PULLING FOR CHRISTCHURCH

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To submit editorial for Trenchless Works Issue 105 please email copy and pictures to: ian@nodigmedia.co.uk by 10 May, 2015

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Two projects in which microtunnelling machines from Herrenknecht are driving new sewers have been awarded the GSTT Award 2015 by the German Society for Trenchless Technology (GSTT). The special award ‘International Project’ was given to the National Water Company of Saudi Arabia. At the unusual construction site in Mecca two Herrenknecht EPB shields with an individual remote monitoring system are in use. The Emschergenossenschaft received the GSTT Gold Award for a construction of a section between Dortmund and Bottrop as a part of the Emscher re-naturalisation where, since 2013, several Herrenknecht utility machines have been driving a new sewer system.

As the owner of the Makkah Haram Sewer Line project the National Water Company of Saudi Arabia was honoured with the GSTT Award in the special International Project category. Directly under Mecca, the most important place of pilgrimage for Muslims, two 3,510 mm diameter Herrenknecht EPB Shields are driving much needed sewers with segmental lining. Tight curve radii of 80 m are being driven over distances of 1.5 and 1.8 km. For the particularly secure removal of sewage through holy groundwater, concrete segments with two sealing profiles and an HDPE liner provide additional protection.

Herrenknecht produced the tunnel boring machines for this project and put together a tailor-made service package. Because only Muslims are allowed to enter the city of Mecca, together with the construction company Saudi Binladin Group Saudi Arabia a special remote monitoring system customised for the project was developed.

Machine operators from Herrenknecht can support the advance around the clock. Therefore the tunnel boring machine’s control cabin was duplicated and its data transmitted from the jobsite in Mecca directly to the offices in Schwanau. In addition, prior to tunnelling, at the Herrenknecht plant in Schwanau the customer’s site crew were trained on the machines set up in the curve radius. “We have to work under time pressure in tight curve radii under Mecca’s busiest ring road and through holy groundwater. For this unique challenge we needed a unique solution. Herrenknecht gave us a complete package - including 24/7 support.” said Eng. Ibrahim Balaban, General Manager of the Tunnelling Division in the Saudi Binladin Group Saudi Arabia.

The GSTT Gold Award was awarded to the Emschergenossenschaft Water Management Society. As the project owner of the Emscher re-naturalisation it was honoured for the planning and...
The construction company Wayss & Freytag Ingenieurbau AG is driving more than 25 km of the sewer sections with an EPB Shield and five AVN machines from Herrenknecht. At this large-scale project, a variety of tunnelling machines from Herrenknecht have been in use for about 20 years. At the construction sections 20 and 40, the construction company PORR GmbH is excavating about 23 km of sewage tunnels with three EPB shields.

Ulrich Schaffhauser, Deputy Member of the Board of Management and Director Utility Tunnelling at Herrenknecht, congratulated the winners. “We congratulate our customers on the honouring of their unique construction projects with this year’s GSTT Award. We are delighted to provide Herrenknecht know-how to support these important trenchless microtunnelling projects that make a contribution to improving the quality of life and conserving natural resources.”

The award ceremony took place on 24 March, 2015 at Wasser Berlin International (International Trade Fair and Congress for Water and Wastewater) in Berlin. Website: www.herrenknecht.com
OBITUARY: JOOP VAN WAMELEN

Joop van Wamelen, Founder of the Southern African Society for Trenchless Technology (SASTT), was instrumental in forming the Southern African Society for Trenchless Technology (SASTT) in 1992 and for 24 years has steadfastly guided the society, both as a board member, President, Past President and more recently as Honorary Director.

He was extremely well liked and respected by members of the Southern African Society as well as his peers at the International Society of Trenchless Technology (ISTT).

Joop and his wife Diana attended several ISTT International Conferences and Exhibitions and represented SASTT at the ISTT Board meetings. The most recent being No-Dig Down Under, in Sydney, September 2013.

In recognition of Joop’s invaluable contribution to SASTT, The Joop van Wamelen Award of Excellence has been running for several years, whereby SASTT members compete for this coveted award by nominating their most excellent projects each year.

Joop was born on the 8 June 1939 in Delft, Netherlands. He was 12 when his parents immigrated to South Africa and they lived in Pretoria for all of his school and university years. Joop and his family also stayed in Pretoria for most of his career except for approximately 8 years spent in Kwazulu-Natal in his early career.

Joop studied at the University of Pretoria and obtained a B.Sc. (Mathematics and Applied Mathematics) in 1960 and a B.Sc. (Eng.) (Civil) in 1966. He was registered as a professional engineer in 1970.

He married his wife, Diana Brink on 6 October 1962. Together they had three boys.

Professional history up to retirement in 2005:
- 1969: Assistant resident engineer, Eskom, construction of power station
- 1971-1972: Assistant city engineer, Welkom, water and sewerage
- 1972: Senior Engineer, Pinetown Municipality, sewerage
- 1973: Associate, Owen Jones & Partners, township services
- 1977: Senior Engineer, Zakrzewski Associates Inc., industrial structures and bridges
- 1978-1979: Consultant: Agrément South Africa, technical assessment of non-standardised construction systems and products; performance criteria; web publishing; marketing
- 1993-1998: Manager: Agrément South Africa
- 1997-2005: Consultant: Agrément South Africa, technical assessment of non-standardised construction systems and products; performance criteria; web publishing; marketing
- 1998: Manager: Energy Efficiency in Housing, Division of Building Technology, CSIR
- 1999-2005: Consultant: Agrément South Africa, technical assessment of non-standardised construction systems and products; performance criteria; web publishing; marketing
- 2005: Consultant: Agrément South Africa, technical assessment of non-standardised construction systems and products; performance criteria; web publishing; marketing
- 2005: Consultant: Agrément South Africa, technical assessment of non-standardised construction systems and products; performance criteria; web publishing; marketing

He retired from the CSIR with 25 years’ service. After retirement he served as the honorary director of the Southern African Society for Trenchless Technology.

Joop also served as a police reservist for a number of years and was involved with the church.

Joop passed away on 13 February 2015, and is survived by his wife Diana, and his 3 sons Paul, Arend and Riaan.

Joop, his wife and a delegate at a No-Dig event in Toronto.
On 5 March, 2015, a Robbins 6.2 m (20.2 ft) diameter Main Beam TBM finished boring a 2.8 km (9,175 ft) long extension tunnel, known as the Eagle Creek Tunnel, for the Indianapolis Deep Tunnel System in Indiana, USA. The contractor, Shea/Kiewit (S-K) JV, had much to celebrate. “I am proud of our world records, and most of all our men and the hard work they have done as a team, working together to accomplish a project of this size,” explained Stuart Lipofsky, Project Manager, for S-K JV. “We finished the first 12.5 km (41,000 ft) [of the main tunnel] almost a year ahead of schedule. The extension added time but what is remarkable is that we were still able to finish within the original contractual dates.” continued Lipofsky. The completion of the first leg of a much larger tunnel system targets three critical CSOs that flow into the nearby White River, and will go online in 2017. The completed tunnels bring the city one step closer to achieving its consent decree with the U.S. Environmental Protection Agency (EPA), set to be achieved by 2025, to eliminate overflows into the city’s rivers.

The rebuilt Robbins hard rock TBM was first used on the 12.5 km (7.8 mile) long main tunnel, called the Deep Rock Tunnel Connector (DRTC). The new cutter head arrived onsite in November 2012, and the machine was launched from a 76 m (250 ft) deep shaft to bore through limestone and dolomite. The TBM achieved world records in its size class of 6 to 7 m (20 to 23 ft), including ‘Most Feet Mined in One Day’ (124.9 m/409.8 ft); ‘Most Feet Mined in One Week’ (515.1 m/1,690 ft); and ‘Most Feet Mined in One Month’ (1,754 m/5,755 ft). According to Tim Shutters, Construction Supervisor for project owner Citizens Energy Group, there were two main factors for the TBM’s high performance. “The first one is the very nice cutter head provided by Robbins. It has performed very well. Second, rock conditions are favourable for mining operations and optimal for fast production.” he said.

Another important element that helped the speedy machine achieve a fast advance was, as Lipofsky put it, ‘one of the most complex continuous conveyor systems in North American tunnelling construction.’ The custom-built Robbins system, consisting of 25 km (82,000 ft) of belt, included horizontal and vertical conveyors for efficient muck removal. The system was the first built by Robbins to go through such sharp curves. “The belt is going through two 90° curves in opposite directions and S-curves in other places. It is very unusual and amazing to see a belt system perform as well as this one did.” said Lipofsky.

Once complete, the deep tunnel project will reduce the amount of raw sewage overflows and clean up tributaries along the White River. Tim Shutters described the environmental benefits the project will provide the Indianapolis community saying: “I have lived in Indy all of my life, and the White River has never been a focal point for the city as there is a lot of pollution. I really think that once it has been cleaned up, people will want to visit, they will swim and fish, and property values along that body of water will go up. Being able to finally utilise the river is key for us.”

After the early completion of the Eagle Creek Tunnel, the project will be moving into its next two tunnelling phases. The White River Deep Tunnel will continue 8.5 km (5.3 mile) north of the completed DRTC and pump station. The Lower Pogues Run Deep Tunnel will split off 2.7 km (1.7 mile) from the White River Deep Tunnel heading east. Two additional tunnels, including Fall Creek and Pleasant Run, are anticipated to be built in 2020, and the project (27 km/17 mile of tunnels in total) is expected to be fully completed by the end of 2025. Website: www.robbinstbmv.com

AKKERMANN DRIVES MICROTUNNEL INSTALLATION

In early March 2015, general contractor BTrenchless Inc., a division of BT Construction, completed a 88 m (288 ft) microtunnel installation of 1,980 mm (78 in) diameter Peralmok steel casing using an Akkerman SL74 MTBM with an increase kit on the Kenwood Outfall Storm Sewer and Roadway Improvements Project in Commerce City, Colorado, USA. The pipeline parallels and crosses under US 85, a Union Pacific Rail Road track, and Interstate I-76. At 8.5 m (28 ft) deep, it required extensive dewatering and contamination treatment. BTrenchless also installed an 2,134 mm (84 in) diameter open cut tunnel on the current phase. The contractor has completed three phases on this project and previously microtunnelled a 73 m (240 ft), 1,372 mm (54 in) diameter storm sewer under Interstate I-76 and a 2,134 mm (84 in) diameter hand tunnel near O’Brien Canal in 2011. This 10-year project involves four tunnels, open cut pipelines, road improvements, and a water retention dam. Website: www.akkerman.com
Herrenknecht’s newly developed semi-trenchless method for pipeline installation has completed its third successful mission. South of Stockholm, using Pipe Express® Züblin Scandinavia AB installed a water pipeline more than a kilometer in length within twelve days. Groundwater lowering was not required despite a water level just below the terrain’s surface.

Compared to conventional open-cut construction the method has significantly less impact on the environment, while simultaneously minimising costs.

The benefits were obvious to Mats Ohlsson, project manager of client Stockholm Vatten: “For open-cut construction we would have needed sheet piles and we would have had to lower the groundwater.” The Pipe Express® method from Herrenknecht, however, requires no lowering of the groundwater.

The construction company made the most of this enormous budget and time advantage. It used Pipe Express® for the laying of a 1,036 m section of a 1,220 mm (48 in) diameter water pipeline near Huddinge, some 10 km south of Stockholm. Drilling started on 22 February 2015, and by 5 March the destination had been reached.

In the most productive 12 hour shift, 221 m of pipeline disappeared into the ground. The average construction performance was 0.70 meters per minute. About 60% of the construction time was taken up just with welding and coating the up to 224 m long steel pipe strings.

Michael Lubberger, Senior Product Manager Pipeline at Herrenknecht, is proud of the success in Sweden: “After the pilot project in the Netherlands and the subsequent deployment in Thailand, this is already our third drive with Pipe Express®. We see strong potential for the new method in the pipeline market.” The keen interest of international specialists on the site confirmed this view.

Pipe Express® from Herrenknecht is a new, semi-trenchless near-surface pipeline installation method. In this method, a buggy with a trenching unit creates a narrow, approximately 400 mm wide trench on the surface. Below it in the soil a boring machine is mounted that digs the actual tunnel with diameters of up to 1.5 m and lays the pipeline at the same time. The excavated soil is brought to the surface by the trenching unit and backfilled in the trench again behind the machine, so laborious finishing work is not required. The pushing force for both excavation unit and pipeline is provided by a Herrenknecht Pipe Thruster located at the starting position.

In contrast to the conventional construction method the corridors, including construction paths, are up to 70% narrower. Extensive earthworks, groundwater lowering, the ramming of sheet piles etc. are not necessary. Up to 2,000 m long pipelines with a diameter of 900 to 1,500 mm (36 in to 60 in) can be laid quickly and cost-efficiently.

In the semi-trenchless Pipe Express® method the vertical trenching unit connects the TBM working underground with the buggy on the ground surface.
CAST IRON SOLUTION WITH BRAWOLINER® HT

The North of England has long been famous for not just its wonderful landscapes, world renowned cities and the character of its people, it is also globally recognised as a major centre in the growth of the industrial economies we see today. Whilst like many parts of the UK the region has had its ups and downs alongside the vagaries of the economy it still boasts some of the UK’s largest industrial facilities.

Not least of these is a major soft drinks manufacturing plant which was recently the site of a challenging pipeline rehabilitation project undertaken by DALROD, a family run drainage industry service provider established in Peterborough in 1985. The project was completed using the BRAWOLINER® HT CIPP liner system, supplied by the UK Brawoliner distributor C.J. Kelly Associates of Peterborough. The project had apparently been looked at by other rehabilitation contractors but dismissed as not possible using currently available techniques.

THE CHALLENGE

At first glance it might appear to be just another pipe rehab project comprising the lining of some cast iron wastewater pipeline that carried effluent away from the soft drinks production process.

Reality proved somewhat different however. Pipe diameters varied from 100 mm (4 in) to 300 mm and comprised both surface and foul pipelines. The number of linings over the period of the works was numerous with Phase 1 of the programme occurring in 2014 and Phase 2 being completed in early 2015. The temperature of the effluent varied depending on the process being drained and the production cycle. The pipelines locations also varied considerably with some running under production line factory floors. This meant that timing of the individual lining operations was a vital part of the rehabilitation process. Whilst some areas of work were undertaken during process line close downs, other works had to be undertaken off shift to ensure that overall no production loss at the factory occurred.

In trying to establish the degree of deterioration in the pipelines, investigations showed that the acidity of the varying temperature plant waste had damaged the pipe to the extent that the invert had in some areas been eroded so much that it had led to exposure of the sub-soils beneath. In others the pipe fabric was so thin there was no chance of running equipment on it as it was believed it would collapse under the strain. This meant that utilising standard rehabilitation techniques would be impossible.

Mike Pollard from DALROD Cambridgeshire liaised with John Kelly from C.J. Kelly Associates. Using previous experience from other sites and carrying out some technical data testing against the Brawoliner data sheets it was proven that the BRAWOLINER® HT product was best suited for the job.

The BRAWOLINER® HT system offered the best solution because it was not only chemically resistant to the required specifications set out by the client, it was also flexible enough to negotiate the numerous bends on the pipe route.

The project complexity came into play during the pre-lining survey. As the base of the original pipe was missing in many areas, pulling a camera system through to complete the pre-project survey and plot lateral positions for reopening later was technically impossible using standard CCTV survey equipment. The deterioration also meant that even with the best CCTV system it was often impossible to effectively plot lateral positions. DALROD therefore had to devise a special method which comprised pulling a cable line through that ran along the pipe roof. This then allowed the contractor to pull a camera

Access to the pipeline under repair was challenging.
system through to plot the laterals that could be seen and pass through a cutter robot to excise any obstructions in the pipe that might impede the lining process.

Once this process was completed, lining could commence. Even then a change to the standard lining process had to be adopted. To ensure that new liner inflated in the host pipe correctly, given the missing invert sections, it was decided to introduce a pre-liner to form the new shape of the liner so preventing the BRAWOLINER® HT liner from slumping into the ‘V’ of the eroded invert channel. This allowed the new liner to form the correct pipe shape during curing.

So, once the liner had completed curing, the now correct-shaped pipe allowed the lateral reopening robot to be inserted to undertake the lateral re-opening works without fear of it falling into the erosion channel beneath the host pipe. This was also where one other aspect of the BRAWOLINER® HT also proved useful on the project. Its flexibility meant that the liner profiled well into all the lateral connections, so when it came to reopening laterals the robot cutter operator found not only those that had been highlighted by the initial survey but also others that had not.

Commenting on the project DALROD’s Mike Pollard said: “This was a very challenging job, however it went reasonably smoothly as our team had previously worked at this site and had learnt from previous experience. The work programme was completed 3 days ahead of schedule with all of the lining runs completed. The project also included some construction work and the installation of a new stainless steel catch pit into the floor of the factory to act as a catchment under the machinery to collect any over-spill of liquid which would previously have potentially caused erosion of the floor. All-in-all, the customer was delighted with DALROD Cambridgeshire’s turnaround time, pricing and attention to detail. On site daily meetings also kept the client up to speed with progress.

DALROD as a company thrives on taking on challenging projects where others may have tried and failed, this is another feather for the DALROD hat.”

**BRAWOLINER® HT**

The BRAWOLINER® HT is designed to offer pipe rehabilitation options in pipes where high and variable temperatures can occur for example in processing plants, industrial units and even kitchen or washing machine waste flows. To achieve a permanent repair the stability of any rehabilitation system at temperatures greater than 93°C is necessary. In addition, for example in Germany, for fire safety reasons, all rehabilitation solutions for wastewater pipes in buildings must meet a minimum for German building materials class B2 in accordance with DIN 4102-1 standards. The system is also DBT approved for use in vertical pipes, making it ideal for internal building pipe work.

The world-renowned BRAWOLINER® has been modified with a special temperature-stable film. This now means that steam curing is now also possible at high temperatures. The BRAWOLINER® HT system now offers, in addition to the advantages of the tried-and-tested BRAWOLINER®:

- Negotiation of bends of up to 90°
- Potential for 2 dimension changes during a lining run
- Hot curing with steam or water

To meet the special requirements of working within a building and domestic environments the company has also developed the new BRAWO® HT resin that has been specially formulated for such use. Together with the proven outstanding features of the well-known BRAWO® resins, it meets all structural requirements including:

- Dimensional stability at temperatures > 93°C
- Meets German building materials class B2 requirements in accordance with DIN 4102-1
- Can be cold or warm cured

For C.J. Kelly Associates John Kelly, Senior Partner said: “Given the state of the host pipe this was never going to be an easy installation for anyone. Working together with DALROD, using its wealth of field experience allied with the technical excellence of the BRAWOLINER® HT product, it was possible to achieve an outcome for the client that no-one else seemed to be able to offer. A success for all concerned.” Website: www.dalrod.co.uk and www.cjkelly.com
INTRODUCING THE ULTRAFLEX LINER

Jetchem and Superjet are amongst the largest suppliers of water jetting machines and equipment in the UK and stock a range of lining equipment and materials supplied by their partner, Re-Tec. Items include the Viking Lateral Cutter and the Liner Jet sluice. Lining materials, which include the Re-Tec Patch lining kits, which recently successfully passed the WRc long term hydrostatic test, are available to buy in kits or bulk from all Jetchem and Superjet depots. Depots are located across the country for ‘over the counter sales’ or by ordering for next day delivery. Jetchem and Superjet are now excited to bring to the UK a new range of liners from the Re-Tec brand.

Re-Tec, which manufacturers and supplies lining equipment and materials, with products having been tried, tested and proven for over 15 years in Sweden, partnered with Jetchem and Superjet to become the exclusive dealer for the UK market in 2013. Jetchem and Superjet are ideally positioned in the marketplace with six nationwide trade counter depots located in London, South Wales, Midlands, South Yorkshire, North West and the North East, with the addition of an online shop and next day delivery options. Each Jetchem and Superjet branch carries a full range of Lining materials and equipment including the patch lining materials.

INTRODUCING ULTRAFLEX

There is a varied selection of liners available on the market, all designed to cope with different challenges the installer faces. Ultraflex is a dimension change liner and offers a solution to some of these challenges.

The Ultraflex liner has a unique design, incorporating a stitched and welded seam which allows the liner to stretch from a smaller to a larger diameter using controlled pressure. The coating of the liner is polyurethane (PU) and can withstand heat up to 80°C.

Bends? These too are not a problem. The complex design also means the Ultraflex liner is suitable for pipelines with bends of up to 90° giving a smooth and wrinkle free finish.

Three versions are available for pipe diameters from 70 mm up to 225 mm including:
- DN70-100mm
- DN100-150mm
- DN150-225mm

MIDDLEFLEX LINER

Also available to the UK market is the Re-Tec Middleflex liner, which has proved to be a trusted inversion liner across Scandinavia for a number of years, incorporating a similar stitched and welded seam design to Ultraflex. The liner can be inverted at 0.5 bar to give a 4.5 mm cured liner, with the ability to increase pressure to reduce the thickness. Middleflex also has a PU coating that can withstand heat. Both liners are available now from any local Jetchem and Superjet depot or by ordering online or over the phone for convenient delivery.

THE RE-TEC LINER JET

Airtank or Water tower? This is the question often asked by liner installers. If the installer is looking to invert a long length of liner, an inversion tank can be used. The length of liner is dependent on the size of the tank and generally a length over 40 m can be an issue as the tanks start to become too big to transport.

Inverting a long length of liner, say 80 m of 150 mm diameter, is made simple by using the Liner Jet 150. The liner is wet out and pushed into the sluice and inverted straight into the pipe.

For larger diameter pipes the installer may decide to build a water tower from scaffold. This has time scale and health and safety issues. The larger model, the Liner Jet 300 is designed to cope with liners up to 300 mm diameter.

Both sizes of liner jet can be easily transported and are ideal for work-sites in tight places, whether the access is at the rear of a building or down a tight alley, the liner jet can be carried by one man.

Website: www.jetchem.com

Installing a liner using the Liner Jet.

The liner jet unit in use with (inset) a cut-away of the Ultraflex liner passing around a 90° bend.
Pipe bursting recently provided a cost-effective, long-term replacement solution for waste water lines compromised by a series of earthquakes in New Zealand. Not all of the property damage done by earthquakes is visible at the surface. A large portion of any city’s infrastructure lies underground. The major seismic events of 2010 (and the occasional earthquakes that still pop up from time to time) destroyed or damaged most wastewater systems in Christchurch, New Zealand and its surrounding foothills. Even after five years of rebuilding there are still hundreds of miles of gravity-fed, clay-pipe sewer laterals that need rehabilitation or replacement. There will also be an on-going need as Christchurch lies on a major fault line.

**TRENCHLESS SOLUTION**

In many places, trenching of the old lines is not an option. The durable and long-lasting materials Stronger Christchurch Infrastructure Rebuild Team (SCIRT) has chosen for replacing affected sewage laterals include polyvinylchloride (PVC) or polyethylene (PE) pipe. These can be installed without trenching through pipe bursting replacement technique. Pipe bursting has proven to be not only one of the quickest techniques but one of the least intrusive to landscape and property and lowest in overall cost.

John Grant, general manager of Ditch Witch New Zealand, said about 30 HammerHead® PortaBurst® units are currently being used for the pipe bursting projects in New Zealand. PortaBurst units are 30 t pipe bursting systems for replacing 50 to 150 mm (2 in to 6 in) diameter lateral pipes, and perfect for the kind of replacement the city of Christchurch needs.

As its name implies, the units are compact. Their modular design for easy disassembly, assembly and transport gives them even greater portability. Yet, Grant said, the little units have the power to easily fracture, press aside, and pull 50 mm to 100 mm (2 to 4 in) diameter PVC pipe through 45 m (150 ft) runs of existing vitrified clay pipe at rates of up to 3.7 m/min (12 ft/min) – without having to excavate the old pipe. “In a lot of cases our contractors cannot use traditional excavating machinery to get to the pipe.” Grant said. “They have to hand dig or use hydro-excavators. They also have to avoid disruptions to other services using the same trench.” The PortaBurst eliminates that worry and hassle of the ‘hows’ and ‘with-what’ in hard-to-access areas.

**NICHE WORK CAPABILITY**

Some of Grant’s construction customers had never done trenchless pipe rehabilitation work before, but they catch on fast. Also, because the PortaBurst is designed to run at only 207 bar (3,000 psi), a contractor’s initial investment is low. Many find they can run it from equipment they already own, such as a backhoe or mini excavator, purchasing a dedicated power pack later on.

The smaller PortaBurst model that Grant’s customers are renting breaks down into just three components, so it can be easily packed in to the more rugged job sites of the hills. However, the unit is compact enough that it is easy to transport and position while fully assembled and can be used in the most confined residential access points.
TOUGH. TRUSTED.
TRENCHLESS.

HammerHead equipment is tough by design—tough, because your jobs are tough, and only equipment engineered to match the conditions you face each day are up to the task. You’ve been trusting HammerHead engineering, innovation and expertise since 1989; first, for the moles that revolutionized an industry, then for a whole range of trenchless equipment, all consistently delivering the very highest rates of uptime and backed by expert, world-class support. Genuine HammerHead Trenchless equipment is available only at your authorized HammerHead dealer.

FIND YOUR LOCAL DEALER AT HAMMERHEADDRENCHLESS.COM
OR CALL +1 920-648-4848

PIERCING TOOLS
STATIC PIPE BURSTING
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PNEUMATIC BURSTING

MOLING | RAMMING | BURSTING | HDD ASSIST | WINCHES
Grant has seen his customers pull from hillsides and the sides of roads where there appeared to be no access to the drain lines. One suspended the unit against a vertical retaining wall from his excavator and successfully made the pull against the wall without a problem. His PortaBurst customers replace drains under houses, garages, massive gardens, big trees and other obstacles without any disruption, even making up to 45° bends around beams and retaining walls.

STRAIGHT-FORWARD BURSTING PROCESS

Typical runs on a Christchurch pipe burst are about 25 m (80 ft), though under-road laterals may be 10 m to 20 m long. They are almost all completed within a normal working shift. To prepare for a replacement pipe burst, customers must first video-scope the pipe’s inside. Grant said: “What they see are pulled pipes and broken lines, a lot of circumferential cracking behind clay pipe collars.” Now several years into replacement, root infiltration is common.

The PortaBurst contractor digs a pit on each end of a planned run down to the existing pipe. The PortaBurst unit is set in the exit pit. The contractor threads its cable through existing pipe to the entry pit side, where the burst head is attached. The replacement PE pipe is then connected to the burst head.

As the PortaBurst pulls the burst head through the existing pipe, the head fragments the pipe, pushing pipe pieces to the sides while pulling the replacement pipe in behind it. When it exits the other side, the contractor removes the head, video-documents the replacement work from the inside, neatly trims the pipe for reconnection and returns the line to service.

Ground conditions around the pipe return to ‘normal’. Restoration work consists only of adding fill and top soil in the entry and exit pits, gully traps and junctions, and reseeding. Those who did not see the replacement taking place have no visual clues that it has been done. Website: www.hammerheadtrenchless.com
HammerHead Trenchless Equipment has introduced the HammerHead ROUGHNECK™ R600, the largest of its pneumatic percussion drilling systems for use in horizontal directional drilling applications. Designed for drilling solid rock with bit diameters of 185 mm to 200 mm (7¼ to 8 in) diameter, the R600 gives HDD contractors the ability to complete larger diameter bores in fewer passes as well as access to a wider range of single-pass boring applications.

Josh Hood, HammerHead HDD product manager, said the R600 opens up new possibilities for the horizontal driller: “A typical large-diameter bore might take several passes to open to the final diameter. A larger pilot can help save time and money by eliminating some intermediary passes.”

The larger bits driven by an R600 also increase the range of single-pass applications the driller has access to, Hood said, such as in communications and other service installations. The R600 completes the range of existing HammerHead ROUGHNECK rock drills available to HDD customers. It joins the R400 designed for 130 mm (5.25 in) diameter straight and offset bits and the ROUGHNECK R500 for straight and offset bits to 160 mm (6.25 in) diameter.

All three ROUGHNECK hammers turn any horizontal directional drill in the construction industry into a high-production rock drilling machine. Capable of penetration rates of 45 m (150 ft) or more an hour, the rock hammers feature heavy-duty, high-flow housing; patent-pending pullback kit; control station/oiler; and drill conversion kit.

Their heavy-duty housing permits directional drilling in varying rock conditions without changing the housing. The larger bore diameter of the ROUGHNECK housings allows the hammer to send more air to the internal piston for maximum efficiency, resulting in faster and harder blows. Standard API thread makes housing connections easy. A patented, pinned-on lid design and isolation package secures and protects electronic investment.

The patented offset rock bit design increases steering precision, allowing the operator to navigate a wide variety of ground conditions. Integrated face-cleaning exhaust ports of the hammer ensure reliable performance, and the patented check valve located within the bit eliminates ingestion of debris.

The control station utilises the drill’s existing mud pump to efficiently deliver air, oil and fluids down hole, reducing footprint size and weight. Integrated electronics facilitate the drilling operation and provide the operator with control and increased productivity without leaving the drill operator’s station.

All ROUGHNECK control stations can be installed with a tee and a ball valve on the high pressure side of the mud pump, which directs airflow to the drilling fluid supply line. For ease of maintenance the ROUGHNECK system is equipped with patented spanner wrench holes in the front and rear of the hammer, reducing the number of breakout tongs required to change out the bit or service the tool. Web: www.hammerheadtrenchless.com
NEW PIPE CUTTERS REDUCE CUTTING TIME SIGNIFICANTLY

Steve Vick International has introduced two new pipe cutters to its range – one for cutting ‘windows’ and one for circumferential cuts; both developed for cutting ductile iron.

Whilst the majority of the existing gas network in the UK is made up of cast iron pipes, there is a significant proportion constructed from ductile iron and steel. These mains pose a problem for utilities when carrying out live and dead mains insertion, as they are not able to be broken out easily like cast iron mains.

THE RAPID WINDOW CUTTER

The Rapid Window Cutter has been developed in collaboration with Wales & West Utilities which saw the need for a fast, safe and easy-to-use machine which would dramatically reduce cutting time on ductile iron pipes.

The Rapid Window Cutter is probably the fastest on the market, able to cut a window in ten minutes when traditional equipment would take significantly longer. The machine comprises a cutting disc mounted on a bespoke chassis assembly which has four small wheels. Pneumatically powered, the operative guides the cutter, applying sufficient pressure to penetrate the pipe wall and is able to pivot the chassis to change direction without removing the unit from the main. Depth controls allow the cutter to be used safely on inserted pipe.

Comprehensive safety features have been incorporated including an automatic emergency cut-off on the trigger handle and the machine is quiet and user-friendly. The finely tuned motor operates at low torque; consequently the cutter is easy to operate and does not have a tendency to ‘run away’ or ‘kick back’. The slow cutting speed produced means that no water is required as a coolant when cutting ductile iron, resulting in a cleaner trench.

The Rapid Window Cutter is small and lightweight and the compact design allows the cutter to be used close up to third party equipment. The Rapid Window Cutter may be used on ductile iron pipes in the diameter range 100 mm to 200 mm (4 in, 6 in and 8 in).

RAPID ROTARY CUTTER

Cutting ductile iron has always posed a problem in the gas and water industries as the pipes cannot be broken out like cast iron mains. Steve Vick International offers a solution with its new Rapid Rotary Cutter, a compact circumferential cutter which is able to cut a 100 mm (4 in) diameter ductile main in around two minutes.

The machine is ideal to use during live or dead insertion projects and is supplied with depth control discs to prevent damage to internal PE pipe.

The Rapid Rotary Cutter comprises two aluminium shells with a motor mounted onto the top
The resulting circular frame sits closely around the circumference of the main. The motor and cutting disc assembly are common to all three sizes; different sized frames are available for diameters 100 mm, 150 mm and 200 mm (4 in, 6 in and 8 in). Bespoke frames are available for different dimensions to special order. For safety, the cutting blade is mounted safely away from the operator’s hand.

The motor is air driven and powered from a typical compressor. An airline lubrication unit maintains the operation of the motor preventing it from freezing or seizing up and prolonging its life. An air exhaust hose prevents dust and debris from being blown around the trench and into the operator’s face.

No water coolant is required when cutting ductile iron which is convenient and leaves a dry trench. A water feed hose is fitted, however, and should be connected to a supply when cutting steel to prevent sparking.

The machine is extremely compact and, compared with traditional circumferential cutters, requires very little space around it resulting in reduced trench sizes. As well as being quick to operate, the machine is assembled over the main in seconds.

With these two new products – The Rapid Window Cutter and the Rapid Rotary Cutter – Steve Vick International believes that it offers utilities faster, safer and more efficient cutting of ductile iron mains. Website: www.stevevick.co.uk

FXT60 TRUCK VAC DESIGNED FOR LARGE CLEAN-UPS

The new Ditch Witch FXT60 truck vacuum excavator, recently introduced by the Ditch Witch organisation, is an exceptionally versatile machine with the power to perform a wide variety of large clean-up tasks, even in difficult-to-access locations.

The FXT60 is a powerful vacuum excavator available on a Class 6 or 7 single-axle or Class 8 tandem-axle truck. An FXT60 configured with a tandem rear-axle truck offers maximum payload and towing capacity. Built to handle heavy spoils while towing a trailer, a tandem rear-axle model can reduce equipment and fuel expenses.

The vacuum excavator is mounted directly to the truck frame rails, allowing system components to flex independently of the truck, maximising structural integrity. With its lower centre of gravity, the FXT60 is easier to handle during transport. Enhancing the machine’s stability are saddle-style tanks that provide even weight distribution.

Equipped with a 74 hp (55 kW) Deutz® diesel engine, the FXT60 offers 1,027 cfm (29.1 m³/min) of suction power and a high-pressure water system with a 5.5 gpm (21 l/min), 3,000 psi (207 bar) water pump, more than enough power and suction for large clean-up jobs around directional drilling sites and municipal locations, plus soft excavation tasks such as potholing utilities. Its auto-clutching feature disengages the water pump when water is not in use, allowing full system power for suction.

Even with all of its power, the FXT60 is one of the quietest truck vacs in the industry, only 82 dBA sound pressure, thanks to a fully enclosed, insulated and lockable power pack.

The FXT60 can be equipped with an optional hydraulic boom that extends to 14 ft (4.3 m), which saves labour and time and reduces operator fatigue. Other options include a choice of tank configurations: a 500 gallon (1,893 l) spoils tank with a 200 gallon (757 l) water tank or an 800 gallon (3,028 l) spoils tank with two 200 gallon (757 l) saddle-style water tanks. Either configuration meets the requirements of virtually any size clean-up job.

To accommodate international markets, the easily accessible, curb-side controls can be configured for left or right hand traffic, which enhances operator safety and convenience. The FXT60 also has a standard hydraulic door that opens fully horizontal to maximise the efficiency of spoils removal. Website: www.ditchwitch.com
Some time ago, Hächler AG Umwelttechnik received a call from a country in Eastern Europe. The caller was the operator of an atomic power plant which was interested in Hächler AG Umwelttechnik’s smallest-sized rehabilitation robots including the Climb, designed for use in pipe from 85 to 225 mm i.d. and the Climbolino, a new robot for pipe from 55 to 100 mm i.d. Eager to learn more, the caller wanted to see the robots in action in the plant.

Just getting there was hard work. Tim Hermes, the sales person responsible, had to drive some 1,400 km (870 miles) to the plant with the robots. Upon arrival the next morning, it took 3½ hours to get inside as security staff checked his identification papers, questioned him at length and photographed and documented the robots and system components he had brought along.

Once inside, he was taken to a separate building housing an impressive full-scale replica of part of the plant’s piping system. This was set up as a testing rig for servicing equipment such as the Climb and Climbolino robots.

The customer had specified in advance that the testing would not be done in pipes in actual service for power plant operation. Among the happiest to hear that was Hächler AG Umwelttechnik’s CEO, and that bit of information probably saved him several sleepless nights.

The robots were to be tested by evaluating their performance in removing surface deposits from 100 and 150 mm i.d. pipes. Work in this diameter range is normally nothing out of the ordinary for these robots. However, what made the test a real challenge was the tortuous piping configuration including alternating horizontal and vertical sections as well as numerous 90° bends, ‘T’ joints and circumferential welding seams. Compounding the difficulty, the customer also added foreign materials to the water in the pipes, simulating worst-case conditions to be worked through.

Testing went on until 23:00 that evening. The results were that Hächler AG Umwelttechnik’s robots passed all tests with flying colours. The customer, visibly satisfied, stated that the Hächler AG Umwelttechnik robots mastered the situation much better than any of the other competitive systems tested.

The testing established some important findings including that the Climb and Climbolino robotic systems performed superbly, far better even than the high expectations of those present at the trials.

Since 1994, Hächler AG Umwelttechnik has developed high-performance solutions for sewer and pipeline rehabilitation and markets them worldwide. They offer a broad portfolio of systems and equipment including hydraulic and pneumatic cutting robots, UV curing systems for cured-in-place inliners, lateral connection rehabilitation robots with ERGELIT dry mortars and epoxy resins, hat profile systems, cutting tooling and many other sewer rehab accessories. Website: www.haechlerag.com
GLAMOUR REACHES THE UKSTT

The 21st UKSTT Annual Dinner & Awards Ceremony took place on 24 April 2015 at the Holiday Inn, Birmingham, UK. The event was attended by nearly 170 VIPs and guests with entries into the awards from over 35 companies.

After a short ‘welcome’ speech by the UKSTT chairman, Ian Ramsay, the renowned Naturalist and ‘Spring Watch’ television host and environmentalist Chris Packham opened the evening. As well as his partner, Chris was accompanied by the ‘fastest & most glamorous’ organism on the planet, a Peregrine Falcon. Peregrine Falcons can be found on every large land mass on the Earth, apart from New Zealand, and is the most successful raptor in the world. As a result they have been used by Falconers for over 3,000 years. When tracking prey they can reach speeds up to 240 mph in short bursts and kill the prey by punching it. They usually inhabit cliffs but are slowly moving into cities, perching on tall buildings, and have developed a new hunting technique using the glow from the city lights to allow night-time hunting. Chris had with him a 4 year old male from the Hawk Conservancy Trust (www.hawk-conservancy.org), unusually for the animal kingdom, the male is smaller than the female.

During the presentation of the short-listed entries, Chris highlighted a late entry into the New Installation category by NHS England ‘Chris Packhams Gut - years of abuse takes its toll’ to much mirth in the room. Chris shared photographs of his recent endoscopy and colonoscopy with the recommendation of CIPP lining of the oesophagus followed by directional drilling into his stomach. He was quite relieved that it was not a scrape and epoxy reline.

This year’s Annual Dinner and Awards Ceremony also saw the additional entertainment of ‘At Table’ magicians during the meal. After the meal the evening was closed out by English writer and stand-up comedian Gary Delaney, who is widely regarded as being the most quotable comic on the circuit. The sheer number of outstanding gags left the audience struggling to remember them all.

The Charity for the evening was The Lighthouse Club. The donations from attendance at the event amounted to about £1,260. All donations were put into a draw for the possibility of winning a Kindle Fire HD, donated by Mammoth Equipment Ltd. This was won by Anthony Price, Warwick University. There was also a Business Card drop draw to win a bottle of Champagne. This was won by Paul Horton, SBWWI.

Many thanks to our guests for attending and making it a successful evening and our Sponsors for supporting the event:

- **Platinum Sponsors** – H5O and UIS
- **Gold Sponsors** – TT-UK, Vp U Mole, Picote, Bournemouth Water and the Finish Society for Trenchless Technology
- **Silver Sponsors** – Fluvius, Hammerhead, Trelleborg and Reline Europe
- **Charity Prize** – Mammoth Equipment

A summary of the short-listed projects follows:

**Renovation – Large (>£250k)**
- **Sponsor:** Bournemouth Water
  - Southern Water, Atkins & Clancy Docwra Ltd - WINNER
  - Heading Underground in Ramsgate – The Thanet Groundwater Scheme
  - Southern Water is undertaking a major upgrade of the 100 year old sewer network across the Thanet area of Kent which represents an investment to maintain the integrity of the sewers, reduce the risk of flooding and protect the environment. The project team have worked together developing new innovative solutions to overcome the wide range of challenges.

**Renovation – Small (<£250k)**
- **Sponsor:** Picote UK Ltd
  - Environmental Techniques and Guernsey Water
  - La Vauquiedor/Havilland Hall
  - Over 500 m of 300 mm diameter gravity sewer running through the grounds of Havilland Hall, the largest privately owned estate in Guernsey, was in need of rehabilitation. The pipe had originally been installed in the mid-1930’s. Ground water infiltration had been identified. It was noted that the risk of wastewater exfiltration into the groundwater and/or surrounding water courses was significant and needed to be removed as quickly as possible.
Lanes Group plc
Lanes’ Mission Impossible Saves the Day, Time and Money
Only Lanes would attempt CIPP rehabilitation of a sewer with 50% deformation. But using any other method at QinetiQ’s Malvern site was risky for the international defence, aerospace and security specialist. So Lanes devised a new programme of works, saving £48,000 and 8 weeks on the project.

Wessex Water - WINNER
‘I Like the way you work it, No-dig’gity ...’ in an emergency environment
Most water companies doubled the size of their sewerage networks over night on transfer of the private sewers in 2011. Wessex Water continue to grow AND enhance the no-dig approach to its Repair and Maintenance emergency jobs working with OnSite, their framework partner, to bring major cost and customer benefits to the company.

New Installation
Sponsor: FISTT
South West Water/H5O - WINNER
Ivybridge Bathing Waters Scheme
To further improve bathing water quality in South Devon, the installation of a 1.2 m diameter tunnel, 150 m long and 8m deep, enabled the connection of a new 1,500 m³ storage tank to the sewage network. The routing beneath the A38 dual carriageway, delivered in only 5 weeks, avoided significant disruption to the local community.

South West Water / H5O
Truro DG5
To remove a number of properties in Truro city centre from the flood risk register, South West Water’s Delivery Alliance, H5O, up sized the existing sewer network, utilising a timber heading tunnel and auger bore. The team’s innovative approach to constructing this project in such a sensitive geographical area was nothing short of remarkable.

Terra Solutions Ltd
Farringdon Station C435
Terra Solutions Ltd. has installed 37 m of 300 mm diameter Naylor Denlock pipe using a front-steerable ‘Terminator’ augerboring/TBM hybrid trenchless solution in hard flint-laden Upnor formation with >100 n-values, for cross-passage drainage from Farrington Eastern Tunnel. Works carried out from a crowded and restricted shaft to perfect line/level all to programme and budget.

Small Scheme (<£100k)
Sponsor: U Mole, a division of Vp plc
DrainTec Solutions Ltd
Strathclyde Park Loch made ready in time for the Triathlon Event, Glasgow Commonwealth Games
A total of £1.2 million was invested in Strathclyde Country Park, one of Scotland’s’ premier water sports centres, to help ensure that its Loch would be ready to host the triathlon competition during the 2014 Commonwealth Games. This included a CCTV survey followed by cleaning and repair of all sewers and CSOs that spilled into the River Calder which fills Strathclyde Park Loch.

Electro Scan (UK) Ltd & Consultant Property Services Ltd - WINNER
Going Where No Camera has Gone Before
Electro Scan technology was able to inspect pipes that were suspected of being subject to ground water infiltration where previous CCTV inspections had failed to identify the source due to visual issues, obstructions and mobility problems. The project was on time, on budget & environmentally sustainable while producing quantifiable results.

PBF Drainage
Trumpington Road, Cambridge
An innovative NO DIG solution to a problem project with restricted access. Designing and installing a bespoke steel shell reinforcing linter to a 300 mm diameter sewer enabled further work to be carried out grouting up and adjacent void via manholes and causing no traffic impact.

Product Innovation
Sponsor: H5O
Picote UK Ltd
The Picote Pipe Cutter for Overshot CIPP Lining
Quickly and easily remove excess cured liner that has overshot during lining process into the main line. Cut the excess piece through the lateral. For longer excess pipe, cut smaller pieces at a time until the desired length has been removed.
UIS Transmatic™ Coil Trainer
The UIS Transmatic™ is the first coil trailer to fully incorporate pipe pushing technology. It improves safety, productivity and efficiency, and is designed to ensure compliant and controlled dispensing operations of coiled PE pipes at all times. It is strong and robust enough to cope with site conditions, but can also be easily manoeuvred to the point of insertion, providing easy access to the host main.

WRc - WINNER
Sahara Conductivity Survey Tool
WRc has developed a sensor, that by detecting changes in electrical condition through the pipe wall, is able to accurately locate leaks or metallic fittings. The tool uses a proven technology to transport the sensor along the pipeline allowing plastic pipelines of 100 mm diameter or greater to be inspected while they are still in service. There is not upper limit on the size of pipe that could be surveyed using this technique.

Innovative Scheme
Sponsor: TT-UK
Environmental Techniques - WINNER
Dublin City Centre Sewerage Scheme
The City Centre Sewerage Scheme included Dublin City Centre and Docklands area. It straddles the River Liffey. This highly urbanised catchment has a mix of residential, industrial, commercial & tourist uses. A comprehensive survey was carried out to assess the structural condition of about 80km of the ageing and complex drainage system as well as build and verify the hydraulic model.

UIS
Use of UIS Click Stick™ by SGN
The Click Stick™ allowed the safe connection to a newly inserted 63 mm diameter PE main. The excavation contained various other utilities, e.g. water mains, electric cables, ducts. This meant it was impossible to safely use a traditional mains breaking tool or hammer in the excavation. However, Click Stick™ allowed the 4 in CI main to be removed, exposing the live 63 mm PE inside.

UIS
Use of Transmatic™ Coil Trainer by Balfour Beatty
The UIS Transmatic™ Coil Trailer and the UIS Power Push allows users to reduce the amount of plant, machinery and labour required to complete insertion activities. This technology was used by Balfour Beatty on their Boston 5 Scheme resulting in a reduction in the number of pits dug, put the scheme back on programme (previously 3 weeks behind) and saved labour/plant costs due to the Scheme finishing early.

Young Engineer
Sponsor: UIS
Liam MacFarlane, Wessex Water
Broad Road, Bristol – Determined to be Trenchless
There cannot be many opportunities to use the three ages of trenchless on one scheme, but that is what happened when a crisis arose whilst renovating a recent sewer. The present, represented by a CIPv Patch repair, was saved by future technology and a historic timber heading, all to be trenchless.

Ashley Williamson, Wessex Water - WINNER
48 St Pauls Road, Salisbury
A 600 mm diameter concrete surface water sewer collapsed beneath a property. The property required structural underpinning allowing 12 m of sewer to be replaced within the kitchen and dining room. Replacing 12 m sewer enabled 60 m of Premier Pipe CIPP lining to be inverted within the pipe providing savings to the client.

Congratulations to all our short-listed entries and especially our winners.
**OTHER NEWS & EVENTS**

**UKSTT supports EUA Utility Streetworks Seminar**

On Wednesday 4 March the UKSTT supported the Energy and Utilities Alllicance (EUA) at its Utility Street Works Conference for 2015. This was held at the Cavendish Conference Centre in London and was attended by over 100 delegates from all utility groups and government departments.

They were welcomed by Les Guest, Chairman of NJUG, and had a series of presentations in the morning session.

Anthony Boucher at DfT gave a ‘Traffic Policy Update’ detailing the Government’s current position on street works legislation and the Department’s upcoming plans for the future. He also outlined the Government’s ultimate aims for street works including:

- Roads occupied for the shortest time with minimised disruptions
- First time reinstatement
- Coordination and corporation between utilities and authorities
- Best practice shared and developed

Specific reference was made to the Government’s decision not to proceed with the deregulation of street works qualifications noting the number of consultation responses received by the DfT and arguments put forward by the industry. However, he maintained the Government’s commitment to deregulation (Red Tape Challenge) quoting its ‘one in two out’ principle which remains its position towards new regulations.

In terms of future DfT street works priorities he specifically raised the following:

- the importance of utilities delivering essential services to support economic growth
- improved traffic management
- evaluate success of lane rental pioneer schemes and increase uptake of permit schemes
- improved industry self-regulation (looking to HAUC(UK) to take the lead)

He also gave indication that Lane Rental ‘pilot’ schemes will be fully evaluated before deciding if, rather than when, it will be implemented throughout the UK.

A break for lunch enabled delegates to catch up on the latest utility street work innovations with various exhibitors, including the UKSTT stand hosted by Jo Parker and Matthew Izzard.

The afternoon presentations opened with Anuj Ahula presenting ‘Engaging the customer in street works’ for Enzen and was followed by the latest updates in surveying and data. Amey’s Adam Stephenson then gave a paper on Apps and integrating with the customer and the last presentation by Paul Gerrard of National Grid: ‘Black is the new yellow’. Les Guest then closed the proceedings with some closing remarks on a highly successful and informative seminar.

**UKSTT Council member runs for Charity**

Steve Taylor, a UKSTT Council Member who you probably thought sat at meetings talking the talk and drinking tea! Well this council member is doing something a little different.

Steve is trying to raise money for the Cystic Fibrosis Trust, an organisation which funds research and supports families and people suffering from, cystic fibrosis. This inherited condition clogs vital organs with thick, sticky mucus, requiring daily treatment and limiting life expectancy for sufferers to around 42 years of age. Unfortunately Steve’s grandson Thomas, suffers from this incurable condition and will require daily treatment for the rest of his life.

To play a small part in relieving his grandson’s, and other children’s, suffering Steve ran the London Marathon in April to raise money for the Cystic Fibrosis Trust.

He would be extremely grateful if you could support him by making a donation through his Just Giving page which can be found at: [https://www.justgiving.com/Steve-Taylor-you-can/](https://www.justgiving.com/Steve-Taylor-you-can/)

If you would like to know a little more Steve was recently interviewed by BBC Radio Lancashire: [http://www.bbc.co.uk/programmes/p02jrn17#auto](http://www.bbc.co.uk/programmes/p02jrn17#auto)

More information about the Cystic Fibrosis Trust can be found at: [www.cysticfibrosis.org.uk/](http://www.cysticfibrosis.org.uk/)

**ISTT AFFILIATED SOCIETY NEWS**

**INTERNATIONAL NO-DIG ISTANBUL 2015**

The International No-Dig 2015 Conference and Exhibition will be taking place at the WOW Instanbul Convention Centre between 28-10 September 2015.

The ISTT annual Conference is renowned for delivering a world class conference. Papers are now invited from international experts. Submit your abstract via the event website [www.nodigistanbul.com](http://www.nodigistanbul.com).

Early bird rates are now available. For further information on exhibition sales and sponsorship please contact Paul Harwood ([pharwood@westrade.co.uk](mailto:pharwood@westrade.co.uk)) or for conference enquiries, exhibition administration and visitor information please contact Selin Dinçer ([selin.dincer@mci-group.com](mailto:selin.dincer@mci-group.com))
TRENCHLESS ASIA 2016
The 8th event in this series and for the first time will be held in Kuala Lumpur at the Convention Centre in May 2016.

The spotlight will be on Kuala Lumpur as, for the first time, it hosts 2016’s most prestigious and exciting forum for trenchless technologists in Asia. Significant advances have been made in the use of trenchless technology in Malaysia in recent years and pressure from authorities has been placed on contractors to use these modern engineering methods to minimise disruption during the installation and refurbishment of underground services. This is a developing global industry. Products and techniques are reviewed and improved on a regular basis and new innovations are proven to enhance performance. Further information can be found at www.trenchlessasia.com

NO DIG LIVE 2016
Following the success of NO-DIG LIVE held in September 2014, the 13th biennial trenchless technology exhibition, outdoor demonstrations and seminars will return to Peterborough Arena, between 20 and 22 September 2016. For further information please visit the website at www.nodiglive.co.uk
The spotlight will be on Istanbul for the ISTT’s 33rd annual International No-Dig Conference and Exhibition, being held between 28 and 30 September 2015. Hosted by the Turkish Society for Infrastructure and Trenchless Technology (TSITT), this year’s event is the first to be held in Turkey at the WOW Convention Center in Istanbul, the city’s largest conference facility.

Organisations lining up to support the event include E-Berk and IGDAS as Gold sponsors, with Aarsleff, Primus Line, Tekyön Tünel and Vermeer already confirming Bronze sponsorships. The German Society for Trenchless Technology (GSTT) is presenting a number of companies on its National Pavilion and exhibitors from around the world will also be joining the event to present a comprehensive range of products and technologies.

The Conference programme is also attracting a high level of papers from international experts looking to share their knowledge and expertise at the industry’s premier annual industry event.

The call for papers deadline has been extended to 30 April and speakers are invited to submit proposals via the event website www.nodigistanbul.com.

Turkey has a 20 year history of utilising trenchless technology and as the urbanisation rate is continuously increasing in the metropolitan cities of Turkey, local and central governments are under pressure to look for trenchless solutions for the new installation and rehabilitation works.

The timing of No-Dig Istanbul this year is key to international exhibitors wishing to introduce their products into Turkey, as the Government has announced an investment budget of US$10 billion for infrastructure development during the period 2015 to 2023.
EVENTS AND MEETINGS

Westrade Group Ltd is an independent company specialising in trade exhibition and conference organisation.

Events include the 'TRENCHLESS' and 'NO DIG' series across Europe, the Middle East, Asia and Africa.

INTERNATIONAL BUSINESS OPPORTUNITIES IN ISTANBUL 2015

- Turkey will host the annual International No-Dig Exhibition for the first time in 2015 in Istanbul
- Turkey is strategically located to attract business from Europe, Asia and the Middle East
- Major trenchless infrastructure projects are ongoing and actively supported by Government
- Take part and profit from new business opportunities at this important event
- Exhibitors will benefit from free limited translation services
- Buffet lunch and wifi included
- Book now to benefit from Early Bird rates.

INTERNATIONAL CONFERENCE

- The ISTT annual Conference is renowned for delivering a world class conference
- Papers are now invited from international experts
- Submit your abstract via the event website www.nodigistanbul.com

EXHIBITION SALES AND SPONSORSHIP

For further information, please contact Paul Harwood
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Conference Enquiries, Exhibition Administration and Visitor Information

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www.nodigistanbul.com
Delegates attending the first conference in Istanbul can look forward to a warm welcome by TSITT at an event hosted by a city rich in history and culture. Further information is to be found on the event website www.nodigistanbul.com and companies based outside Turkey and who are interested in exhibiting should contact international sales agents, Westrade Group by email: trenchless@westrade.co.uk

HOBAS® AT NO DIG BERLIN 2015

From 24 to 27 March, the renowned Trade Fair and Congress for Water and Wastewater WASSER BERLIN INTERNATIONAL drew the attention of professionals from all around the world to the German capital. On a total area of 36,000 m², more than 600 exhibitors presented their industry-specific products and services. Among them HOBAS, with innovative solutions in the areas of pipe jacking and rehabilitation.

One major part of the WASSER BERLIN INTERNATIONAL was the 2nd NO DIG BERLIN Symposium and Exhibition, which was dedicated to trenchless technologies. The importance of both pipe jacking and trenchless pipeline rehabilitation is constantly growing, given the intense construction activities in urban areas and the increasing need to renovate old sewer structures.

As leading manufacturer of GRP Pipes Systems and global player in the trenchless market, HOBAS once again participated in the NO DIG BERLIN. At the HOBAS Booth, numerous trade visitors and industry experts had the opportunity to learn about the advantages of trenchless compared to open trench installation, the use of GRP pipes systems in pipe jacking applications as well as rehabilitation projects, and trend-setting innovations in the water and wastewater industry. This also included a particularly efficient GRP overflow system for combined sewers, the modular HOBAS CSO Chamber.

Prof. Jens Höltterhoff, German Society for Trenchless Technology, was pleased with the exhibition’s outcome saying: "From our point of view the fact that the congress was part of the fair was very positive for us. NO DIG BERLIN and the International Symposium on Pipeline Construction (ILBS) were very well attended. I was informed by many of the companies belonging to our organisation who exhibited at the fair that there was considerable international interest in trenchless construction technology from Germany.” Website: www.hobas.com
11th Ville Sans Tranchée Exhibition

French NO DIG LIVE

Trenchless Technologies for replacement and maintenance of various underground networks

2.3.4 June 2015
CHATOU (78) - FRANCE
Ile des Impressionnistes

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<td><a href="http://www.bcafrica.com">www.bcafrica.com</a></td>
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<td><strong>No-Dig Istanbul 2015</strong></td>
<td>Istanbul, Turkey.</td>
<td><a href="http://www.nodigistanbul.com">www.nodigistanbul.com</a></td>
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<td><strong>BAUMA CONEXPO Latin America</strong></td>
<td>Santiago, Chile.</td>
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<td><strong>STUVA Expo 2015</strong></td>
<td>Dortmund, Germany.</td>
<td><a href="http://www.stuva-conference.com">www.stuva-conference.com</a></td>
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<td>2016</td>
<td><strong>UCT 2016</strong></td>
<td>Atlanta, USA.</td>
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<td><strong>Bauma 2016</strong></td>
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<td><strong>Trenchless Asia 2016</strong></td>
<td>Kuala Lumpur, Malaysia.</td>
<td><a href="http://www.trenchlessasia.com">www.trenchlessasia.com</a></td>
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<td></td>
<td><strong>No Dig Live 2016</strong></td>
<td>Peterborough, UK.</td>
<td><a href="http://www.nodiglive.co.uk">www.nodiglive.co.uk</a></td>
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</tbody>
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If you have an event, course or meeting scheduled and would like to add it to this listing please forward details to:  
[ian@nodigmedia.co.uk](mailto:ian@nodigmedia.co.uk)