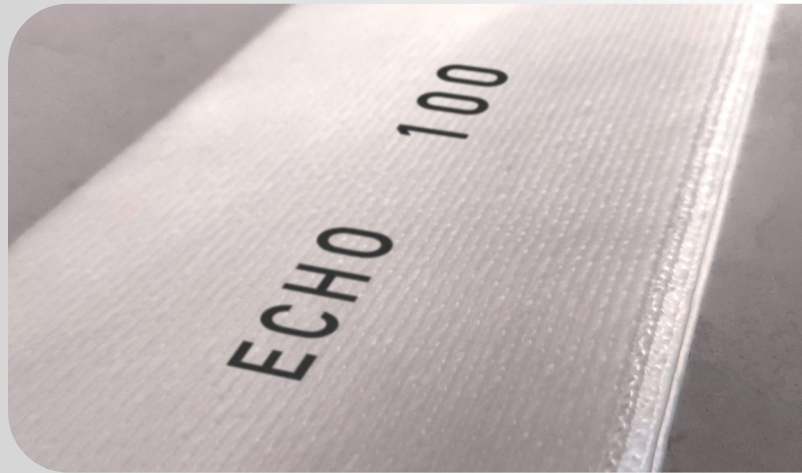
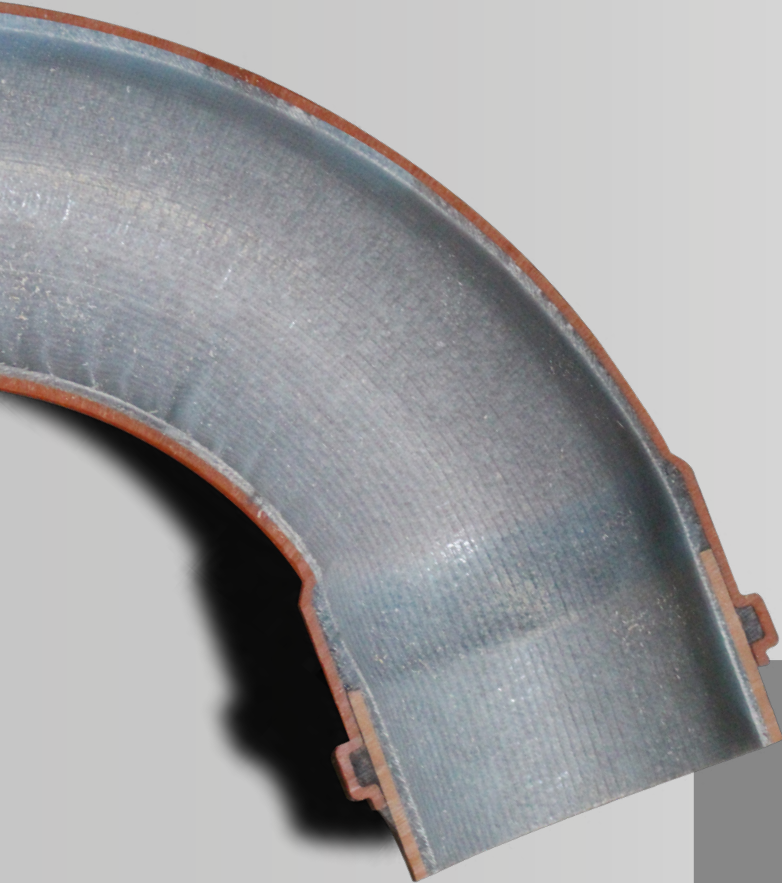


**RSM Lining Supplies**  
CHOICE AND TECHNOLOGY



*Scan the QR Code  
to claim your free  
sample pack*

# NEW OPTIONS ADDED TO THE **ECHO LINER** FAMILY



## **ECHO LINER**

*Seam free construction to ensure optimum flexibility*

## **ECHO GLASS**

*Reinforced with fibreglass, offering an increased strength characteristic*

## **ECHO DIAMETER CHANGE**

*Ability to negotiate numerous diameter changes*

+44 (0)330 043 9604  
sales@rsm-web.com  
www.rsm-web.com



**ECHO LINER**



# CONTENTS

To submit editorial for Trenchless Works next issue please email copy and images to: [editorial@trenchless-works.com](mailto:editorial@trenchless-works.com) by the 12<sup>th</sup> of the month. Submissions arriving after this date cannot be guaranteed inclusion in that month's issue. For Trenchless Works sponsorship and advertising rates please email [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk)

ARTICLE	PAGE	SUPPORT EQUIPMENT	
SPOTLIGHT	5	PE PIPE CUTTER APPROVED BY NGN	47
		SOUTH GEELONG STATION – WATER MAIN RELOCATION PROJECT	50
<b>INDUSTRY COMMENT</b>		HERCULES SITE SERVICES' FURTHER INVESTMENT IN SUCTION EXCAVATION	52
UNEARTHING THE IMPORTANCE OF TRAINING IN TRENCHLESS TECHNOLOGIES	6	ORBIS AND VODA.AI LEAKAGE PARTNERSHIP	53
		TRACKED MTS DINO FOR PIER UK	54
<b>NEWS</b>		<b>ASSET MANAGEMENT</b>	
TRACTO UK SEALS DEAL FOR 18ACS IN SAUDI	13	LOCATING THE LARGEST LEAK IN THE USA	56
GAME-CHANGING INFORMATION TO INCREASE UV PERFORMANCE	16	LANES LAUNCHES NATIONAL HIGHWAY DRAINAGE SURVEY SERVICE	59
GF PIPING SYSTEMS POSITIONS ITSELF AS A GLOBAL LEADER	21		
NO-DIG LIVE 2024 OPEN DAY	23	<b>ISTT SOCIETY NEWS</b>	
VAPAR AND UNITED UTILITIES WIN EUROPEAN AWARD	25	A MESSAGE FROM THE CHAIR	61
NO-DIG ROADSHOW SUCCESS IN GLASGOW	26	ISTT WEBINAR	64
		ROUNDUP – ITTC 2023	66
<b>PIPELINE REHABILITATION</b>		STUDENT PAPER COMPETITION AT NO-DIG MEXICO	68
HOT TEMPS ARE NO MATCH FOR NUCURE COLD CURE UV	28	<b>NASTT SOCIETY NEWS</b>	72
TIME IS CASH, TIME IS MONEY!	31		
SLIP LINING USING PICOTE SLIPLINING METHOD	37	<b>UKSTT SOCIETY NEWS</b>	
REINFORCING STRATEGIC WEST-EAST LONDON WATER MAIN	42	WELCOME FROM THE CHAIR	73
BRAWO® SYSTEMS SHORTLINER	45	EVENTS AND MEETINGS	76
BRAWO® DRUM 4.0 – ONE FOR EVERYTHING!	46		

Paul Harwood, Publisher  
[pharwood@westrade.co.uk](mailto:pharwood@westrade.co.uk)

Ian Clarke, Editor-in-Chief  
[editorial@trenchless-works.com](mailto:editorial@trenchless-works.com)

Austen Lees, Editorial  
[marketing@westrade.co.uk](mailto:marketing@westrade.co.uk)

Gary King, Group Sales Director  
[gking@westrade.co.uk](mailto:gking@westrade.co.uk)

Stuart Hillyard, Sales Manager  
[shillyard@westrade.co.uk](mailto:shillyard@westrade.co.uk)

Leigh Abbott, Group Marketing Manager  
[labbott@westrade.co.uk](mailto:labbott@westrade.co.uk)

Ioan Lucian Sculeac, Design & Production  
[lucian@westrade.co.uk](mailto:lucian@westrade.co.uk)

Lexi Di, Chinese Agent  
[lexi.di@bestexpo.cn](mailto:lexi.di@bestexpo.cn)

Trevor Dorrell, Sales Director  
[tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk)



Trenchless Works is published 12 times a year by Westrade Group Ltd | Carotino House | Bury Lane | Rickmansworth | WD3 1ED | UK

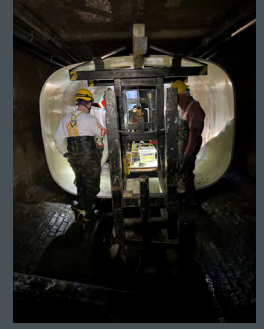
Contributions: Contributions are invited and articles should be emailed to [editorial@trenchless-works.com](mailto:editorial@trenchless-works.com). No responsibility can be taken for drawings, photographs or written contributions during delivery, transmission or when with the magazine. In the absence of an agreement, the copyright of all contributions, regardless of format, belongs to the publisher. The publishers accept no responsibility in respect of advertisements appearing in the magazine and the opinions expressed in editorial material or otherwise do not necessarily represent the views of the publishers. The publishers accept no responsibility for actions taken on the basis of any information contained within this magazine. The publishers cannot accept liability for any loss arising from the late appearance or non-publication of any advertisement for any reason whatsoever.

ISSN 2049-3401

Subscribe for free: [www.trenchless-works.com](http://www.trenchless-works.com)



# CHANNELINE GRP Structural Lining Systems



PANELS SHOWN ABOVE ARE MANUFACTURED BY  
CHANNELINE

## ANY SHAPE – ANY SIZE

Large diameter pipelines and culverts represent the backbone of any city's utility network for the collection and disposal of sewerage and effective drainage of stormwater. The need arises to consider the means by which the structural rehabilitation of these pipelines and ducts can be achieved whereby a new, 100-years plus life expectancy can be provided with a high degree of confidence. Channeline international has been providing bespoke Structural Glass Reinforced Plastic (GRP / FRP) lining systems since the early 1980's, during which time we have accumulated unrivaled engineering and manufacturing experience for both Circular and Non-circular buried infrastructure worldwide. **At Channeline, we are proud of our heritage and are committed to offering economic custom solutions to our existing and future customers in the Storm and Wastewater Sectors.**

Channeline International Fiber Glass Manufacturing L.L.C.  
P.O. Box 8091 Dubai,  
United Arab Emirates  
Tel: +971 4 8848383  
Fax: +971 4 8848384  
E-mail: [timwebb@apsdubai.com](mailto:timwebb@apsdubai.com) /  
[sales@channeline-international.com](mailto:sales@channeline-international.com)  
Website: [www.channeline-international.com](http://www.channeline-international.com)

### Applications:

- Sewer Main Pipelines
- Sewer Overflow Pipelines
- Sewer Interceptor Pipelines
- Sewer Inverts
- Storm Water Drains
- Seawater Cooling Pipelines
- Large Diameter Culverts and Tunnels
- Railway & Road Culverts
- Manhole Liners
- Multisegmental Liners

Channeline International North America  
Tel: +1 514 2424495  
E-mail: [andysherwin@channeline-international.com](mailto:andysherwin@channeline-international.com)



## Beyond the Ordinary



# SPOTLIGHT



Paul Harwood, Managing Director and event organiser, Westrade Group Ltd. Publisher, Trenchless Works, Liaison, Board of Directors, International Society for Trenchless Technology

## Hello All

Well, it has certainly been a busy few months for the fabulous Westrade team and the whole trenchless community! The hugely success Trenchless Asia event in Kuala Lumpur was quickly followed by an equally well attended, and sunny, No-Dig Roadshow at the Westerfield Hotel just outside Glasgow. Supported by Scottish Water and UKSTT, this was the second in our ever-popular roadshow series with an exhibition floor featuring several of the sector's best-known names including Quick-Pig, Steve Vick, PE100+ Association and UIS. The conference programme was expertly put together by UKSTT and moderated by Iain Naismith – thank you Iain. The third and final No-Dig Roadshow of 2023 takes place on 29 November at the wonderful Tortworth Court, near Bristol. This event also incorporates the UKSTT Annual Awards and Dinner which is always a sell out, so be sure to book your tickets now to avoid disappointment – [www.nodigroadshows.co.uk](http://www.nodigroadshows.co.uk).

It was great to see many of you at the recent No-Dig Live Open Day which took place at the show's new home, the NAEC Stoneleigh Park. Everyone I spoke to welcomed the opportunity to see these amazing new facilities first-hand, it is a venue that has changed beyond recognition since we were last there. Feedback was overwhelmingly positive and we are working many of your suggestions into our plans for 2024. The Farm Shop also recorded one of its best ever days!

The Westrade team is now gearing up for the ISTT's International No-Dig Mexico 2023 event that takes place at Expo Santa Fe between 17 and 18 October and is supported by LAMSTT and NASTT. The multi-track conference programme, which features a wide range of technical sessions, will be a major draw for visitors representing the biggest names in the installation and refurbishment of underground utilities across South America and the USA.

Finally, keep an eye out as well for more news on Trenchless Asia 2024 (running between 26 and 27 June) which next year moves to the Philippines vibrant capital city of Manila and the SMX Convention Centre.

That is all for now. I hope you enjoy this edition of Trenchless Works and I look forward to seeing you at one of our events soon.

Paul



# UNEARTHING THE IMPORTANCE OF TRAINING IN TRENCHLESS TECHNOLOGIES

## Addressing the Gaps and Enhancing Skills for a Growing Sector



Frank Reilly



Paul Harwood

Welcome TW readers, to this industry sector piece, where we want to shed some light on the vital role of training in the world of trenchless technologies. Today, we have the opportunity to put questions to JBP's Director for Trenchless Training – Frank Reilly. Frank was instrumental in establishing JBP's Trenchless Training Programme and more latterly working to bring the programme on-line.

He is someone who prefers to remain behind the scenes, facilitating and supporting the 'real experts' to share their knowledge, experience and expertise through the courses they have worked on with JBP. Welcome Frank.

**Frank:** Thank you Paul, and many thanks for giving me the opportunity to share my thoughts and comments on something both JBP and I care passionately about, namely Trenchless Technologies and Training.

**Paul:** What was the inspiration or motivation behind establishing JBP's Trenchless Training Programme, and when and where did it all begin?

**Frank:** Let me take the second part of your question first Paul. JBP's Trenchless Training programme formally kicked off in March of 2017, in Malaysia. We delivered our first course in Sewer Condition Assessment and Coding, together with Peter Henley from WRc, to a group of engineers and technicians from Indah Water Konsortium (IWK), and a group of contractors, in Kuala Lumpur.

In actual fact, JBP's commitment to training, started well before 2017. With numerous invitations from organisations such as PUB in Singapore, JPP in Malaysia, UDC in Vietnam and many others, to deliver technical short courses and seminars, to help inform and train their engineers and technicians.

With regards the inspiration or motivation behind setting up the programme, this came out of the assessment through another of JBP's consulting services and as a trenchless solutions provider. Without effective training and knowledge exchange it was clear that the adoption of many of the solutions JBP was proposing or the methods and machinery many of the contracting companies were considering using would potentially not be successful. >





Images of attendees and presenters at various training events



Dr Dec Downey during one of the training sessions run through JBP

**Paul:** How have you gone about developing the courses that are included in the Trenchless Training programme?

**Frank:** I am glad you asked me that Paul. At the core of the programme is the principle of sharing knowledge, experience and expertise. Paraphrasing a saying that is often cited by our Managing Director, Börje Persson 'to be successful know-who is as important as know-how'. JBP was established in 2004 by Börje. Many people will know that Börje's experience in the Trenchless sector extends over more than three decades. He brings to the table considerable knowledge and experiences, as do so many others with whom he has had the privileged of working over the last 35 plus years.

The strength of the programme is that we have tapped into that considerable knowledge, experience and expertise, working with some of the best in their respective fields, with names that need little or no introduction such as Dr Dec Downey, Tom Sangster, Don Ridgers, Albert Herber who provide independent marking of many of our course assessments, and others, to develop courses that will facilitate that all important knowledge transfer to the next generation.

**Paul:** What about your own role? Do you get directly involved in the delivery of the courses?

**Frank:** Yes, always in a coordinating capacity, to ensure every course runs smoothly and is effectively delivered. Sometimes I do get more involved when the courses are delivered in a blended way, part in-situ, part on-line and part through live webinar links with the real experts.

I often comment to the participants in a course that I am the least qualified person in the room, after all I am surrounded by qualified engineers and technicians. My own background is in education. I have gained a level of understanding and knowledge over the years I have worked with JBP and in cooperating with the experts with whom we have developed the courses and who support their delivery.

My job, my role is to facilitate, both for those taking any of our courses, but of equal importance is to help facilitate the development of courses that will be of direct benefit and relevance to professionals working in the sector. >

SPONSORED BY:

**TRACTO**



Classroom training  
in progress



Practical training  
under way



In the field  
training

**Paul:** You mentioned facilitating courses that are relevant to professionals working in the sector? Do the courses in the programme have a particular focus?

**Frank:** Central to our courses is an applied approach to the use of methods, technologies and solutions. At present we have focused our courses primarily in asset management, condition assessment, and rehabilitation for sewer pipelines. We have recently added two new courses focusing on related asset management issues for Water Mains and another course which offers a comprehensive introduction to and overview of Trenchless Rehabilitation Solutions. This last course is an updated version of a course that was successfully delivered, in-situ in Kuala Lumpur in June 2019, by Dr Dec Downey and our own MD Börje Persson, to over 40 engineers and technicians. This course is now available on-line.

This last course is also a good illustration of another important aspect to the courses we develop, that being a practical and applied focus. I believe this particular course will be very valuable to those who are maybe new to the sector or need to gain a good overview of methods, solutions and related technologies and some key considerations in the decision making process.

**Paul:** I know JBP has cooperated with our team here at Westrade, and has run a programme of Applied Trenchless Technologies Workshops at every Trenchless Asia conference since 2016. Was the programme well received this year?

**Frank:** Unfortunately, I couldn't be there in person on this occasion due to other commitments, but my colleagues tell me it was standing room only, in many of the sessions! We always try and get a cross-section of contributors including systems suppliers, contractors, utility representatives, consultants, professional bodies and others, and we give them the scope and freedom to present their company's or organisation's products and services, sometimes referenced to case studies of applications. I believe the practical, applied focus is an excellent complement to the main conference programme with its highly informative technical sessions. We are delighted to have cooperated with your team Paul, and look forward to doing so again in the future. >





Visiting trade events is also a useful way of learning about current techniques and ideas

**Paul:** In my introduction I mentioned you had more recently brought the programme on to an on-line platform. Was this prompted by the restrictions imposed during the pandemic?

**Frank:** No, but its development was certainly accelerated by the restrictions during the pandemic. None of us need reminding of the amount of screen time, Zoom calls and on-line webinars we all enjoyed (or maybe endured) during that time. But, prior to the pandemic, it was clear to us that in order to make our courses available to the widest possible trenchless community, in a way that was convenient and also took account of the costs both for users of the platform and for delivery, a fully developed on-line platform would be essential. JBP has made a significant investment in developing its trenchless programme and the on-line platform. We have developed valuable in-house expertise, not only in how to develop and deliver courses relevant to trenchless professionals, but also in packaging them to make sure that they can be effectively delivered to all candidates who enrol on any of our courses.

**Paul:** Frank what do you think are the key challenges that professionals face in adopting and implementing trenchless technologies?

**Frank:** One of the primary challenges is developing specialised knowledge and finding the appropriate training. Trenchless technologies require unique skills and understanding of the equipment, materials, and techniques involved. Additionally, the rapid evolution of these technologies necessitates continuous learning to keep up with the latest advancements. Again, I would like to emphasise here the importance of an applied focus of much of the training the sector needs. There is of course a role for training and courses at a variety of levels, technically and in terms of deliverables, but I believe in all cases professionals must come out of any training with both an improved knowledge or understanding, but also critically with the ability to apply their newly enhanced knowledge and understanding.

**Paul:** Do you think training has role to play in driving innovation and the future of trenchless technologies?

**Frank:** The future of trenchless technologies is incredibly promising. As urbanisation continues to accelerate, the demand for efficient, non-disruptive solutions will only increase. There is also greater scrutiny of environmental impacts and also value for money. Training programmes play a crucial role in fostering innovation by nurturing a skilled workforce. By staying up to date with the latest techniques and best practices, professionals can push the boundaries of what is possible in the trenchless industry. >





Visitors at the recent Trenchless Asia event in Kuala Lumpur

**Paul:** In your opinion, Frank, how can the industry collaborate in bridging training gaps and enhancing the skills of professionals?

**Frank:** Collaboration is key to addressing training gaps effectively. No single organisation or training provider can do this on their own. Firstly, industry associations, training providers, key events organisers such as Westrade, Paul, and other stakeholders, should work together to establish standardised certification programmes with recognition across the sector. I know these already exist in some areas and through some recognised platforms, but I think there is more work to be done. This would ensure a consistent level of expertise and professionalism.

Secondly, promoting research and development in training methodologies can lead to innovative and efficient ways of imparting skills. The tools are there and should be used more widely and to better effect. Lastly, sharing best practices and success stories through conferences and forums can inspire others and encourage the recognition and value to training, for all concerned.

**Paul:** Thank you very much Frank, for sharing your comments and observations in this very important area for the trenchless sector. One final question, if I may, before we bring this to a close. What plans are there for the future?

**Frank:** Firstly Paul, many thanks to you and all the team at Trenchless Works. It is a fantastic and important platform in keeping us all informed and helping us share the knowledge and experiences we all have.

Regards to the future, now our focus is on consolidating the courses we have already developed and are available on the platform and making sure people are aware of the real benefits they can bring to their teams, and their organisation's or company's bottom line.

We are also engaged in several very interesting conversations, with many of the experts and organisations working with Trenchless solutions, to meet new training needs. JBP's door remains firmly open to all those who share our passion for trenchless, for raising standards, for continuous professional development and for helping to inform and educate the next generation!

SPONSORED BY:

**TRACTO**





## Water & Wastewater Courses for Professionals





+34 96 131 1400  
@ info@trenchless.training



JBP Composites S.L.

## Elevate Your Team's Knowledge & Skills Invest in Training

Courses for Trenchless Professionals in ...

- 
- 
- 
- 

Developed and delivered by Leading Sector Experts

[www.trenchless.training](http://www.trenchless.training)

Now  
On-line



## TRENCHLESS TECHNOLOGIES SOLUTIONS SUPPLIER

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



### CIPP - UV-CURED GRP LINERS

UV light cured liners for pipe diameters from 100mm to 1600mm.

### PATCH REPAIR MATERIAL, PACKERS & PIPE STOPPERS

Systems for patch repair in all types of pipes. Silicate resin and fiberglass together with installation equipment such as packers and pipe stoppers.



### UV-CURING SYSTEMS

"Ultra-violet" curing systems for light cured liners, from diameter 100mm to 1600mm.

### INSPECTION & ROBOTICS EQUIPMENT

CCTV inspection and pipe cutting equipment for all types of pipe profiles, for diameters 70mm to 1200mm.







# UIS Go Golfing

Proud Sponsors of The Pipeline Industries Guild & Cadent Gas Golf Days



UIS Tooling and Technology has dedicated itself to expanding its presence in the utilities and pipeline sectors throughout the year. The company has successfully launched its new Technology business, catering to numerous large client organisations with a comprehensive range of tooling and technology solutions.

According to Joe Iredale, the Managing Director of UIS Tooling and Technology, establishing awareness of their award-winning traditional tooling offerings is a fundamental aspect of their business growth. However, he also emphasises the importance of highlighting the introduction of their new technological innovations. These innovations provide asset owners with invaluable means to manage their assets in a more cost-effective and efficient manner.

To bolster brand and product visibility, UIS Tooling and Technology has actively engaged in various industry events. Notably, Director of New Technology, Joe Lynch, who is an avid golfer himself, has led the UIS team in participating in several high-profile golf competitions recently. As a proud sponsor, UIS fielded a team for the Pipeline Industries Guild Golf day held on June 6th at The Branston Golf and Country Club. Although they showcased their exceptional golfing skills, they narrowly missed securing an award. Reflecting on the day, Joe Lynch expressed his admiration for the well-organised event, stating that UIS will persist in their pursuit of victory in future competitions.



This event served as a warm-up for the highly anticipated annual Cadent Gas Golf Day, which was also partly sponsored by UIS Tooling and Technologies and took place at The Belfry Brabazon course. Once again, the UIS team performed admirably but narrowly fell short of claiming a prize by a single spot. Joe Lynch humorously remarked, "What a day, if Carlsberg did golf days..." Nevertheless, the event successfully raised significant funds for the Cadent Foundation, a vital support system for individuals in vulnerable situations. Joe Iredale emphasised the significance of supporting such events, particularly the Cadent Foundation, as it plays a crucial role in aiding numerous charities across the country. This year's proceeds were dedicated to Emmaus, an outstanding organisation dedicated to helping individuals overcome homelessness by offering meaningful work, training, support, and stable housing for as long as necessary.



Collaborating with Cadent and other Gas Distribution Networks (GDNs), UIS Tooling and Technologies are actively developing products that enhance the lives of individuals facing vulnerable situations. Their commitment to supporting events like these exemplifies the company's core values and purpose. UIS Tooling and Technologies remain steadfast in their mission to drive meaningful technological advancements in the global utility sector, addressing critical needs and making a positive impact worldwide.





Handover – Roger Wahl, MD Tracto UK hands over the 18ACS to Husni Alyacoub of MBTC.

## TRACTO UK SEALS DEAL FOR 18ACS IN SAUDI

Pioneering German trenchless technology company, TRACTO, has a fully-fledged subsidiary for the UK market. TRACTO UK not only has the British Isles within its remit, but also the Middle East including Saudi Arabia. Managing Director of TRACTO UK, Roger Wahl, recently concluded the successful sale of a high-tech GRUNDODRILL 18ACS drilling rig to customer, MTBC and was delighted to hand the machine over to Division Head, Husni Alyacoub. >

SPONSORED BY:

**TRACTO**



# NEWS

“This is a key investment for our company and offers us class-leading quality and performance. The 18ACS offers advanced technology and state-of-the-art operation, but even more important is the aftersales support and spares availability which they could offer to MBTC”

M. Al-Barghash Trading Co. (MBTC), is a multi-award-winning, Saudi-owned company that was established in 1976 and has grown to become a leading engineering, procurement and construction company. Working in large-scale oil and gas pipeline, wellhead water and on-shore maintenance projects, the company operates from a huge industrial base that has modern facilities for fabrication, blasting, hydro-testing and a range of other competencies to support the multi-million-dollar projects the company undertakes. The large site is also future-proofed for expansion and diversification into new areas.

In January 2020, MTBC successfully launched its Trenchless Technology division, headed by Husni Alyacoub, which has successfully completed major drillings and crossings in adverse working conditions using a large drilling rig. Now, as the principal OMPP (Onshore Maintain Potential Project) contractor for Saudi Aramco, the state-run petroleum and natural gas business, MTBC's goal to expand overseas has become a reality and the company has added a further drilling unit to its fleet to undertake new projects.

The TRACTO GRUNDODRILL 18ACS, nicknamed the King of Rock for very good reason, is a sophisticated drilling rig capable of working productively in very difficult ground conditions, including hard rock. The unit was specified by MBTC and delivered in May 2023. Husni Alyacoub was instrumental in making the decision to buy the King of Rock saying: “This is a key investment for our company and offers us class-leading quality and performance. The 18ACS offers advanced technology and state-of-the-art operation, but even more important is the aftersales support and spares availability which they could offer to MBTC; a huge edge among its competitors. We have had excellent service from the TRACTO Group and the general level of support and assistance has been very well received. We are looking forward to sending the new unit off on its first project imminently.”

The GRUNDODRILL 18ACS not only offers advanced technology with features including automatic bore mode, fully automatic rod exchange system, clamp and break-away facility, but a comfortable cab with user-friendly controls, ergonomic seat and air conditioning.



# TRACTO

THE KING OF ROCK  
GRUNDODRILL 18ACS



The GRUNDODRILL 18ACS is no ordinary HDD rig. This is German precision engineering and reliability from TRACTO.

From the finest silt to the hardest rock, the 'King of Rock' works where others give up.

To find out more about this HDD rig and our financing options please get in touch:

[sales@tt-uk.com](mailto:sales@tt-uk.com)  
T +44 1234 342 566

**ADVANCED TRENCHLESS TECHNOLOGY**

[TRACTO.COM/GRUNDODRILL](https://tracto.com/grundodrill)





# GAME-CHANGING INFORMATION TO INCREASE UV PERFORMANCE

A ProKasro UV  
Lining truck

The NO-DIG movement is widely spread and trenchless sewer rehabilitation is a means to an end. The promising novel method renews damaged sewer pipes intending to restore sealing and regain stability. For this purpose, a plastic layer, the so-called liner, is installed as a new pipe wall.

The sewer shaft installation process requires an uncured state of the liners, which consist of glass-fibre-reinforced, poly-, or vinyl ester resin. It allows easy handling and correct application of the new shell to the existing sewer wall. With the assistance of UV lamps attached to sophisticated state-of-the-art robots, known as cores or chains, the liner cures.

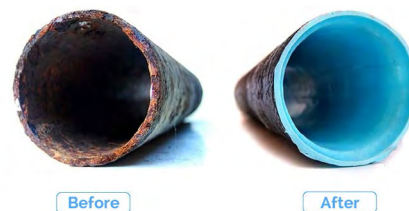
In an after-construction-site-completion process, accessible peripheral samples are tested in certified laboratories to determine characteristic values, such as residual styrene level and degree of cure. >

SPONSORED BY:  
**TRACTO**



## Liner Reaction

The plastic liner, usually styrene-containing poly- or vinyl-ester, resin-impregnated glass fibre fabrics, is custom-made in wall thickness and length to meet the respective construction site requirements. Transported in secured packaging, the cured-in-place liners solidify, utilising UV lamps.



The reaction mechanism is a radical polymerisation process with UV light energy causing the initiator to decompose into reactive radicals. It further triggers a chain reaction in which the reactive radicals cause the monomers in the resin to chemically bond, known as a curing or crosslinking reaction. During the crosslinking process, the poly- or vinyl-ester resin forms long-chain compounds, and the styrene provides the crosslinking, resulting in very high mechanical strength.

## Around The Technology

The technology consists of a rehabilitation vehicle, fully equipped to manage the job and likewise being the command centre for the construction site. The vehicles range from 3.5 t Sprinter size to 18 t trucks.

In addition to the UV-curing technology, the vehicles also include technology for work robots, milling exposure of inlet pipe joints and their joint sealing, and TV inspection systems for visual inspection of the rehabilitation section. The design of the UV lamp's wavelength range matches the liner systems available on the market.

## The Truth Behind The Myths

UV radiation can only penetrate a few millimetres into the material, so thick liners do not cure entirely and remain soft in the area of the original sewer wall.

Indeed, UV radiation can only penetrate a few millimetres. Nevertheless, combining UV and thermal energy input is the decisive factor for curing thick liners. The UV light only initiates radical formation and triggers the chain reaction. Subsequently, the increased temperature keeps the chain reaction going, and the reactive radicals migrate through the liner and provide crosslinking. Therefore, UV cores with very high powers are not the solution for the higher penetration depth of UV light. However, with the higher temperature development, they ensure that the crosslinking reaction takes place sufficiently even in thick liners.

Some liner manufacturers UV initiators are incompatible with existing equipment technologies or malfunction.

Today's conventional mercury steam lamps cover a broad spectrum with main intensity lines in the UV, visible, and infrared ranges. The lights are almost an all-purpose weapon for UV initiation, combining thermal energy to increase the reaction power. From a chemical point of view, all commercially available UV initiators, can be triggered by mercury steam lamps.

Is more really better? Often stated, the higher the temperature, the better! The assumption is simply wrong! High temperatures often cause liner damage. Brittle effects, but even more harmful, is the negative impact on the protective film, causing it to stick to the liner while it needs to be removed after the curing process finishes.

The combination of UV initiation and the thermal influx decide over the liner's cure and therefore its performance.

A UV light train operating inside a pipe



## Liner Testing In The Lab

The liner lab testing has two main goals:

- the achievement of sufficient mechanical strength
- the ecological integrity of uncured chemical components.

Therefore, among other parameters, the values 'residual styrene level' and mechanical 'E-Module' are of primary interest. Inspection of processed liners is carried out by accredited testing laboratories, of which there are only a few in Germany. >





A DEA testing unit

### Liner Testing At The Construction Site

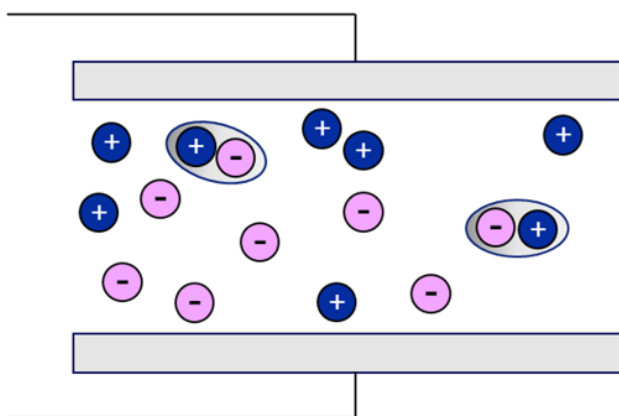
The call for on-site testing increases consistently. Climatic site-to-site influences, differing material behaviours due to a diverse liner manufacturer landscape, and other dominating factors, such as channel wetness, affect the curing behaviour of plastics.

A promising technology delivering both high sensitivity and a transportable setup is dielectric analysis (DEA). More than ten years ago, SBKS & Co. GmbH and NETZSCH-Gerätebau GmbH, a market leader in thermal and dielectric analysis, conducted real-life tests with disposable sensors on the construction site to monitor liner curing.

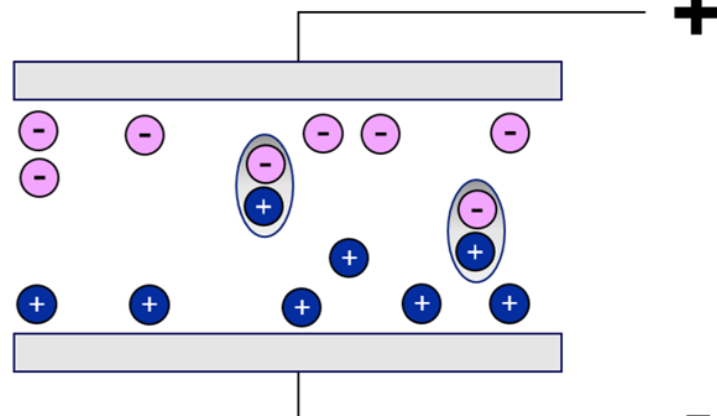
Dielectric analysis

According to the measuring principle of dielectric analysis, the investigated sample is stimulated via a sensor by alternating voltage. The response behaviour displays a current flow and the reaction time from excitation to the response.

Without external electrical field



With external electrical field



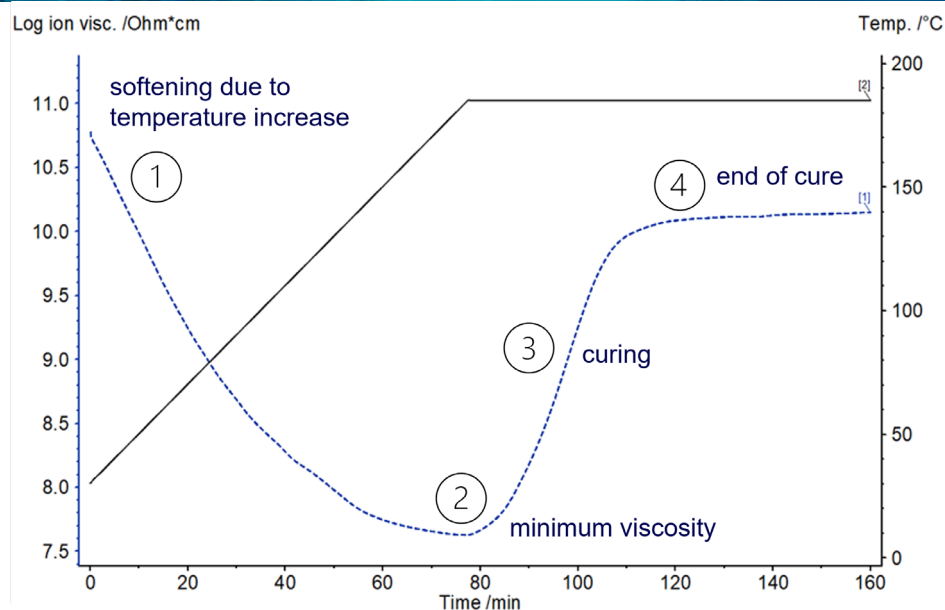
As a result, the microscopic mobility of the plastic is measured, arising from the alignment of dipoles and the movement of smaller molecular groups. As the curing progresses, mobility decreases. The generated measurement data provide precise insight into the material behaviour and previously inaccessible data. >

SPONSORED BY:

**TRACTO**



A DEA analysis curve representation



Disposable DEA sensors give insights into material behaviour and portability, but it sees limitations that challenge the technological suitability.

The measurement principle requires the investigative material to be directly in contact with the sensor. As a result:

- the sensors can either only measure into the duct at the peripheral area of a construction site within arm's length or
- have to be inserted during liner production, which would turn the manufacturing process upside down
- the sensors only measure at specific points and would therefore have to be integrated into the liner in large quantities to obtain statistical significance along the rehabilitation route
- the absolute measured values are strongly dependent on the moisture, the liner temperature and the fibre fraction content, which make data evaluation via absolute measured values difficult, not to say impossible.

As a conclusion of the manufacturing process and the handling of the liner, an only peripheral area is not representative of an entire rehabilitation channel. Moreover, the climatic conditions around the periphery differ from the conditions in the sewer.

### A Novel Patented Process Opens Up New Monitoring Possibilities

Due to the limitations of the existing dielectric measurement technology for on-site use in trenchless sewer rehabilitation, NETZSCH decided to develop a novel, no-contact sensor technology that monitors material and whose measurement signals are more independent of environmental influences.

Together with ProKASRO Mechatronik GmbH, NETZSCH Process Intelligence GmbH has patented a process that monitors the curing progress along the entire sewer rehabilitation channel and sends the information to the command centre in real-time. It further enables the active and dynamic control of the core's pulling speed based on the material's curing progress to exploit the highest possible pulling speed and avoid overheating of the liner. Concurrently, the cured liner data measured in the channel allows correlation with quality assurance data such as the degree of cure, E-modulus and the residual styrene level.

The solution's sensor and evaluation unit, named 'sensXPERT Pipe', is directly mounted on the UV cores while the data is transferred to the 'third man'.

Expanding the 'third man' as a system component that actively controls the core significantly reduces sudden leaps and makes the system accessible for retrofitting and new UV radiation systems of ProKASRO and its competitors.

SPONSORED BY:

**TRACTO**



# PROKASRO

ProKASRO UV Technology  
Full POWER up to 36.000W

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

RAUSCH  
INTERNATIONAL  
GROUP

**DART**  
SYSTEMS

**rausch**  
REHAB

# ROBOTIC

## Cutter RRC1

- Full-HD camera
- DN 200 - DN 800
- Electric motor (power up to 2.5 kW)
- Endless arm rotation
- Rear view camera
- 4 degrees of freedom
- Modulare connections

**Full HD**  
1920 x 1080

UK & IRELAND  
**DEMO TOUR**  
10<sup>TH</sup> - 21<sup>TH</sup> JULY

CALL FOR MORE  
DETAILS!

Rausch-Tab  
Central control unit



**DART**  
SYSTEMS

+44 (0) 1761 404870  
[sales@dartsystems.co.uk](mailto:sales@dartsystems.co.uk)  
[dartsystems.co.uk](http://dartsystems.co.uk)

Dart Systems Ltd,  
Environment House,  
First Avenue,  
Westfield Industrial Estate,  
Radstock, Radstock BA3 4BS





## GF PIPING SYSTEMS POSITIONS ITSELF AS A GLOBAL LEADER

A screen shot from the new GF movie

Following the voluntary recommended cash tender offer of GF for all shares in Uponor, the Swiss company's division has released a film that conveys its core values and demonstrates its capabilities as a leading flow solutions provider worldwide.

GF Piping Systems has been a specialist in the safe preservation and transportation of global fluid resources for over 150 years. >

SPONSORED BY:  
**TRACTO**





“Trust must be built, and that is what we do. I am proud to share our story about how as an innovation and sustainability leader”

The company's innovative solutions continue to help solve water loss for utilities, improve energy efficiency in buildings, data centres, and onboard vessels, improve water quality for water treatment OEMs, semiconductor manufacturers, and the food and beverage industry and ensure clean water for hotels, health care facilities, and building services. In addition, its performance materials, and specialised solutions, including prefabrication and engineering, support numerous industries to improve operational safety and meet the demand of construction execution.

GF Piping Systems has now released a short film entitled 'Trust is everything' that extends the story of GF's purpose of 'Becoming better every day - since 1802' and opens the viewer's eyes to the world of GF Piping Systems beyond the expected. The film guides viewers through the world of GF Piping Systems, from one and a half centuries as a provider of innovative and sustainable piping systems to solutions designed to address future challenges, including a clean and reliable water supply, green energy, or microchip production. Furthermore, GF Piping Systems positions trust at the core of its promise, encompassing strong customer relationships, safe and reliable technology, and complete project support.

Joost Geginat, President of GF Piping Systems, sees the release of the film as an important statement for the company, saying: "Trust must be built, and that is what we do. I am proud to share our story about how as an innovation and sustainability leader, we add value to our customers and partners operations, creating connections for life."

[Access the full film here.](#)

SPONSORED BY:

**TRACTO**





## NO-DIG LIVE 2024 OPEN DAY

"It was great to be able to show off these brilliant facilities to so many exhibitors both old and new. The feedback on the venue was extremely positive with several companies choosing to increase the size of their stand."

With the venue basking in the glorious Warwickshire sunshine there was a fantastic turnout for the recent No-Dig Live 2024 Open Day, which took place at the event's new home, the NAEC Stoneleigh Park, UK.

Paul Harwood and members of Westrade's team were on hand to give exhibitors a guided tour of these amazing new facilities which have changed out of sight since the event was last hosted there in 2012.

NAEC Stoneleigh now offers some of the country's most sought-after exhibition real estate boasting 250 acres of outside space including hardstanding and grass for those exhibitors wishing to break ground with their live demonstrations. For those that prefer to be inside there are also three state-of-the-art exhibition halls covering just over 10,000 m<sup>2</sup>.

The event's conference programme will be homed in a fantastic new purpose-built conference centre on site and visitors on the day were given some early insight into what is always a thought provoking and well considered conference programme expertly curated by the UKSTT.

Commenting on the success of the Open day Westrade's Managing Director, Paul Harwood said: "It was great to be able to show off these brilliant facilities to so many exhibitors both old and new. The feedback on the venue was extremely positive with several companies choosing to increase the size of their stand. It was really exciting to see plenty of new potential exhibitors that will help us build on the success of last year's event. The open day also provided an opportunity for exhibitors and supporters to give us their feedback, much of which we are already building into our plans for 2024. Thank you to everyone who took the time to attend and thanks also to the UKSTT team for update on what will be another stellar conference programme."

No-Dig Live 2024 will also see the launch of a new Party Night! On the first evening of the show all exhibitors will be welcome to host a party on their stand between 4.30 and 9.00 pm. This will provide another great networking opportunity but just as importantly will help everyone unwind and have a bit of fun after what is always an extremely busy first day.

No-Dig Live will take place between 1 and 3 October, 2024. Early-bird exhibitor rates are now available. For more information email: Chantel Avis [cavis@westrade.co.uk](mailto:cavis@westrade.co.uk)

SPONSORED BY:

**TRACTO**



# **INTERNATIONAL NO-DIG** **2023** **MEXICO** Conference and Exhibition 17-18 October 2023 Expo Santa Fe, Mexico THE 39th INTERNATIONAL NO-DIG

## BOOK YOUR STAND TODAY

**International No-Dig Mexico is the major annual international gathering for trenchless technologists to meet and discuss the latest industry developments.**

- Reach new markets at this major event targeting influential audiences to be drawn from Latin and North American markets, as well as attendees from further afield
- An opportunity to display and demonstrate products to a highly targeted audience
- Ensure your brand has a profile in the presence of the industry's premier decision makers
- Take a leadership position and play a major role within the Trenchless/No-Dig sector
- Be part of the region's only industry specific exhibition and conference with a proven track record that truly demonstrates Trenchless/No-Dig technology and its capabilities
- Be seen alongside influential supporters representing Latin America

**To be amongst the worlds leading providers and show your innovations, book a stand at International No-Dig Mexico.**

**Sponsorship opportunities available!**

Contact Trevor Dorrell at [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk) or +44 (0) 1923 723990

[www.no-digmexico.com](http://www.no-digmexico.com)

Organised by



Supported by



Official Media Partner

**TRENCHLESSWORKS**





Receiving the Award at the Conference Dinner

## VAPAR AND UNITED UTILITIES WIN EUROPEAN AWARD

Making the presentation of the VAPAR UU case study at the European No-Dig event 2



The European No Dig Award for The Best Preliminary Investigations paper

Since its establishment in Australia, VAPAR, the developer of an Artificial Intelligence (AI) Platform that looks to create the fastest way to the right pipeline investment decision, has been a big supporter of various No-Dig events around the world including attendance at events in Australia, Finland and the UK. It was therefore a natural progression for the company to take part in the recent European No-Dig 2023 Conference and Exhibition in Milan, Italy. The event provided the opportunity to present its case study outlining the company's work with UK Water Company United Utilities (UU) through its Innovation Lab programme.

The event offered a wide range of presentations and visitors and exhibitors alike were impressed by how the sector is embracing the need to reduce carbon and the impact of climate change.

The organisers also staged an excellent Gala Dinner which was held at the impressive San Barnaba's Monastery in the centre of Milan. VAPAR alongside United Utilities were honoured to receive the Award for Best Preliminary Investigations paper which was just one of several Awards made at the event. Commenting on the event Nathan Muggeridge of VAPAR said: "This was a great event and furthermore the Preliminary Investigations Award will look good alongside UU's other awards."

The event also gave VAPAR the opportunity to complete various customer meetings, including with its partner Planetek. VAPAR and Planetek have established a joint service offering to efficiently identify structural defects using satellite data and creating the fastest way to achieve the correct investment decision using AI. Ultimately, this service offering will identify structural defects before they become so bad that No-Dig options cannot be used.

In closing Nathan continued: "We are honoured to have received the Award alongside UU and are looking forward to taking part in future No-Dig events."

SPONSORED BY:

**TRACTO**





## NO-DIG ROADSHOW SUCCESS IN GLASGOW

The well-attended exhibition space at the recent Glasgow No-Dig Roadshow

The No-Dig Roadshows organised by Westrade are always a highlight of the UK trenchless calendar and the recent event at a sunny Westerwood Spa and Golf Resort near Glasgow was no exception.

The conference programme, which was curated by UKSTT, featured two keynote addresses from the event's supporter, Scottish Water. Paul Sexton, General Manager Alliances, gave an update on 'Delivering Scottish Water's Capital Programme' while Iain Jones, Wastewater Risk and Lifecycle Planning Manager, gave a valuable insight into 'Scottish Water's drive for innovation in Trenchless'. The Roadshow's bustling exhibition hall included some familiar names including the event's sponsors UIS, Steve Vick, Quick-Pig and the PE100+ Association.

Attention now turns to the final event in the series which takes place on 29 November at the beautiful Tortworth Court, near Bristol. Any company wishing to showcase their products and services to senior decision makers involved in the installation and refurbishment of underground utilities across the UK should contact Trevor Dorrell: [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk)

The Bristol event also incorporates the ever-popular UKSTT Annual Awards and Dinner which will this year be hosted by England's World Cup winning rugby legend (and Dancing on Ice winner), Kyran Bracken. This event is always a sell out so visit <https://www.ukstt.org.uk/tickets/> to book your tickets now.

SPONSORED BY:

**TRACTO**



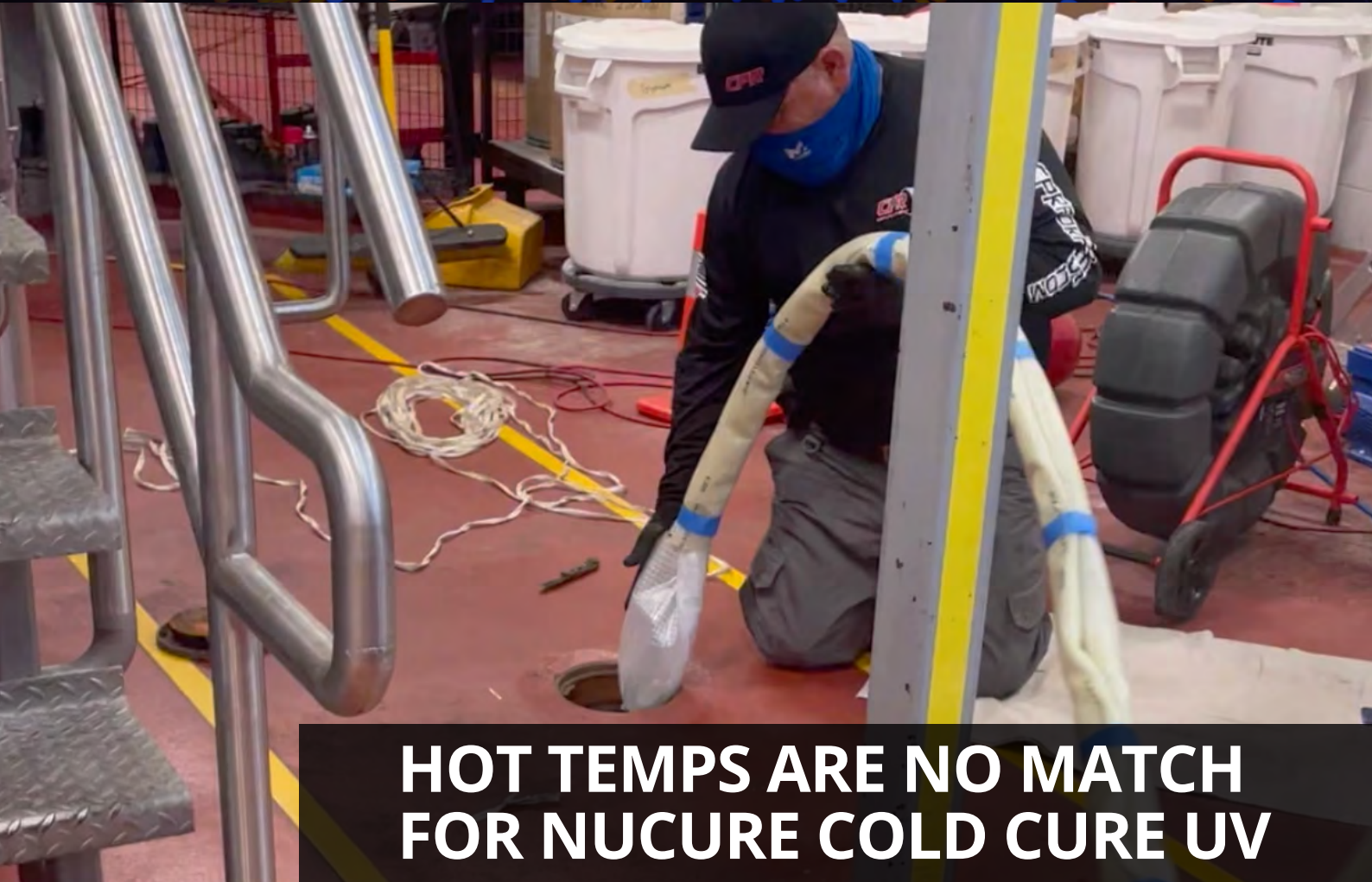


# QUALITY PRODUCTS FOR EVERY STAGE

S1E Limited is a specialist supplier of trenchless technologies to the drainage repair industry. All products can be used for sewer rehabilitation without the need for costly, time-consuming and disruptive excavation. The company focuses on sourcing quality products from leading brands that have been tried and tested in the field to produce impressive results.







## HOT TEMPS ARE NO MATCH FOR NUCURE COLD CURE UV

Above: Installing the prepared liner  
Below: Liner preparation



The NuCure Cold Cure UV rehabilitation system kept the beer flowing at a local craft brewery in Cincinnati, Ohio, USA. Troubled by pipe failure in its brand-new brewing facility, the customer turned to a NuFlow Certified Contractor to fix its plumbing problems for the long term.

The brewers at a local craft brewery were troubled when the pipes in its brand-new production facility were failing. The brewery, built in 2018, was specially designed to fit the brewery's needs and outfitted with fresh PVC pipes. The pipe network was located under a concrete slab with rows of brew kettles and fermentation tanks, so the brewers needed a solution to fix the pipe issues without tearing up the entire brewery and disrupting production. It turned to CPR, a NuFlow Certified Contractor, to solve the problem.

When CPR performed a camera inspection of the pipe infrastructure, the crew found multiple breaks in the joints on the main line of the system. The extreme temperatures used during the brewing process caused the breaks, resulting in overflow and loss of materials. The CPR team recommended lining the pipes to fix the problem with the joints and prevent any future issues from the constant high temperatures. While the customer was eager to fix the problem, it had concerns about the process. The brewery did not want to shut down production, wanted to ensure the product could withstand the temperatures regularly used in the brewing process, was resistant to the chemicals used in the cleaning process, and would not affect the quality of the beer. CPR leaned on the technical support team at NuFlow to address the concerns. >

SPONSORED BY:

**TRACTO**





Careful preparation of the liner was needed at the operational brewery site

The brewer's provided the specifics that were required in the brewing process including – a consistent heat of 115°C and a list of chemicals used during cleaning. With all the information gathered, NuFlow recommended using NuCure Cold Cure UV technology. Grant Whittle, NuFlow's Technical Director explained: "The dense cure of the NuCure system results in exceptionally high heat deflection temperature (HDT), enabling the NuCure CCUV liners to be utilised in very high temperature applications. It is a perfect application at the brewery to combat extreme temperature fluctuations. The UV system's ability to tolerate high temperatures opens new markets that other lining systems cannot adequately serve." NuFlow also confirmed the safety information and chemical analysis of the UV system, so the customer was confident it was the right choice. As a bonus, the NuCure Cold Cure UV system cures within 10 minutes and allows for immediate reinstatement of the laterals, cutting the production time of the project in half.

The CPR team worked with the customer to accommodate the production schedule of the brewers to make sure they did not interfere. Working on site for 3 days and 3 nights the contractor lined 430 ft (131 m) of 4 in (100 mm) and 6 in (150 mm) diameter main line PVC using NuCure Cold Cure UV and reinstating all the lateral lines. Tony from CPR added: "The brewery was fully functional the entire time – no shut down. The customer loved the process and was very happy with the outcome and the cost was half of the other bid received."

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

SPONSORED BY:

**TRACTO**



# "SIMPLE AND EASY SYSTEM TO WORK WITH!"

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

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

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

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

**Svanbjörg Vilbergsdóttir**  
Consultancy - Ráðgjöf og eftirlit

## THE NUFLOW ADVANTAGE

- Field QA System with Documentation
- Project Assessment and Site Evaluation Planning
- World-class Training and 24/7 Tech Support

**nu·cure**  
COLD CURE UV

- Push/Pull in Place liners cure in 10 minutes
- Resin and UV light calibrated for extremely dense cure
- Fast cure reduces labour costs, maximises profit

**nu·flow**  
WE FIX PIPES

**Become a NuFlow Certified Contractor Today!**

[nuflow.com](http://nuflow.com) | +44 771 4241959



# TIME IS CASH, TIME IS MONEY!

Foto: Benjamin Köhn  
www.Feuerwehr-Weissenfels.de

Feuerwehr Weißenfels

Deine Stadt. Deine Feuerwehr.



A 2019  
equipment fire  
at Swietelsky-  
Faber in  
Leipzig made  
headlines

It has now been two decades since, in 2003, ProKASRO Mechatronik GmbH expanded its product range to include KASRO UV Technology and became an international full-range supplier for complete sewer rehabilitation solutions. Innovation and the continuous evolution of existing technologies are central to ProKASRO's philosophy, and it was this approach that led to a further promising development at the company in 2018.

It all began when ProKASRO received an enquiry from Poland that set the development of a new UV line in motion. The project called for an even higher-performing UV system than was available on the market at the time. The ProKASRO engineers took up the challenge and got down to work. The KASRO UV control unit and drum were re-engineered, produced and adapted to the new requirements. The end result was impressive: the KASRO POWER UV 36,000W system appeared to outperform everything available up until that point in every respect. In particular, this powerful system is predestined for large liners with thicker walls.

## Investment instead of 'fire restoration'

Then, in 2019, Swietelsky-Faber GmbH Kanalsanierung lost one of its UV systems due to a fire at the Leipzig branch. A fierce blaze, caused by a short circuit in the truck, damaged the system beyond repair. The high volume of business on the books meant that the system needed replacing as quickly as possible. However, the willingness to invest in new UV technology was not just a direct result of the fire: 'profitable growth' is key to Swietelsky-Faber's philosophy and that means being prepared to invest in modern and forward-looking technology. >

SPONSORED BY:

**TRACTO**





Full speed ahead  
with Swietelsky-  
Faber's new  
KASRO POWER  
UV system

The longstanding and positive business relationship between the two companies also played a part in the selection process, and Swietelsky-Faber decided to purchase a 36,000W POWER UV system from ProKASRO.

Although Swietelsky-Faber was already aware of the kind of performance that could be expected from this innovation, no curing tables from the liner manufacturers existed at the time. In principle the manager of the Leipzig brand, Mr Heil, was convinced by the fact that the curing speeds for the standard KASRO PROFESSIONAL UV systems were (and continue to be) listed in all the leading liner manufacturers' manuals and meet the requirements of the external construction inspectors. After all, construction work can only be executed to the satisfaction of everybody involved when the pulling speeds of the light sources are specified and verified. Therefore, in order for the improved performance now available to be utilised in real-life situations on the construction site, it was vital to establish and validate the pulling speeds of the new system's light sources.

### The 'Ferrari theory'

Around this time tough discussions took place between Uwe Reinhardt, managing director of ProKASRO Mechatronik GmbH, and colleagues from Swietelsky-Faber. Mr Reinhardt insisted that, as listed and confirmed by the liner manufacturers up until that point, the pulling speeds for the KASRO UV systems, and especially for the new POWER UV line, did not come close to reality and were in fact far too slow.

This conviction was based on his many years of experience in the sewer rehabilitation sector and particularly in UV curing, which has made him a well-known and respected voice in the industry. >

SPONSORED BY:

**TRACTO**





Alexander Heil  
with the brand  
new ProKASRO  
"Ferrari"

This was also clear to Swietelsky-Faber and the company immediately placed an order for two more POWER UV systems.

Nevertheless, the time had come to conduct a large-scale field trial and test the actual pulling speeds under real-life construction site conditions. Because of the agreement between the two companies, it was clear to both sides that in order to deliver dependable data for the curing tables, ProKASRO needed to collaborate with a UV-construction company like Swietelsky-Faber.

No time was wasted. Mr Reinhardt's explanations of the huge potential for increasing the pulling speeds had already convinced Mr Heil. However, words alone are not enough when such a complex issue is involved. Now, with the collaboration of all the relevant colleagues at Swietelsky-Faber, the mission was to collect verified data so that it could be listed as a guarantee in the liner manufacturers' manuals.

Mr Heil summed the situation up with a fitting comparison: "What good is owning a Ferrari if the official speed limit means I am not allowed to drive it faster than 100 km/h?" The aim was therefore to eliminate the imaginary 'throttle' and allow the 'Ferrari' to make the most of its potential. The concrete planning phase could begin. Together with ProKASRO, Swietelsky-Faber pulled out all the stops and used its influence as a major customer to win the liner manufacturers over. Since then, the measurements and trials necessary to ascertain the actual pulling speeds possible with the POWER UV systems have been conducted on an enormous scale. >

SPONSORED BY:

**TRACTO**



### Test 1, Test 2, Test 3

The first step involved precise measurement of the POWER light sources in order to determine their intensity and calculate the theoretical speeds. The next stage was to construct the first above-ground trial setups. Swietelsky-Faber made its new POWER UV systems available for the purpose. In order to obtain differentiated and reliable results, liners with various diameters were cured using different POWER UV-light cores. The mechanical properties and residual styrene of the material samples taken after curing were meticulously tested, with promising results. The two liner manufacturers involved in these initial tests then produced provisional curing speed tables.

A direct comparison of the test results clearly showed the impressive effects of increasing the energy input and thus also the pulling speeds. The performance topped even the high expectations prior to testing:

Liner DN 1000	ProKASRO 3 x 4 x 1000W triple core	ProKASRO 4 x 4 x 1000W quadruple core	ProKASRO 4 x 4 x 2000 W quadruple core
Wall thickness 7 mm	85-95 cm/min	110-130 cm/min	195-220 cm/min
Wall thickness 10 mm with combined curing	60-95 cm/min	95-110 cm/min	160-195 cm/min

Liner DN 1000	ProKASRO 2 x 6 x 1000W triple core	ProKASRO 3 x 6 x 1000W triple core	ProKASRO 3 x 6 x 2000W triple core
Wall thickness 7 mm	80-85 cm/min	130-140 cm/min	255-270 cm/min
Wall thickness 10 mm with combined curing	80-90 cm/min	130-145 cm/min	250-265 cm/min

With the KASRO 4 x 4 x 2000W core, the pulling speed could be almost tripled as compared to the 3 x 4 x 1000 W core, thus reducing the curing time by one third. The KASRO 3 x 6 x 2000W Jumbo core could also be travel at three times the speed as compared to the KASRO 2 x 6 x 1000W Jumbo double core.

In order to verify the experiments under even more realistic conditions, Swietelsky-Faber implemented a third step. After consultation with the test lab and principals, the data obtained so far was applied on site during actual construction projects. This resulted in countless large-profile liners being cured with the KASRO POWER UV system using the newly established and much faster pulling speeds. The SBKS test laboratory headed by Professor Dr Jörg Sebastian conducted the measurements necessary to check and verify the established pulling speeds. The mechanical values obtained after curing, particularly the gratifyingly low residual styrene content, exceeded all expectations and confirmed what was already clear. The new KASRO POWER UV rehabilitation system is currently the highest-performing light curing system on the global rehabilitation market.

### On-The-Job Safety = Employee Satisfaction

However, the benefits of the faster pulling speeds are not limited to cost savings and the increased efficiency of the construction work. In terms of on-the-job safety, they also represent a major step towards employee-friendly working conditions and help relieve the pressure on the construction team.

In recent years, both construction sites and liners have become bigger and bigger, making installation an increasingly time-consuming process. Not infrequently, this results in the working day of a UV systems crew exceeding the legal directives. Faster pulling speeds can reduce daily working time by several hours, especially in the case of large-profile projects. That brings the ultimate goal of a moderate workload and regular working hours within reach and given the current challenges associated with finding skilled employees, that represents a huge benefit for employers when it comes to recruiting. >





A world first: DN2000 curing with KASRO POWER UV system in Italy



Swietelsky-Faber scrutinises the performance of the Power UV system on site in Italy

### DN2000 in turbo mode

The DN2000 construction work carried out in March 2021 at a site in Reggio Emilia, Italy, is a prime example. Unprecedented anywhere in the world, the project marked a major milestone in sewer rehabilitation and for ProKASRO itself. Here too, the new POWER UV system was deployed. By using 2,000W UV bulbs instead of 1,000W bulbs, it was possible to achieve a maximum output of 36,000 watts, resulting in drastically increased pulling speeds and therefore much shorter curing times.

After preparing the site by installing the liner and packer, calibrating the liner and deploying the KASRO POWER UV Triple Jumbo core, it was possible to cure the 164 m long, 22 t liner in the incredible time of just four hours. It was a record achievement for all those involved and for the UV technology and was witnessed by staff from Swietelsky-Faber who, in light of the planned investments, had travelled to the site to see what the system was capable of for themselves.

But there is still a lot to do, and this UV innovation is far from the final step. With its 36,000W system, ProKASRO is one step closer to achieving the overriding goal of reducing the residual styrene in the liner to less than 1%. The next development is already in the pipeline and involves using special sensor technology and an infrared controller for precise measurement of the laminate temperature. Together, KASRO UV technology and Swietelsky-Faber have made meaningful progress towards resolving the understandable controversy surrounding the residual styrene content of cured liners.

SPONSORED BY:

**TRACTO**





**Bluelight lining Ltd**

## Paired to Perfection

LED light curing  
equipment and  
materials  
and standard  
CIPP materials

### Choose a partner, not a product

**Utilising innovative technology** • Bluelight is your go-to system for laterals and mains lining, as well as smaller wastewater pipes.



More than  
**700,000**  
metres laid  
throughout Europe

More than  
**90,000**  
single installations

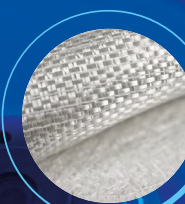
More than  
**15**  
years practical  
development and  
site experience



Patch Repair Packers



Bulk Matting



Equipment Sales



Silicate Resins



t. 01604 753558 e. [hello@bluelightlining.co.uk](mailto:hello@bluelightlining.co.uk) w. [www.bluelightlining.co.uk](http://www.bluelightlining.co.uk)

**RELINE**  
UV TECHNOLOGY



### RE COMPACT RE COMPACT PLUS

#### THE START OF A UNIQUE MODULAR SYSTEM

Our in-house designed and developed RE COMPACT and RE COMPACT PLUS are the start of a globally unique modular UV Curing System, providing all the prerequisites for an innovative and flexible entry-level model. Each UV light source and packer, as well as further equipment, can be used across all system sizes within the new generation of RELINE technology. Contact us today to learn more about our innovative technology!

#### WE ARE THERE FOR YOU!

RelineEurope GmbH  
Große Ahlmühle 31  
76865 Rohrbach | Germany

Tel.: +49 6349 93934-0  
[info@relineeurope.com](mailto:info@relineeurope.com)  
[www.relineeurope.com](http://www.relineeurope.com)





## SLIP LINING USING PICOTE SLIPLINING METHOD

Preparing the  
liner pipe

PBF Drainage Services Ltd was recently contacted by Metro Mechanical Services Ltd, being a trusted supplier, to carry out drainage repairs to a foul water discharge to sea pipe on the Isle of Wight. The works involved full length lining of a DN150 VC pipe that ran from the private treatment works to an outfall in the Sea. The total length of the works was 180 m over two separate lengths.

Access from the treatment works was difficult due to multiple large treatment tanks and various pipes and electrical conduits. Access to the middle chamber was via a small very overgrown track, through a heavily wooded and boggy area with little to no access for equipment.

The last chamber before the outfall was located just above the high tide mark on the beach located on hard standing and with plenty of space. >

SPONSORED BY:  
**TRACTO**





The liner pipe ready for installation



The lining pipe guide in the manhole

### The Pipe

The discharge pipe had substantial root ingress, multiple infiltration locations and various cracks and fractures along its length. The system itself had high flows during wet weather and the outfall pipe was backfilling during high tide and therefore limited working windows were available.

Various methods of repair including full length CIPP using either Ultra Violet light cure, Hot cure using either hot water or steam, LED light curing methods, spray coating and also ambient curing methods were all considered but due to the limited working times between high and low tide, the working window was approximately 8 hours only, the beach chamber and intermediate chamber becoming surcharged, limited the use of CIPP. Lining up stream was considered but due to the amount of infiltration this was not feasible and the added costs of stopping the infiltration first were prohibitive and this method increased the risks involved. Spray lining methods were discounted due to the difficulty of getting the pipe dry before coating.

### The Solution

Having previously carried out sliplining methods on various projects, this alternative was presented to the client. Traditional sliplining requires access pits, large winching or pushing equipment, expensive pipe welding equipment, and additional labour and plant on site.

PBF Drainage Services Ltd has worked closely with S1E and Picote for many years on various projects from brush coating applications, Picote milling machinery and Picote tooling for removing failed liners, hardened deposits, and concrete. The company has a vast array of equipment to carry out all these tasks and continues to work very closely with S1E being a trusted supplier of Picote equipment and materials.

After discussing the works with Terry Ingleby from S1E and the diverse options, the consensus was to use a new product from Picote. Terry has been trained on the new Picote sliplining method as well as the materials and after discussing this method in detail the decision was made to proceed this product. S1E has excellent knowledge of drainage rehabilitation and using PBF's own as well as Terry's knowledge, sliplining was the preferred option.

This would be the first use of the Picote sliplining method in the UK, another first for PBF Drainage.

The Picote sliplining method does not require any excavation. Having a small portable welding rig, lightweight materials and being very flexible meant that all the works could be carried out from the existing chambers and utilising the ground space on site.

Multiple discussions were had involving S1E which would be supplying the materials and the equipment rental as well as arranging the delivery of and training for the process. Terry Ingleby has a wealth of knowledge and has an excellent relationship with PBF Drainage working closely on multiple projects over the years. >





Inserting the liner into the host pipe

The final pipe sizes and pipe wall thicknesses were taken into consideration, and it was determined that the 140 mm o.d. and 125 mm i.d. would not be an issue due to the increased flow characteristics of the finished materials.

All the relevant information was gathered and submitted to Metro Mechanical which in turn discussed options and risks with the end client.

Everything was agreed and the process of ordering materials, training, and delivery of everything required were put into motion.

Training was carried out at the Picote training centre and as arranged by S1E, this was only a short training session due to the previous experience with sliplining. It was more a familiarisation of the equipment and handling rather than a full training session as would be expected with unfamiliar users.

### The Works

The works would require some initial root cutting, CCTV surveying and high-pressure jetting, all of which were carried out by Metro Mechanical's in-house team the week prior to the actual repair works being carried out. The final surveys were provided to PBF Drainage to ensure everything was to a satisfactory condition.

Due to the layout of the downstream chamber a small amount of benching was removed to allow for the access and the guide frame to be placed inside the chamber this was due to the direction change in the chamber, the winch rope was pulled through the entire length of pipe to the downstream chamber. Everything was ready for the pipe on the first day on site, which took approximately 4 hours to complete.

The materials for the repair works were delivered to site and then transhipped onto a smaller vehicle due to the limited access on site. This was made easier due to the light weight of the 6 m lengths of DN140 pipe. Each length could be lifted and transported very easily by a single person. Some 32 lengths of pipe were transhipped to the works location, where the pipe welding would take place.

The long access road to the beach with a large open grassed area was ideal for carrying out all the initial preparatory works. The welding rig was set up and powered by a small generator, rollers were placed at various locations to aid the process of pulling the pipe as it grew.

The small welding equipment with pipe clamps, joining frame and cutting tool were all aluminium so made it extremely easy to use. Both lengths of pipe were welded in a single shift with each weld taking approximately 10 minutes to complete, in total the welding of both full lengths took around 6 hours to complete this included set up, cutting, cleaning, and welding.

The final day on site consisted of setting up the pipe frame which guided the pipe into the downstream chamber, from where each section would be pulled in. The first upstream length would be pulled through the intermediate chamber until it arrived at the treatment works. >





Loading the liner onto the guide frame

The pulling head was secured into the start of the pipe and the winch rope attached. The pipe was guided over the frame and through the pipe guide in the base of the chamber. A small battery powered capstan winch was used to pull the pipe into place. The pulling process was carried out at a rate of some 8 m per minute. Once the pipe was on its way there was no other additional works required the pipe fed itself over the rollers and into the host pipe.

Once the front of the pipe reached the upstream chamber the pipe was allowed to rest for 45 minutes allowing any tension in the pipe to naturally reduce. The pipe was then cut to length allowing a small amount to be used to bench the new pipe into the channel of the host pipe and chamber.

The second downstream section was pulled into place in the same manner as the first using the upstream chamber as the winching point.

All the pipes were secured into the existing chambers, the benching repaired, and all works completed within 2 days on site. Website: [www.pbfdrainage.co.uk](http://www.pbfdrainage.co.uk)





# TRAIN WITH PICOTE

SANDHURST | WHITBURN | VIRTUAL



Contact: [training@picotesolutions.com](mailto:training@picotesolutions.com) | [www.picotegroup.com](http://www.picotegroup.com)



We can strengthen the cities we love

## Amiblu®

Pipes designed for generations

### Amiblu NC Line

Non-circular pipe profiles in all shapes and sizes

- Sustainable rehabilitation of urban pipe networks
- Open cut and trenchless installation
- Excellent structural stability
- Increased acid resistance
- Asset lifetime 150 years+

[www.amiblu.com](http://www.amiblu.com)  
[united.kingdom@amiblu.com](mailto:united.kingdom@amiblu.com)  
Tel: +44 7786 013574



# REINFORCING STRATEGIC WEST-EAST LONDON WATER MAIN

Reinforcement, similar to that which Barhale will complete at the Thames Lee Tunnel, being carried out at the QEII Reservoir.

Thames Water has selected Barhale to reinforce a section of what was once believed to be the longest tunnel in Europe and a key source of raw water for East London, UK.

The strategically important Thames Lee Tunnel (TLT) was built between 1955 and 1959 to carry water from the River Thames at Hampton Water Works to Lockwood Pumping Station at the Lee Valley Reservoir Chain. The 19-mile (31 km) tunnel, runs at a depth of 68 to 190 ft (21 to 58 m) and passes through 24 access shafts of 12 ft (3.7 m) diameter. It was designed to transfer 120 million imperial gallons (550 megalitres) of water per day. >

SPONSORED BY:

**TRACTO**





Lockwood shaft, Walthamstow, one of three locations where draindown of the TLT will take place, the others are Barn Elms and Hampton.

The contract will see civil engineering and infrastructure specialist Barhale reinforce a 70-metre length of the 102 in (2.6 m) diameter concrete-lined tunnel water main where it runs across the route of HS2 in North London.

The location of the works will necessitate an unusually long concrete pump, over 800 m horizontal plus the almost 50 m depth of the Barrow Hill shaft at Primrose Hill, to the site of the works. Barhale has been working with Caumford to design a bespoke pumping solution.

Shane Gorman, Barhale's Water Director – Southern Region, highlighted the importance of the Thames Lee Tunnel as part of London's water infrastructure. "The need for the TLT was identified both to address drought conditions and to meet the requirements of new housing and development in East London after the Second World War," he said. "For more than sixty years it has played an essential role transporting water across the capital and these works are an important measure to reinforce a key part of London's water distribution network. The section we are working on offers some additional challenges. The actual site of the relining is an unusually long distance from an access shaft and the levels of service and utility congestion in Camden means that we cannot sink boreholes. So, designing a concrete-pumping solution that will work over more than half a mile has been a key focus. We have worked closely with Thames Water on the design and scheduling of this project. Such is the strategic importance of the Thames Lee Tunnel that outages can only be scheduled for certain times of the year and they are contingent upon general storage levels across the rest of the network. We have now identified a suitable window and look forward to successful completion in February 2024."

SPONSORED BY:

**TRACTO**



# NO-DIG EVENTS

International No-Dig events brought to you by the industry's world experts



## INTERNATIONAL NO-DIG MEXICO 2023

ISTT's 39<sup>th</sup> International No-Dig Conference and Exhibition

**17-18 October 2023**

Expo Santa Fe, Mexico

[www.no-digmexico.com](http://www.no-digmexico.com)



## NO-DIG ROADSHOW & UKSTT ANNUAL AWARDS BRISTOL 2023

**29 November 2023**

De Vere Tortworth Court, Tortworth, Wotton-under-Edge

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



## TRENCHLESS ASIA 2024

**26-27 June 2024**

SMX Convention Center Manila, Philippines

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



## NO-DIG LIVE 2024

**1 2 & 3 October 2024**

NAEC Stoneleigh Park, Warwickshire

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



## INTERNATIONAL NO-DIG DUBAI 2024

ISTT's 40<sup>th</sup> International No-Dig Conference and Exhibition

**18-19 November 2024**

Dubai World Trade Centre, Dubai



t: +44 (0)1923 723990

e: [trenchless@westrade.co.uk](mailto:trenchless@westrade.co.uk)

w: [www.westrade.co.uk](http://www.westrade.co.uk)

twitter: [@WestradeGroup](https://twitter.com/WestradeGroup)



# BRAWO® SYSTEMS SHORTLINER



Inserting the  
Brawo® Shortliner  
into a host pipe

BRAWO® SYSTEMS has sent out an invitation to its virtual product launch. In an online event, the company which offers products for property and building drainage systems presents its latest repair procedure for sewers and pipes for the nominal diameters DN70 to DN200. The company's experts informed people about the procedure with the BRAWO® ShortLiner and showed the simple application in a live demonstration.

Preparing a  
Shortliner



The SRR resins used for  
the Shortliner



Bendy Packers  
from Picote

## The Repair Process In A Nutshell

BRAWO® ShortLiner comprises the tried-and-tested BRAWOLINER® 3D liner material, the BRAWO® SRR epoxy resin and the Bendy Packer from Picote including accessories. BRAWO® ShortLiner is characterised in particular by a very high degree of flexibility. Repairs can be carried out in a closed design even in difficult sewer and pipe runs as well as bends.

### Components

**BRAWOLINER® 3D** – The BRAWOLINER® 3D enables a rehabilitation with several dimensional changes, is easy to soak with resin and is also characterised by very good bend flexibility. Due to a special loop construction, the BRAWOLINER® 3D is extremely flexible. This makes it the ideal rehabilitation solution for defective pipes with bends up to 90°. With a service life of over 50 years, BRAWOLINER® 3D is an economical and environmentally friendly alternative to open construction!

### BRAWO® SRR epoxy resin

The proven material combination of the Brawoliner carrier material and the bi-component BRAWO® SRR epoxy resin guarantees a high-quality standard. The rapid curing at ambient temperature makes the resin the perfect component for the ShortLiner process. The resin has a high chemical resistance and good mechanical characteristics. BRAWO® SRR makes a positive and frictional fit on most old pipe materials possible.

### PICOTE Bendy Packer

The Bendy Packers from PICOTE are special packers for repairing damage on severe bends. The packers come with a removable control ball for complicated pipe runs and a control guide for insertion into junctions. A bladder expanding centrally to the ends ensures that the carrier material is pressed on without creases, whilst the length expansion control ensures resilience and longevity. The Bendy Packers are compatible with air-driven push rods from the PICOTE connection cuff system 2.0. A rehabilitation of pipes with several dimensional changes is possible with the special packers.

Website: [www.brawosystems.com](http://www.brawosystems.com)

SPONSORED BY:

**TRACTO**





# BRAWO® DRUM 4.0 – ONE FOR EVERYTHING!

BRAWO® SYSTEMS recently presented its new innovative inversion drum BRAWO® Drum 4.0 for the first time at the Ro-Ka-Tech event in Kassel, Germany. The drum can be used universally for all four curing methods: ambient temperature, steam, hot water, and light.

The inversion process is critical for good rehabilitation results. Only when the liner is introduced with a constant and uniform pressure, can it optimally adapt to the pipe wall. BRAWO® Tech offers only high-quality professional-quality inversion drums. The best stainless steel, the high-quality workmanship and well-thought-out design enable an optimal result and professional work for years.

The BRAWO® Drum 4.0 impresses with its high flexibility in terms of application possibilities. It has universal connections, such as for the BRAWO® Magnavity SX light curing system. Due to the optimised chassis design, the drum can be positioned directly above the respective shaft. A large handwheel provides good control during the inversion of the liner and facilitates the recovery of calibration hoses. The robust, construction-site-compatible stainless steel design is mandatory.

Accessories such as inversion bends can be seamlessly fitted at different angles to the BRAWO® Drum 4.0 using the camlock coupling. The angle of the drum output can also be adjusted in any axis-centred manner. All positions are possible from vertically downwards (directly above a shaft) to vertically upwards (downpipe with access from the basement). The BRAWO® Drum 4.0 complements the range of BRAWO® inversion drums with the familiar advantages and the usual high quality of BRAWO® Tech. Ambient temperature - Steam - Hot water - Light

- Curing at ambient temperature
- Hot curing with water and steam

Through the rotary joint on the drum axis and the drain valve, a simple setup of the circulation is possible. The curing process can be accelerated by water or steam.

## Curing with UV/LED light

The adaptation of the light source is now possible without an additional airlock. From the beginning of the inversion to the completion of the curing, the liner remains pressed against the pipe wall through continuously applied pressure. This prevents the formation of wrinkles in the liner by collapsing and repositioning. The inversion process can be carried out without interruption.

Website: [www.brawosystems.com](http://www.brawosystems.com)

SPONSORED BY:

**TRACTO**







# PE PIPE CUTTER APPROVED BY NGN

The new PE Pipe Cutter for large diameter PE in action

UK-based Steve Vick International (SVI) has developed, as a joint Network Innovation Allowance (NIA) funded project with the UK's Northern Gas Networks (NGN), a new PE Pipe Cutter for large diameter PE. This innovative tool has been approved by Northern Gas Networks and is now available for hire.

The PE Pipe Cutter offers an accurate, safe, and highly efficient method of circumferentially cutting large diameter PE pipes, surpassing traditional cutting techniques. With the ability to effortlessly cut pipes with diameters of 250 mm and above, and wall thicknesses up to 70 mm in a single pass, the PE Pipe Cutter is set to transform the industry.

One of the key advantages of the PE Pipe Cutter is its exceptional speed. The low-profile, pneumatically powered machine can complete a full circumferential cut on a 630 mm PE pipe in less than 5 minutes, providing a significant timesaving compared to standard cutting methods. This efficiency allows operators to increase productivity and reduce project timelines. >

SPONSORED BY:

**TRACTO**





Detail of the new  
pipe cutter

“This innovative tool will revolutionise the way large diameter PE pipes are cut.”

Safety is paramount, and the PE Pipe Cutter addresses the operational risks associated with traditional cutting equipment. Designed for use in both above-ground and in-ground scenarios, it requires minimal clearance, making it ideal for confined spaces. The cutter's total working height of 170 mm ensures ease of use and accessibility even in restricted areas.

Furthermore, the PE Pipe Cutter's performance remains outstanding even when pipes are under bending stress, which often causes blade pinch in traditional methods. By incorporating a swarf collector, the machine effectively gathers PE cutting waste as it rotates around the pipe, significantly reducing the emission of microplastics into the surrounding environment.

The benefits of the PE Pipe Cutter extend beyond its efficiency and safety features. This lightweight and versatile tool allows for quick and accurate cutting, minimising the need for additional finishing work before butt fusion or socketing. With its adjustable chain, the cutter can be easily customised to suit different pipe diameters, adding to its versatility.

“We are thrilled to introduce the PE Pipe Cutter, developed in collaboration with Northern Gas Networks.” Said Katie Higgins, Sales & Marketing Director at Steve Vick International. “This innovative tool will revolutionise the way large diameter PE pipes are cut. Its speed, accuracy, and enhanced safety features make it an invaluable asset for gas network operators, water companies and contractors, construction companies, and other industries that work with PE pipes.”

The PE Pipe Cutter is a welcome addition to SVI's extensive range of pipe cutting equipment which includes, the Rapid Rotary Cutters, Rapid Window Cutters, and Keel Cutters. With over 40 years of experience, SVI is committed to delivering cutting-edge products and services that enhance safety, efficiency, and productivity in the utilities sector.

SPONSORED BY:

**TRACTO**



# LARGE DIAMETER PIPE CUTTING, CRACKING & HANDLING EQUIPMENT

TRIED & TRUSTED PLANT HIRE

AVAILABLE  
FOR HIRE

**STEVE  
VICK**  
INTERNATIONAL



## PE Cutter

A Circumferential cutter for large diameter PE pipe, above 250mm.



## MACAW Pipe Cracker

Digger attachment for the safe and effective cracking of redundant cast iron mains, 8" to 24".



## Pipe Handler

Hydraulic excavator attachment used to safely manoeuvre sticks of PE and insert into a host main quickly and efficiently. Handles diameters from 180mm to 630mm.



01225 864 864 | [stevevick.com](http://stevevick.com)

# SMARTER TOOLS FOR A SMARTER JOBSITE

## TRACSTAR® /iSERIES MACHINES

from McElroy bring a new level of productivity to the jobsite. Integrated technology empowers operators to work more efficiently by providing individual machine control to fit the user or jobsite demands. Easy-to-use software steps through the entire fusion process. And a built-in DataLogger® records every fusion joint to ensure the job adheres to industry standards.



TracStar® iSeries

SEE HOW MCELROY'S SMART FUSION TOOLS AND ACCESSORIES  
CAN IMPROVE YOUR JOBSITE AT [MCELROY.COM](http://MCELROY.COM)

**M McELROY**

©2023, MMI block, TracStar and DataLogger are registered trademarks of McElroy Manufacturing, Inc. All rights reserved.

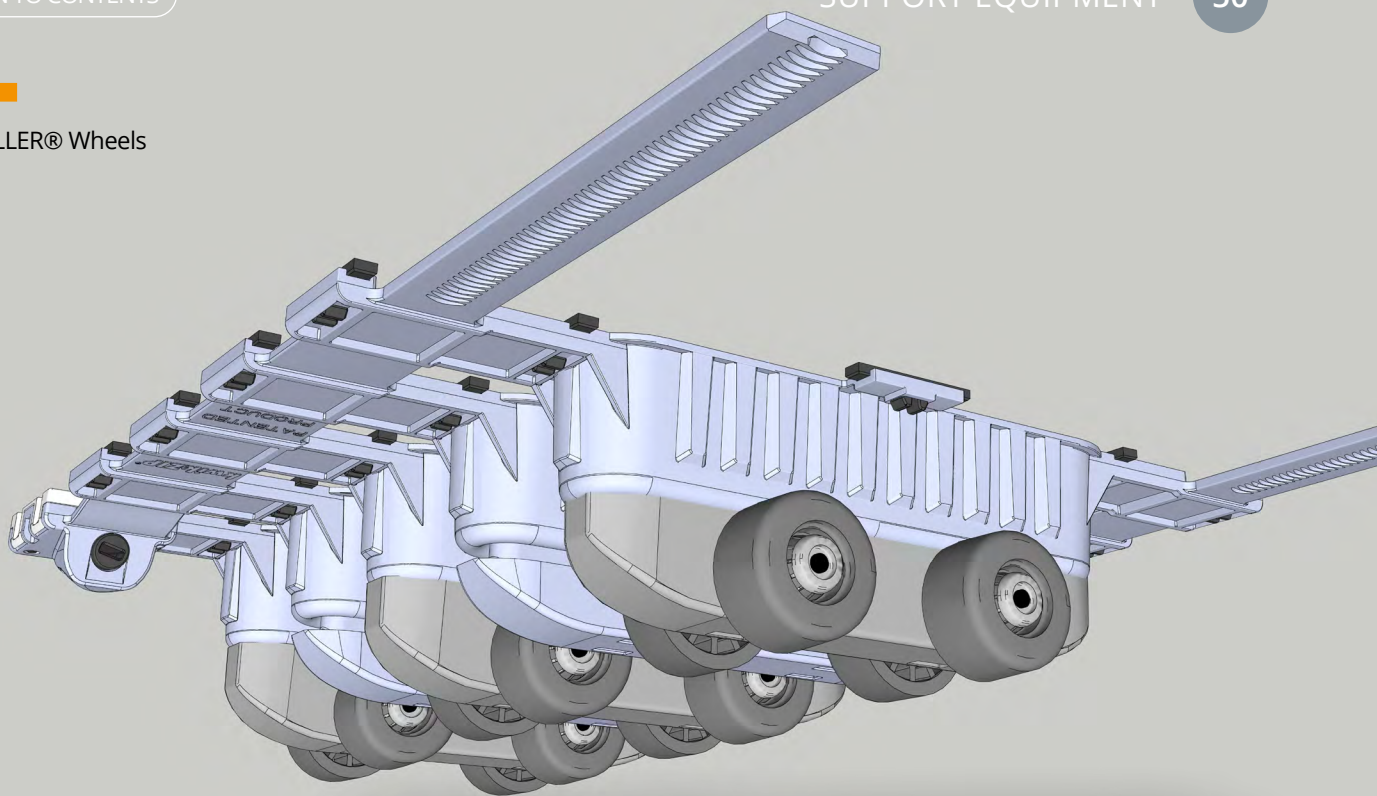
Scan the QR code  
to learn more and  
download machine  
specifications.







## Kwik-ROLLER® Wheels



# SOUTH GEELONG STATION – WATER MAIN RELOCATION PROJECT

On a recent Water Main relocation project in Victoria, Australia, McConnell Dowell utilised Kwik-ZIP HDXT-58W spacers to facilitate the sliplining of a 660 mm o.d. MSCL Steel Mains Sintakote® carrier pipe into an 800 mm i.d. RCP casing pipe over a 54 m run.

Whilst not utilised on this particular installation, kwik-ZIP HDXT-58W spacers can accommodate the company's Kwik-ROLLER® wheels. These clip-on wheels are ideal for use in longer runs to minimise wear and to provide significantly reduced co-efficient of friction.

Kwik-ZIP's large range of spacers caters for a wide range of carrier/casing pipe size combinations as well as providing flexibility to deal with project alterations.

"With limited room and being unable to utilise our pipe rollers we had concerns that pushing the MSCL pipe over 54 m would be a challenge, but the Kwik-ZIP spacers allowed us to complete the installation with ease using a 14 t Excavator." said Paul Pomfret, Senior Project Engineer – McConnell Dowell.

Kwik-ZIP's HDXT and HDX Series spacers have been successfully appraised by the Water Services Association of Australia (WSAA) with both products being the only casing spacers on the market that have been approved as compliant by WSAA. The WSA PS-324 Product Specification prescribes casings spacer requirements for correct protection of carrier pipes when installed inside casings.

Website: [www.kwikzip.com](http://www.kwikzip.com)



kwik-ZIP HDXT-58W spacers on a 660 mm o.d. MSCL Steel Mains Sintakote® pipe being pulled into an 800 mm i.d. RCP casing



SPONSORED BY:

**TRACTO**



# kwik-ZIP®

For all your spacer requirements

✉ [sales@kwikzip.com](mailto:sales@kwikzip.com)

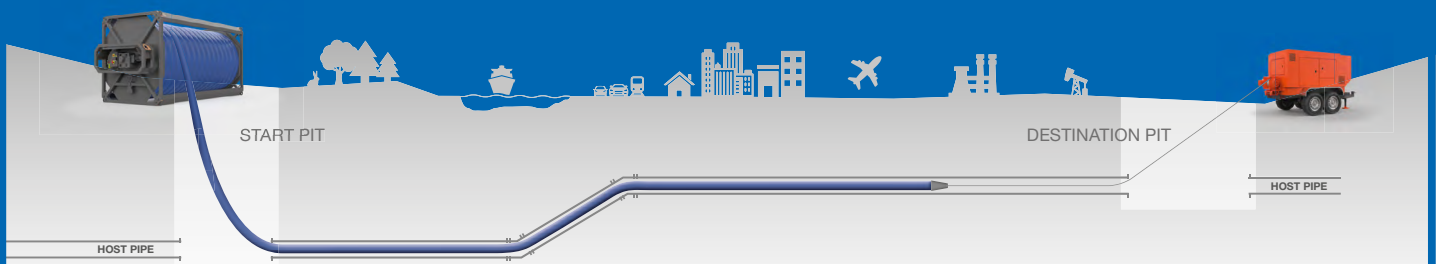


kwik-ZIP® is a registered trademark of kwik-ZIP Pty Ltd Certified to ISO 9001

➡ [www.kwikzip.com](http://www.kwikzip.com)

## PRIMUS LINE

The prime solution for pipes.



### Trenchless rehabilitation of water mains and sewer rising mains

- Savings of up to 40% compared to open trench
- Renewal of up to 500 m per day
- Bends of up to 45°
- Small pits, minor installation footprint

Installations in  
over 50 countries

**Rädlinger primus line GmbH**

93413 Cham | Germany  
[info@primusline.com](mailto:info@primusline.com)

**rädlinger**  
WERNER RÄDLINGER GROUP

Designed  
developed and  
made in Germany

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





The HERCULES Team with the company's latest suction excavator

## HERCULES SITE SERVICES' FURTHER INVESTMENT IN SUCTION EXCAVATION

"Suction excavation is a must for efficient, safety-focused projects. At Hercules, we pride ourselves on a high-quality, cost-effective service"

Gloucestershire, UK-based firm Hercules Site Services plc took delivery of its 30<sup>th</sup> RSP suction excavator on 7 June, 2023, following the publication of extremely strong financial results for the first half of the current financial year. This significant investment in suction technology is in response to the award or expansion of several high-profile clients for Hercules, including HS2, Taylor Woodrow, Amey and SGN. The fleet of thirty suction excavators is among the largest of any company in the UK and demonstrates the increasingly high demand for safe methods of excavation.

Chief executive Brusk Korkmaz said: "Suction excavation is a must for efficient, safety-focused projects. At Hercules, we pride ourselves on a high-quality, cost-effective service and our large fleet of RSP suction excavators enable us to provide that for all our customers."

Director of RSP UK Charlie Gardener said: "We are delighted to be long-term partners of Hercules Site Services and would like to congratulate them on their exceptional success which has enabled them to further invest in our suction excavators. They share our commitment to making the UK's construction and engineering industries as safe and as efficient as possible, and we value their contribution to helping us stay at the forefront of suction technology."



RSP hands over the 30<sup>th</sup> suction excavation truck to HERCULES



A trophy to mark the 30<sup>th</sup> truck milestone

SPONSORED BY:

**TRACTO**



# ORBIS AND VODA.AI LEAKAGE PARTNERSHIP

Water technology company Orbis Intelligent Systems and artificial intelligence (AI) specialist VODA.ai have entered into a strategic partnership offering a combined skillset to support US utilities and municipalities with their leakage strategies.

Orbis develops smart, data-driven technologies that provide real-time insights into pipeline infrastructure. Products include the SmartCap, an intelligent fire hydrant and pipe monitoring device that enables remote leak detection.

VODA.ai is a software-as-a-service company which helps water utilities prioritise their infrastructure investment through AI analyses. Its patent-pending system uses machine learning to virtually assess the condition and risk of each pipe segment in a water system, enabling science-based decision making.

The companies' joint offering will allow utilities to closer align non-revenue water strategies with capital pipe replacement projects by understanding where to deploy Orbis technology based on VODA's analytics-based predictions.

Lou Rossetti, Orbis senior vice president of sales, North America, said: "We are delighted to be joining forces with VODA.ai to offer US water utilities our combined expertise and complementary technologies. VODA's pipe failure predictive analytics, combined with our leak-identifying hardware and software, will enhance the service we offer utilities, strengthening our respective businesses and, most importantly, helping the global efforts to cut leakage and preserve freshwater supplies."

Cory Sides, VODA.ai senior vice president of sales, said: "VODA.ai and Orbis are very much aligned in our mission to improve our nation's drinking water infrastructure systems through innovative smart technologies. This new, formal partnership, will see us working more closely together to help bring reliable supplies of water to communities across the country."



Cory Sides



Lou Rossetti





Pier's new tracked unit  
on the low-loader

## TRACKED MTS DINO FOR PIER UK

Pier UK Ltd, which claims to be the largest exponent of non-operated suction excavation equipment in Europe, has recently taken delivery of its latest MTS DINO Track unit from MTS in Ely. The company collected the unit on its specialist low loader, liveried in Pier's highly distinctive colours.

The DINO Track offers all the power and performance of the traditional DINO8 and 12 chassis mounts but with the ability to tackle extreme access, cross-country works that wheeled equipment just cannot reach. The equipment is fully remote controlled and driven and features a 4.5 m<sup>3</sup> side tipping spoil tank, twin 900 mm fans, on-board high-performance air and of course the MTS patented cyclonic air movement and filtration system that make MTS the UK number one.

Website: [www.mammoth-mts.co.uk](http://www.mammoth-mts.co.uk)

SPONSORED BY:  
**TRACTO**



# WovoX: The Next Generation addition to the WovoLiner® suite of products.

No question, a **GAME CHANGER!**

- Ability to transition liners to multiple sizes
- Multiple bends up to 90 degrees
- Increased consistency for calculating stretch and drawback



[appliedfelts.com](http://appliedfelts.com) | 276.656.1904 | +44(0)1924 200535



**Increased Depth & Data Range**

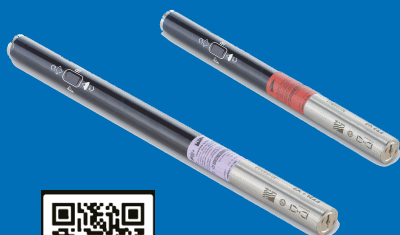
**Multi- Power**

**Quick Scan Pair**

**Falcon Technology**

**24 Roll Clock Positions**

**New 19" Multi-Power Capability**



Scan for More



Since 2016, DCI's exclusive Falcon technology has earned a reputation for high performance in both active and passive interference. With the new Falcon+ feature enhancements, the F2+ is more powerful and easier to use than ever before. The result is easier training, faster setup, and more time to complete more jobs.





# LOCATING THE LARGEST LEAK IN THE USA

The PIPA Flowrider Lite system

PIPA was recently contacted by water utility contractor in the USA, Mckim & Creed. The client had identified a possible leak on 30 in (760 mm) diameter pipeline crossing a river with sound heard on one sound of the river bank. Due to the pipeline bury depth and location using traditional techniques the client could not pinpoint the leak's exact location.

## Challenges

The HDPE pipeline is situated under a river crossing and deeply buried with a diameter of 30 in (760 mm) with an operating pressure of 9 bar. It runs over a length of 235 m. The pipe inlet point was on an angled leg section and through a butterfly valve.

The client utilised an in-house leakage team and searched for leaks over several weeks using methods including:

- Noise correlators – Leaks identified (not accurate on large diameter metallic pipes)
- Ground microphone- Pipeline was deeply sited on bank and under river crossing so this technique not feasible
- Flow meters- Water loss results identified but not located >

SPONSORED BY:  
**TRACTO**





Leak identified using Flowrider



Preparing the Flowrider system prior to the leak detection survey



The Flowrider system on site



The survey team during the survey run

This had a major knock-on effect, as the client cannot proceed with a localised repair solution, and even a river bank excavation as an investigation would have been difficult to complete.

### PIPA Technology

The Flowrider Lite™ system offers long range pressurised floating pipe assessments that includes CCTV, Leak location and pipe tracing.

PIPA uses technology that includes a pressure rated camera and hydrophone capsule tethered to a water safe floating cable to give the operator real time viewing during an inspection. The system enters a pipeline via an 80 mm diameter riser, and is fully chlorinated during its insertion. The system works on a live basis, with no interruptions to the client's services, and can cover a distance of up to 1 km per day.

The technology is the latest live main inspection system on the market being fully battery powered and only requires a 2-person team for its Implementation.

The results of the survey found that:

- PIPA successfully identified the leak at 101.6 m into the pipeline
- Tethered insertion technology system allowed for precise location of the leaks to be identified
- The Acoustic system is very sensitive and able to pick up small and large leaks
- The operator was able to identify no other leaks with joints identified in close proximity to each other
- The system is portable and was carried 30 m to the entry point, and is self-powered via batteries
- Complete survey completed in one insertion
- The Flowrider system successfully navigated around an angled entry, pipe bend and via a butterfly valve during the survey
- Leak measured to be at 63 l/sec, the largest ever recorded with a floating camera sensor

### Conclusion

It would have been very difficult and expensive for contractor to find the remaining issues within the water main. The acoustic capability proved indispensable for locating issues and trouble shooting.

PIPA completed the inspection in 1 working day, and in total successfully identified and located 1 leak (now verified).

The contractor resolved the ongoing issue by removing the guess work at a fraction of the cost and time invested in other methods in previous weeks.

A PIPA representative said: "The project was a great success, ideal due to pipe location and material and also a great case study for our company. The contractor had exhausted all other pipeline inspection avenues, and was more than relieved when we offered a solution. PIPA has also delivered successful projects with the majority of the UK water utility companies, and now offers the technology globally."





# TRENCHLESS ASIA 2024 ANNOUNCED

26-27 June  
SMX Convention Center Manila, Philippines

The thirteenth event in this outstanding series travels to Manila.

TRENCHLESS ASIA is the major annual international gathering for trenchless technologists to meet and discuss the latest industry developments featuring:

- Trenchless Technology
- Underground Infrastructure
- Pipeline Technologies
- Underground Utilities
- Trenchless Solutions for Urban Flooding
- Knowledge Transfer
- Green Technology



For more details regarding exhibiting and sponsorship opportunities please contact:  
Paul Harwood at [pharwood@westrade.co.uk](mailto:pharwood@westrade.co.uk) or +44 (0)1923 723990  
Stuart Hillyard at [shillyard@westrade.co.uk](mailto:shillyard@westrade.co.uk) or +44 (0)1923 723990

Organised by



Supported by



Official Media Partner

TRENCHLESSWORKS



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





# LANES LAUNCHES NATIONAL HIGHWAY DRAINAGE SURVEY SERVICE

Lanes' CleverScan system onsite in April 2023

UK-based wastewater and drainage specialist Lanes Group plc has launched a new national highways drainage surveying service backed by a dedicated data processing centre and advanced asset laser scanning technology.

It means the company can provide clients with a safer, faster and more comprehensive highways drainage surveying service, integrated with its unrivalled drainage unblocking, cleaning, repair and rehabilitation services.

One of the first major projects Lanes has supported with the new service has been A66 Northern Trans-Pennine, a scheme to improve the A66 between the M6 in Penrith and the A1(M) at Scotch Corner. >

SPONSORED BY:

**TRACTO**



“Combining the latest data capture technology like, CleverScan, with cloud data transfer and centralised processing is a game-changer for our clients”

Lanes Head of Highways Ben Forsyth said: “Developing our own in-house highways data capture and processing capability allows Lanes to deliver a faster, more agile, and safer surveying service for clients. This can be coordinated with our drainage cleaning, repair and rehabilitation teams to give highway contractors and National Highways the best possible integrated drainage service.”

Lanes can now deliver a broad range of highway survey services with in-house teams, including CCTV, GPS, full HADDMS and asset conditions surveys.

It has also invested in the latest chamber laser scanning technology, so assets can be surveyed more safely and faster than ever before, with the need for confined space entry.

The CleverScan inspection system is highly portable, fast and accurate. It creates a flat scan and a dense point cloud image of chambers up to 10 m deep that can be merged into CAD and 3D applications.

Using CleverScan, Lanes teams can carry out more than 30 chamber surveys per shift, twice as many as conventional methods. The laser scanner is lightweight and can be operated away from a vehicle. Data is added directly to National Highways shape files which are then sent via the cloud to a new dedicated highways drainage survey processing centre in Manchester. Its qualified and experienced highways drainage data technicians then compile reports precisely in line with client needs. The service meets National Highways targets for updating HADDMS, while providing detailed interim survey reports for client engineers.

Lanes has proved the value of its new in-house service while working on the A66 scheme which is being progressed by contractors in a National Highways regional delivery partnership.

Between January and March 2023, drainage engineers from the Lanes' Newcastle depot completed 40 night shifts, working on the eastern section of the planned upgrade route.

A team of Lanes drainage engineers from Preston and Manchester are also due to begin a similar programme of works on a stretch of the A66 in Cumbria. All Lanes personnel hold the National Highways Passport and receive thorough in-house training on the new surveying systems.

Lanes Contract Manager Andrew Lindsay said: “Combining the latest data capture technology like, CleverScan, with cloud data transfer and centralised processing is a game-changer for our clients. We can give them more tailored reports that are more accurate and delivered faster than ever before. Then, if remedial work is needed, we have all the assets and skills needed as well. It's an end-to-end service that maximises operational effectiveness, sustainability, through multitasking and use of digital technologies, and value, through efficiencies created by service integration.”

Website: [www.lanesfordrains.co.uk](http://www.lanesfordrains.co.uk)





# SOCIETY NEWS [istt.com](http://istt.com)

ISTT News brought to members by Trenchless Works

## A MESSAGE FROM THE CHAIR



Keh-Jian (Albert) Shou,  
Chairman, ISTT

Hi ISTT members!

I would like to share my experience with you of the No-Dig conferences I have attended in the past few weeks, Trenchless Asia 2023 in Kuala Lumpur and Italia No-Dig Live 2023, Milan. Shortly, I will attend SÃO PAULO NO-DIG SHOW 2023, No-Dig Down Under 2023 in Brisbane, Australia and No-Dig Poland in Krakow. I must say our field is extremely vibrant as the exhibitions were full of people. I will try my best to partake in as many events as possible to encourage our Affiliated Societies.

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

ISTT is trying to provide more services to our Affiliated Societies through our website. In addition, we keep holding the ISTT educational webinars, that can be replayed in the member space. Please keep watching our new developments, and feel free to provide us your comments or suggestions. I am looking forward to seeing you soon either during our webinars or at the No-Dig events being held around the world.

With my Best Wishes!

Keh-Jian (Albert) Shou  
Chair, ISTT



2023 Trenchless Asia, Kuala Lumpur,  
Malaysia

SPONSORED BY:

**TRACTO**





# SOCIETY NEWS

[istt.com](http://istt.com)

ISTT News brought to members by Trenchless Works

## A MESSAGE FROM THE CHAIR



"The Green Room" Trenchless Asia 2023,  
Kuala Lumpur, Malaysia



SPONSORED BY:  
**TRACTO**



2nd European Trenchless Technology  
Conference, Milan, Italy



HOSTED BY



SUPPORTED BY



SUPPORTED BY



CHINA PARTNER



OFFICIAL MEDIA PARTNER

TRENCHLESSWORKS

# NO-DIG TÜRKİYE 2023

31 October / 01 November 2023 - İstanbul  
WOW Istanbul Hotel & Convention Center

TRENCHLESS TECHNOLOGIES,  
INFRASTRUCTURE CONSTRUCTIONS  
MACHINERY AND EQUIPMENT FAIR

## NO-DIG TÜRKİYE 2023

Theme: **Earthquake Resilient  
Underground Pipelines**

WOW Istanbul Hotel and Convention Center

31 October-1 November 2023

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

In Conjunction With



7<sup>th</sup> WATER LOSS FORUM & EXHIBITION  
SU KAYIP VE KAÇAKLARI FORUMU & SERGİSİ  
31 Ekim/October - 01 Kasım/November 2023 - İstanbul

[www.waterlossforum.org](http://www.waterlossforum.org)



SU YÖNETİMİ  
ÖDÜLLERİ  
WATER MANAGEMENT  
AWARDS  
2023

ORGANIZED BY



Meşrutiyet Mah. Rumeli Cad. No:22  
Rumeli Plaza Kat:7 Daire:7 Şişli / İstanbul  
T. +90 850 309 38 51 | [info@maven.events](mailto:info@maven.events)  
[www.maven.events](http://www.maven.events)

For Exhibition and Sponsorship Enquiries  
[burak@maven.events](mailto:burak@maven.events)  
+90 542 308 79 74

For General Enquiries  
[ufuk@maven.events](mailto:ufuk@maven.events)  
+90 533 405 56 72





istt.com

# SOCIETY NEWS

ISTT News brought to members by Trenchless Works

## ISTT WEBINAR

ISTT is pleased to announce that its next Webinar will take place on 19 July, 2023, at 10:00 US EDT, 15:00 GMT, on the subject of Direct Steerable Pipe Thrusting DSPT (also known as Direct Pipe®). The webinar will be presented by Dr Kimberlie Staheli, Ph.D., P.E. of Staheli Trenchless Consultants, Inc.

Direct Steerable Pipe Thrusting (DSPT) is the generic name for the installing a steel pipeline using the following features: 1) a microtunnelling machine is used for excavation; 2) the pipe is installed using a pipe thruster; 3) the pipe is typically installed along a designed bore path that includes curves similar to typical HDD designs.

Herrenknecht Corporation was the first manufacturer to bring this technology to the market with its Direct Pipe® system with the first installation occurring in 2007. Since that time, the application of DSPT has been steadily increasing with hundreds of installations completed worldwide. DSPT is often described as a combination of horizontal directional drilling (HDD) and Microtunnelling (MT) as DSPT has operational and behavioural characteristics that are similar to microtunnelling while allowing the installation of pipelines with geometric characteristics that are similar to HDD installations. >



Kim Staheli

SPONSORED BY:

**TRACTO**





# SOCIETY NEWS

ISTT News brought to members by Trenchless Works



Preparing to launch a DSPT project

However, understanding the features of DSPT and how they compare to microtunnelling and HDD is critical to determine and analyse the mechanisms that govern the development of thrust forces, the risk of inadvertent returns, and the behaviour of the pipe within the borehole.

[Kimberlie Staheli](#)

Dr Staheli is the President and Founder of Staheli Trenchless Consultants, Inc. located in Seattle, Washington, USA. Staheli Trenchless specialises in the design and construction management of trenchless projects around the world. Kimberlie has a degree in Mechanical Engineering from Rensselaer Polytechnic Institute, a master's in civil engineering from Mississippi State University, and a Ph.D. in geotechnical engineering from Georgia Institute of Technology. Kim's passion is managing risks on trenchless projects and educating the industry to allow for more successful trenchless installations. Dr Staheli has published over 100 technical papers on Trenchless Technology and is a Past Chair of the North American Society for Trenchless Technology, and the current Vice Chair of the International Society for Trenchless Technology.

SPONSORED BY:

**TRACTO**

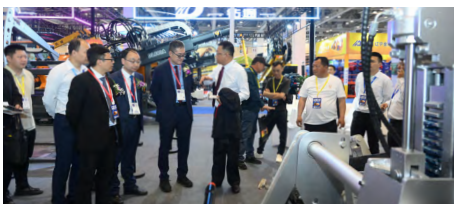




# SOCIETY NEWS

ISTT News brought to members by Trenchless Works

Ribbon-cutting ceremony for the ITTC 2023 exhibition opening.



VIP tour of the exhibition booths



A well-attended exhibition hall



Opening ceremony of the conference

## ROUNDUP – ITTC 2023

The wind brings fresh greenery and a revival of all things, contributing to the industry's recovery. Between 19 and 26 April, 2023 the 26<sup>th</sup> International Trenchless Technology Conference (ITTC2023) opened at the Suzhou International Expo Center, in China. The event exhibition an area of 20,000 square meters, and the organising committee selected 123 companies from the industry to showcase their latest products and technologies. Among them, 27 companies participated for the first time, accounting for 21.95% of the total exhibitors. Some 95% of the exhibitors brought dozens of physical exhibits, covering cutting-edge technologies and products in all relevant fields of the trenchless technology industry. They comprehensively demonstrated the leading development trends and innovative technologies of trenchless technology in municipal, petroleum, electric power, telecommunications, and gas sectors, including new pipeline construction and existing pipeline rehabilitation.

Despite the fact that ITTC2022 was postponed due to the impact of the pandemic, there was a call for 'accelerated recovery and full return', of this important platform for showcasing and technical exchange within the industry. >

SPONSORED BY:

**TRACTO**





# SOCIETY NEWS

ISTT News brought to members by Trenchless Works



Speech by overseas cooperative partners



The conference venue



Corporate presentation at the new product launch event



Attendees at the new product launch event

The successful convening of ITTC2023 has stimulated the aggregation of high-quality ecological resources in the trenchless industry and related industry chains. It presented the vigorous vitality and development potential of China's trenchless industry and market while boosting business confidence and injecting strong impetus into the industry's recovery and upgrading.

The event was affected by immigration policies, and the 'German National Pavilion' was unfortunately unable to visit China. However, cooperation with GSTT has not slowed down, and both parties have reached preliminary cooperation intentions for future exhibitions. At the same time, Mr Holm Reisinger from Trelleborg Sealing Profiles Germany GmbH and representatives from other German companies all participated in person at the event. CSTT executives held meetings with representatives of various companies, engaging in in-depth exchanges on further expanding Sino-German exchanges, deepening cooperation in the trenchless industry, developing of the Chinese market, and achieving positive results.

WONG Meng Kin, Deputy Director of the Public Utilities Board (PUB) Singapore also visited the ITTC2023 event for the first time. Professor Yan Chunwen, Vice President of the CSTT, accompanied him and introduced the development trends of China's trenchless technology, innovative technology achievements, and star products of Chinese manufacturing enterprises to the guests. From the industry benchmarking equipment showcased by many cutting-edge manufacturers at the exhibition, one can also glimpse the innovative upgrades in China's intelligent manufacturing of trenchless equipment.

Professionalism and forward-thinking have always been the two highlights of the ITTC event, which strives to present a vivid innovation feast for the trenchless industry. This event has attracted high attention from industry professionals both domestically and internationally.

ITTC2024 will be held in Changsha, Hunan, China between 24 and 26 April, 2024 and the organisers look forward to gathering with all of you.





# SOCIETY NEWS

ISTT News brought to members by Trenchless Works

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

Conference and Exhibition  
**17-18 October 2023**  
Expo Santa Fe, Mexico

## STUDENT PAPER COMPETITION AT NO-DIG MEXICO

The International Society for Trenchless Technology is hosting a Student Paper competition at the forthcoming International No-Dig Show which is taking place in Mexico City, Mexico between 17 and 18 October, 2023.

Students are invited to submit papers to the Technical Program Committee for Review. Four Winning Papers will be selected for presentation at the event. The closing date for entries is: August 15, 2023.

Please submit your papers, which should be between 4-8 pages, by using the dedicated submission form which can be found at the website: <https://www.istt.com/main/task.announcement/id.wrbxWH1XOVBIshoquV4pxQ==>

SPONSORED BY:

**TRACTO**





# AFFILIATED SOCIETIES

## ISTT Affiliated Societies around the world



### Austrian Association for Trenchless Technology (AATT)

c/o TU Wien Resselgasse 5,  
1040 Wien, Austria  
Phone: +43 664 5184084  
Email: office@grabenlos.at  
Web: www.grabenlos.at



### Brazilian Association for Trenchless Technology (ABRATT)

Alameda Santos, 1773 – Jardim  
Paulista Sao Paulo  
01419-002 Brazil  
Phone: +55 11 983893450  
Email: hrosas@abratt.org.br  
Web: www.abratt.org.br



### Australasian Society for Trenchless Technology (ASTT)

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



### Bulgarian Association for Trenchless Technology (BATT)

Kaprinka Lake Village Kazanlak  
6100, Bulgaria  
Phone: +359 2 4901381  
Email: info@batt-bg.org  
Web: www.batt-bg.org



### China Hong Kong Society for Trenchless Technology (CHKSTT)

Tsimshatsui Post Office 91499 Kowloon  
Hong Kong  
Phone: +852 9201 1952  
Email: chkstt@gmail.com  
Web: www.chkstt.org



### China Society of Geology - Trenchless Technology Committee (CSTT)

Xicheng District Room 151, 26  
Baiwanzhuang Street, Xicheng District,  
Beijing 100037 China (PR)  
Phone: +86 10 6899 2605  
Email: yan64843889@126.com  
Web: www.cstt.org



### Chinese Taipei Society for Trenchless Technology (CTSTT)

3F, No 92, Roosevelt Rd., Sec. 4,  
Zhongzheng Dist, Taipei City, 100  
Taiwan  
Phone: +886 2 2362 0939  
Email: zoradrcr@gmail.com  
Web: www.ctstt.org.tw/en\_index.asp



### Czech Society for Trenchless Technology (CzSTT)

Bezova 1658/1, 147 14 Praha 4 Czech  
Republic  
Phone: +420 244 062 722  
Email: office@czstt.cz  
Web: www.czstt.cz



### Danish Society for Trenchless Technology - NoDig Infra (DKSTT)

Odinsvej 29 Silkeborg Denmark  
Phone: +45 50894489  
Email: tina@juul-consult.dk  
Web: www.nodiginfra.dk/nodig-infra/  
startside



### Finnish Society for Trenchless Technology (FISTT)

c/o Sari Pietilä, Haapasuonkankaantie 10  
90830 Haukipudas, Finland  
Phone: +358 504132484  
Email: info@fistt.net  
Web: www.fistt.net



### French Society for Trenchless Technology (FSTT)

4 rue des Beaumonts, F-94120  
Fontenay Sous Bo, France  
Phone: +33 1 53 99 90 20  
Email: contact@fstt.org  
Web: www.fstt.org



### German Society for Trenchless Technology (GSTT)

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



### Italian Association of Trenchless Technology (IATT)

Via Ruggero Fiore, 41 Rome Italy  
Phone: +39 06 39721997  
Email: iatt@iatt.info  
Web: www.iatt.it



### Iberian Society for Trenchless Technology (IBSTT)

C/ Josefa Valcarcel, 8 – 3a  
PTLA 28027, Madrid, Spain  
Phone: +34 913 202 884  
Email: ibstt@ibstt.org  
Web: www.ibstt.org





# AFFILIATED SOCIETIES

## ISTT Affiliated Societies around the world



### Japan Society for Trenchless Technology (JSTT)

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



### Latin American Society for Trenchless Technology (LAMSTT)

Medellín Highway (Calle 80) KM3.5  
via Bogotá-Siberia south side, Bogotá  
Terrestrial Cargo Terminal, Office C-12,  
Cota – Cundinamarca, Colombia  
Phone: +57 1 8764675  
Email: cistt.arlex.toro@lamstt.org  
Web: www.lamstt.org



### Malaysia Association for Trenchless Technologies (MATT)

No 44, Jalan Dungun, Damansara Heights,  
Kuala Lumpur 50490 Malaysia  
Email: trenchless@matt.org.my  
Web: www.matt.org.my



### North American Society for Trenchless Technology (NASTT)

22722 29th Drive SE, STE 100,  
Bothell, WA 98021  
Phone: +1 888 993 9935  
Email: info@nastt.org  
Web: www.nastt.org



### Netherlands Society for Trenchless Technology (NSTT)

Postbus 79, 3769 ZH Soesterberg,  
Netherlands  
Phone: +31 346 723450  
Email: info@nstt.nl  
Web: www.nstt.nl



### Polish Foundation for Trenchless Technology (PFTT)

Ul. Warkocz 14, 25 - 253 Kielce, Poland  
Phone: +48 41 34 24 450  
Email: parkaa@tu.kielce.pl  
Web: www.pftt.pl



### The Russian Society Trenchless Technology Association (RSTT)

Severnoy proezd 12, Balashikha Moscow  
region, Russian Federation  
Phone: +7 (495) 521 78 82  
Email: gnb.06@mail.ru  
Web: www.s-gnb.ru



### Southern African Society for Trenchless Technology (SASTT)

1053 Hyde Avenue, Eldoraigne ext 1,  
Centurion Gauteng, South Africa  
Phone: +27 (0) 82 551 7458  
Email: director@sastt.org.za  
Web: www.sastt.org.za



### Singapore Society for Trenchless Technology (SgSTT)

84 Toh Guan Road East, Singapore Water  
Exchange, #02-02 608501, Singapore  
Phone: +(65) 97124054  
Email: singaporestt@gmail.com  
Web: www.sgstt.org.sg



### Scandinavian Society for Trenchless Technology (SSTT)

Gezelius väg 12, 134 31 Gustavsberg  
Sweden  
Phone: +46(0) 70 438 01 54  
Email: Kontakt@sstt.se  
Web: www.sstt.se



### Trenchless Romania Club

Kucukbakkalkoy Mah. Ali Ay Sok.  
No:3/2 Roma Street, No. 16, District 1  
Bucharest Romania  
Phone: + 40724 550 830  
Email: maria.nae@trenchlessromania.ro  
Web: www.trenchlessromaniacub.ro



### Turkish Society for Infrastructure and Trenchless Technology (TSITT)

Gayrettepe Mah. Huzur Sok. No:1A  
Besiktas 34349 Istanbul, Turkey  
Phone: +90 212 603 11 01  
Email: info@akated.com  
Web: www.akated.com



### Ukraine Association for Modern Trenchless Technology (UAMTT)

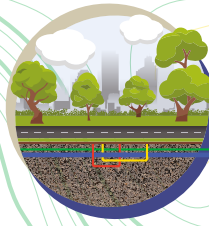
83A Srednyaya Str., Odessa 65005 Ukraine  
Phone: +380 50 3953280  
Email: trenchless.as@novatec.ua  
Web: www.no-dig.odessa.ua



### United Kingdom Society for Trenchless Technology (UKSTT)

Camden House, Warwick Road,  
Kenilworth, Warwickshire, CV8 1TH, UK  
Phone: +44 (0)192 651 3773  
Email: admin@ukstt.org.uk  
Web: www.ukstt.org.uk





**GREEN ABOVE.  
GREEN BELOW.**

# THE NASTT 2024 NO-DIG SHOW MUNICIPAL & PUBLIC UTILITY

## Scholarship Program

The NASTT No-Dig Show Municipal & Public Utility Scholarship Award has been established to **provide education and training** for North American municipalities, government agencies and utility owners who have limited or no travel funds due to restricted budgets.

Selected applicants will be awarded **complimentary full conference registration** to the NASTT 2024 No-Dig Show in Providence, Rhode Island, April 14-18, 2024. One day conference registrations will also be available. Registration includes **full access to all exhibits and technical paper sessions**...

all you have to do is get yourself to the conference! Selected applicants will also be eligible to receive **overnight accommodations**. Selection based on responses to the application as well as need.

**APPLY TODAY!** Application deadline is November 1, 2023.



Visit **[nodigshow.com](http://nodigshow.com)** to learn more



The No-Dig Show is owned by the North American Society for Trenchless Technology (NASTT), a not-for-profit educational and technical society established in 1990 to promote trenchless technology for the public benefit. For more information about NASTT, visit our website at [nastt.org](http://nastt.org).



# NASTT SOCIETY NEWS

nastt.org

NASTT News brought to members by Trenchless Works



## NASTT UPCOMING EVENTS

**June 28**

Introduction to Rehabilitation  
Mexico City, Mexico

**November 16**

Municipal Sewer Grouting Good Practices  
VIRTUAL

**June 28-29**

New Installation Methods Good  
Practices VIRTUAL

**December 13-14**

Pipe Bursting Good Practices  
VIRTUAL

**September 28**

Gas Good Practices  
VIRTUAL

**April 15-17, 2024**

NASTT 2024 No-Dig Show  
Providence, Rhode Island, USA

**October 11**

Trenchless Elevated 2023  
Golden, Colorado, USA

**October 21-23, 2024**

No-Dig North 2024  
Niagara Falls, Ontario, Canada

**October 17-18**

ISTT International No-Dig  
Mexico City, Mexico

**March 30 – April 3, 2025**

NASTT 2025 No-Dig Show  
Denver, Colorado, USA

**October 23-25**

No-Dig North 2023  
Edmonton, Alberta, Canada

**March 29 - April 2, 2026**

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

SPONSORED BY:

**TRACTO**



# SOCIETY NEWS

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

Society News brought to members by Trenchless Works

## WELCOME FROM THE CHAIR



Ian Ramsay, Chair, UKSTT

Welcome to summer. The weather is warming up and so is the industry. A hectic May saw me attending 3 major trenchless events around the world. From the NASTT show in Portland, Oregon, USA, through RO-KA TECH in Germany and eventually Trenchless Asia in Kuala Lumpur. Every show was well attended, and the conference papers were excellent and well supported. Without a doubt the trenchless industry worldwide is growing, full of innovation and talented people.

Back in the UK, there has been a lot of news reported lately regarding sewage spills into rivers, seas, and lakes. In most cases this can be due to a lack of maintenance and ageing infrastructure. Water companies are now facing strict targets on pollution from sewage under a new plan set out by the UK Government. UKSTT will continue to promote the use of Trenchless Technology, highlighting the techniques available that could be implemented straight away to address current issues asset owners are facing. Many high profile people, such as actor Paul Whitehouse, have lobbied against sewer spills and the amount of sewage polluting Britain's rivers. The more the merrier I say.

On 15 June we were in Glasgow for the second of this year's NO-DIG Roadshows. The focus for this conference was based on Scottish Water's need for and use of Trenchless. The exhibition area was packed, and attendance was great. Many thanks to all of the speakers, Scottish Water for supporting the event and the Sponsors, Steve Vick International, UIS, PE100+ and Reinert. If you have not already done so, please register to attend the next NO-DIG Roadshow which is taking place in Bristol on 29 November, 2023, that also includes the UKSTT Annual Dinner and Awards Ceremony. For details visit: [www.nodigroadshows.co.uk](http://www.nodigroadshows.co.uk)

We are currently in discussions regarding a new partnership agreement and hope to be able to make an announcement in the next issue. Watch this space!

I look forward to hearing from members and hope everyone has a great summer.

Ian Ramsay  
UKSTT Chair

SPONSORED BY:

**TRACTO**





# UKSTT Annual Awards Dinner 2023

Join us for the annual UKSTT Awards Dinner on the evening of Wednesday 29 November in partnership with Westrade Group at the Bristol No-Dig Roadshow, De Vere Tortworth Court.

**Venue:** De Vere Tortworth Court, Tortworth,  
Wotton Under Edge, GL12 8HH

**Dress Code:** Black Tie Preferable

**Date:** Wednesday 29 November

**Time:** 7.00pm till late

**Tickets:** Early Bird Rate £185 + VAT  
Standard Rate £210 + VAT

Early bird tickets must be booked and paid for by 31 July 2023

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

**We are pleased to announce our guest speaker will be Kyran Bracken MBE.**

**CLICK TO  
BOOK  
TICKETS  
NOW**

Further details are available - [www.nodigroadshows.co.uk/ukstt-awards](http://www.nodigroadshows.co.uk/ukstt-awards)  
Sponsorship opportunities are available – please contact Trevor Dorrell  
Email: [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk). Tel: +44(0)1923 723 990

Hosted by



Organised by



Official Media Partner

**TRENCHLESSWORKS**



# NO-DIG ROADSHOWS 2023

2023

NO-DIG ROADSHOW

JOIN US AT THE FOLLOWING EVENT:  
**NO-DIG ROADSHOW & UKSTT  
ANNUAL AWARDS BRISTOL**  
**Wednesday 29 November 2023**

To book please contact:

Trevor Dorrell, [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk)

Kathryn Boi, [kboi@westrade.co.uk](mailto:kboi@westrade.co.uk) | +44 (0)1923 723 990 |

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

Organised by



Supported by



Official Media Partner

TRENCHLESSWORKS



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

Discover Smart Test

Accurate.

On Site.

Pressure Testing Results.

Automatic interventions  
Accurate pass/fail outcomes  
GPS location  
24/7 access to recorded data



Available now. Contact us:  
0370 3306 023 | [pipelinesolutions@sunbeltrentals.co.uk](mailto:pipelinesolutions@sunbeltrentals.co.uk)  
[sunbeltrentals.co.uk](http://sunbeltrentals.co.uk)





# EVENTS AND MEETINGS

## 2023

### July 4-6: São Paulo No-Dig Show

Av. Dr. Dante Pazzanese, 120 - Vila Mariana, São Paulo

Details from:

[www.abratt.org.br/eventos/sao-paulo-no-dig-show-esta-definido/](http://www.abratt.org.br/eventos/sao-paulo-no-dig-show-esta-definido/)

### September 13 – 14: ASTT NO-DIG Downunder

Brisbane Convention and Exhibition Centre

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

### October 17-18: International No-Dig Mexico 2023

ISTT's 39<sup>th</sup> International No-Dig Conference and Exhibition

Expo Santa Fe, Mexico

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

### November 1-2: No-Dig Turkey 2023 Conference and Exhibition

Darulbedai Cad. No 4 Harbiye Sisli, Istanbul 34367, Turkey

### November 1-3 November: 18<sup>th</sup> International ACUUS Conference

Singapore

Details from: [www.acuus.org](http://www.acuus.org)

### November 8-9: STUVA-Expo 2023 in Munich

Messe München, Messegelände, Hall C1

81823 München, Germany

Details from:

[www.stuva-expo.de/en/start-stuva-expo-2023.html](http://www.stuva-expo.de/en/start-stuva-expo-2023.html)

### November 29: No-Dig RoadShow Bristol & UKSTT Annual Awards

De Vere Tortworth Court, Wotton Under Edge

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

## 2024

### June 26-27 Trenchless Asia 2024

SMX Convention Center Manilla, Philippines

### October 1 2 & 3rd No-Dig Live 2024

NAEC Stoneleigh Park, Warwickshire

### 18-19 November: International No-Dig Dubai 2024

ISTT's 40<sup>th</sup> International No-Dig Conference and Exhibition

Dubai World Trade Centre, Dubai

SPONSORED BY:

**TRACTO**

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)