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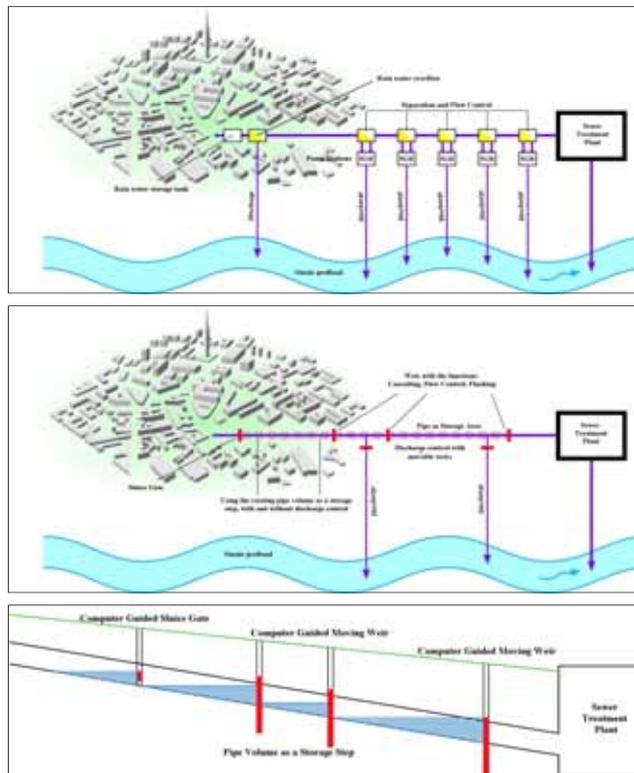


FULLY MANAGING AND UTILISING SEWER CAPACITY MINIMISES FLOOD RISK

For the past decade or more the world has been arguing over the development and effects of global warming and its influence on the weather. Whatever these arguments it has become obvious that in many parts of the world rainfall patterns have changed significantly. In many instances these changes have manifested themselves as more concentrated, localised storms resulting in increasing occurrences of widespread flash flooding.

Investigations of many of these floods have shown that poorly maintained and/or under-capacity sewer systems formed part of the rainfall management problem with pipes either being blocked by silt or other detritus build-up preventing full capacity usage or, apparently, that there was simply too much water passing through a given section of the pipeline for it to handle at the time of the event.

However, a closer look at this latter situation shows that more often than not the lack of capacity in the sewer became apparent only when too much water arrived at a single point in the sewer at one time. The discharge from this point was then insufficient to prevent the flood occurring up through the surface accesses and manholes.



Schematics of (top) a conventional flow control system, (middle) the Uhrig system when installed and (bottom) an elevation of the flood control provided by the Uhrig system once installed.

FLOOD STORAGE

The solution to this type of situation would therefore be better management of flows prior to overcharging of these pipelines at any critical points where the flooding might occur. One German company has developed an in-sewer flow management system specifically designed to address this requirement, known as the Uhrig System.

The Uhrig system has been developed after many years experience in the design and construction of wastewater pipelines across Europe. In essence the Uhrig system utilises the full capacity of the sewer over its whole length to manage and control high potential flood water flows during major rainfall events. The system does this by utilising specially designed and installed computer monitored flow measurement systems, remote-controlled Sluice gates and moving weirs positioned at strategic points along the pipeline length, prior to the point where flows enter the sewage treatment plant.



Made by Uhrig, the system uses modern flow monitoring techniques and automated control systems triggered by the flow monitoring systems to open and close the sluice gates as flow volumes in the pipeline change. This allows the pipe upstream of the sluice gate to be used as an immediate 'short-term' flow storage facility, with flows

A computer monitored and operated flow control sluice gate as used within the Uhrig system.

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being held above the sluice gate and released by the automatic sluice control only when the pipeline below the sluice has the capacity available to handle the flow.

This arrangement not only manages the flow rate of water through the pipeline by maintaining manageable levels throughout the pipe length but also minimises any need for discharge through overflows. It does this by using the full sewer cross-section as a storage facility so preventing the surge flows at the lower end of the pipe that might lead to overcharging and subsequent flooding.

HOW IT WORKS

In conventional flow control systems used by most if not all older storm sewer pipelines flows are allowed to build to a point where they automatically discharge into overflow pipes as flow rates increase. This can lead to major unwanted and potentially contaminated discharges into local river systems and other waterways, sometimes with serious environmental consequences where combined foul and storm sewer pipelines exist.

With the Uhrig system, selective positioning of the sluice gates and controlled weirs means that large sections of the pipeline can in effect be isolated for a period of time to become in-situ storage tanks, giving flows below these 'tanks' time to dissipate before more flow is released.

The flows in the pipe are monitored constantly through the weirs and when predetermined levels are reached the gates are shut off gradually so as not to 'shock' the system. Once closed, the flows above the gate are stored in the pipeline. Strategically positioned overflow discharges may be introduced into the system to allow for extremely high flow rates where even the storage capacity of the pipe is insufficient. But, using the Uhrig system should minimise the need to use these overflows.

When flows below the weir dissipate sufficiently to allow the stored water to be released, it can be done under controlled flow conditions, again so as not to surcharge the pipeline further downstream.

The Uhrig system therefore allows water engineers to manage the storm conditions to the best capacity of the pipeline and minimise the risk to the surrounding areas in terms of surface flooding and the damage, suffering and cost this can cause.

OTHER ADVANTAGES

Whilst the Uhrig system was originally designed as a flow and flood management system it does bring with it other advantages.

For example, even during normal conditions the standard monitoring and control regime can be over-riden to allow engineers to close the gates remotely. This will allow standard flows to build up in the pipeline behind the weirs. Once built up the waters can then be released by fully opening the sluice gate causing the water rush out of the 'flooded' pipe section. The result is that the pipe effectively cleans itself by means of "Flushing" the system, so minimising silt and other material build up. This enables the system to be maintained at full operational capacity at all times as well as minimising the need to utilise potentially costly remote cleaning systems, jettors etc.

The advantages of this can be two-fold. By ensuring that sediments are regularly cleaned from the pipe using the controlled flushing ability provided by the Uhrig system and with all flows being directed towards the sewage treatment plant, the pipe not only remains clean and therefore at full capacity when needed but also that during flood occurrences, where perhaps overflow into the local water courses does come into play, minimal, possibly contaminated, silt is discharged along with the water flows into the local water courses, so minimising any environmental impact of the discharge that might otherwise have occurred.

Furthermore the Uhrig system can also be utilised to control 'normal' flows to the treatment plant. By maintaining a more regular/constant flow into the plant and minimising flow fluctuations, the efficiency of treatment regimes can be maximised whilst the cost of flow treatment can be minimised. In the current, economic climate any such cost saving has to be a bonus.



An Uhrig Discharge Weir.

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All of the equipment used within the “Uhrig system” is manufactured through the Uhrig company, which also undertakes the installation and commissioning operations thereby ensuring that the automated system is fully balanced, operational and fit for purpose. This also includes provision of malfunction management, data management and all service and maintenance requirements.

Commenting on the system for Uhrig Brian Hickland, International Sales Manager for Uhrig said: “Flood management related to pipeline capacity is an increasing problem across Europe as populations increase and older sewers have to manage increasing ‘average’ flow rates. As has been seen in recent years this is no different for the UK water management industry. Introducing the Uhrig system to the UK, we at Uhrig feel that we can bring a whole new monitoring and control option to the country’s water engineers allowing them to fully manage and maintain normal full capacity operational systems, as well as unexpected surcharge flows, in an efficient and cost effective way.” Brian went on to say: “We can provide examples that show, practically, just how successful the Uhrig system has been in recent years using installations we have designed and installed across Europe.” Website: www.uhrig-bau.de

SBWWI WATER DRAGON AWARDS

Viking Johnson, Balfour Beatty Utility Solutions and RPS Water were the winners in the 2010 Water Dragons Awards organised by SBWWI (Society of British Water and Wastewater Industries).

Now in its third year and an eagerly anticipated fixture in the water industry calendar, Water Dragons is loosely based on the BBC TV programme, Dragon’s Den. In front of four senior executives from water companies, the Water Dragons, entrants have ten minutes to pitch their innovative product, process or service followed by a twenty minute question and answer session. The Dragons judge each entry on two basic criteria: Is it truly innovative, and is there a well-researched and financially viable business plan behind it.

This year there was a tie, leading to a joint award. Viking Johnson and Balfour Beatty Solutions presented the EasiClamp, a radical rethinking of a traditional repair clamp. The EasiClamp has been designed to deliver a quick, safe and permanent repair to a damaged water pipe at full operational pressure without having to enter the trench.

Roger Tucker from Viking Johnson demonstrated to the Dragons that the EasiClamp can be installed by a single operator in just sixty seconds. Roger’s excellent presentation with his colleague, Mark Oliver, of Balfour Beatty meant that they also won the prize for the best pitch.

This year’s joint recipient of the Water Dragon Innovation award was RPS Water for the Accuflow system which uses acoustic signature analysis and processing to both identify leaks and quantify leak volumes. It is the ability of Accuflow to quantify leak volumes which sets it apart and potentially gives water companies the scope to adopt a far more effective leakage repair strategy. RPS Water estimates that Accuflow could potentially reduce leak repair costs by up to 33%.

Carol Hickman, Executive Director of SBWWI, the Water Dragons organiser, was delighted by this year’s awards: ‘EasiClamp and Accuflow show that successful innovation can come in widely different shapes and sizes. Accuflow uses leading edge technology and applies it to improving water company performance in leakage repair. EasiClamp rethinks a widely accepted and almost commodity mechanical fitting and, by fully understanding the operational aspects of leak repair, creates a product in line with the water companies’ drive to work more effectively and minimise disruptions caused by excavations. They are both very worthy winners.’

The awards were formally presented to the winners by Water Dragon Martin Kane of Severn Trent at the SBWWI AGM Lunch Awards on 3 November, 2010. Website: www.sbwwi.co.uk



The Water Dragon Innovation Award Winners. Top: Viking Johnson and Balfour Beatty Solutions for EasiClamp. Bottom: RPS Water for the Accuflow system.

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NEW BOOKSHOP AT nodig-construction.com

A new online bookshop is to be found at nodig-construction.com, offering the latest and most relevant bestselling books and regulations on civil engineering and trenchless technologies. Beside a selected choice of trade books, GSTT info sheets, RSV bulletins, DWA regulations, DVGW regulations, VSB recommendations and DCA guidelines are available.

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A screenshot of the new bookshop.

Registration prior to ordering is no longer required; you just have to fill in a brief order form. Order and payment is generally on account. Website: www.nodig-construction.com

MORE THAN 250 ATTEND DITCH WITCH BARCELONA EVENT

Ditch Witch Barcelona hosted a special customer event on October 15, 2010, drawing over 250 customers and equipment dealers. There were 13 different countries represented from Europe and the Middle East. This event was the largest event to date.

This was the tenth year this event has taken place. It was an all-day event highlighted by introductions and demonstrations of new Ditch Witch® trenching and trenchless equipment. Many attendees got their first look at the new JT100 All Terrain horizontal directional drill, the MT12 Microtrencher, OnGrade® drilling system, the RT24 and RT115 Quad trenchers, and HammerHead products. The event concluded in the evening with a reception and dinner.



The Ditch Witch Barcelona meeting drew over 250 visitors to the one-day event.

Joe Smith, Jr., European Sales Manager for the Ditch Witch organisation said: "The Ditch Witch Barcelona customer event was a huge success and it is very encouraging that customers were positive about the upcoming year." Website: www.ditchwitch.com

OBITUARY – DAVID PATERSON

It is with regret that we have learned of the death of David Paterson, one of the founding members of the Sewer Renovation Federation. David, who died from prostate cancer on 28 September, aged 69, began work as a labourer for Rees Construction in the late 60's and set up Civation Ltd in Oxford in 1971. David, a pioneer in the trenchless industry, developed his business by lining crumbling Victorian sewers with a Guniting system utilising preformed crown and invert segments. He later adopted GRC and GRP segments to develop Civation into an internationally recognised and highly regarded company and became the approved installer for Channeline. David developed good working relationships with rival contractors, Sewer Services, Rees Construction and Ferro Monk and together with Chris Rees, Bob Brown and Bryan Venn established the Sewer Renovation Federation (SRF), later SBWWI to support fellow industry members and lobby water companies to invest in renovation of the ageing UK sewer network. David was a great industry asset, making a great contribution to the understanding of the challenges of man entry sewer renewal. He will be missed by many friends and former colleagues across the industry.

David Paterson



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PERMA-LINER ANNOUNCES EUROPEAN DISTRIBUTOR

Perma-Liner™ Industries recently announced that Envirotech Industries Ltd has been appointed as the European Distributor for its equipment and materials. Envirotech Industries Ltd will cover the following markets: Czech Republic, Iceland, Slovakia, Denmark, Ireland, Monaco, Austria, Italy, Holland, Spain, Finland, Norway, Sweden, Belgium, France, Lichtenstein, Switzerland, Germany, Portugal, Gibraltar, Luxembourg, Romania, Greece, UK, Cyprus, Hungary, Malta, San Marino, Yugoslavia

Envirotech Industries Ltd offers a wide range of products and equipment for the Drain and Sewer repair industry. From inspection and cleaning to repairs and maintenance, the company's clients range from one man contracting companies to government organisations.

Perma-Liner™ Industries, Inc. is a worldwide supplier of trenchless lining products which specialises in Perma-Lateral™ air inversion, Pull-In-Place Pipelining, Sectional Main Line Point Repair™, Push In Place Perma-Patch, Perma-Main™ and its recently released hot water and steam cure equipment. Website: www.envirotechindustries.co.uk

SBWWI AGM AWARDS LUNCH AND DEFRA RESPONSE

Fireworks were not the theme for SBWWI's 24th AGM, held on 3 November 2010 but sparks were flying during the Awards presentations, with Balfour Beatty's Lee Gerrard netting the People Award and, with a joint entry from Viking Johnson, taking both the Best Presentation and Best Innovation Awards from the Water Dragons event. Saint Gobain PAM's excellent submission took the honours for their entry for the Health & Safety Award, Daniel Contracting and RPS Water both receiving Highly Commended certificates for their respective entries for the People and H&S Awards. There were also further successes highlighted at the lunch, with USIT (Utilities and Service Industries Training) confirming seven bursaries for member companies to undertake a variety of training. John Bourne, Deputy Director of Water Supply, DEFRA, addressed the audience prior to a short pre-lunch update from Martyn Hopkinson on the SBWWI Procurement for the Future report, which is expected to be published during November and officially launched at a Parliamentary Reception being held on 6 December.

The lunch followed a successful AGM, where Martyn Hopkinson, Chairman of the Society, reported that despite a very challenging trading year, membership numbers had increased and a Resolution to move the Society to a company limited by guarantee was approved. The Treasurer, Jon Parr, reported on the continued financial stability of the Society and reported that, for the third year running, annual subscriptions would not be increased. The focus for 2011 is clearly on developing stronger relationships with the water companies, Water UK, Achilles, E&U Skills and other related industry organisations; to emphasise the need to work together and recognise the valuable input the supply chain can provide; and to ensure its members and the wider industry are fully conversant with the requirements of the transfer of private sewers to water company ownership.

Furthermore a response to the DEFRA request for views during its review of OFWAT has been made by SBWWI which raises some very interesting points and suggestions. To read the full response click the following link to the SBWWI Website: [Link](#)

CERTAINTEED MOBILE APP

Demonstrating its commitment to innovation and sustainability, CertainTeed Corporation is launching a company-branded Quick Response (QR) code mobile smartphone app to simplify how architects, contractors, distributors and consumers get information about the company's products.

The CertainTeed app instantly scans and reads a barcode, called a 2D QR code, when a user simply points a QR-enabled phone's camera at the code. Upon recognition of a QR code, the app rapidly processes and decodes the image, allowing users to view web sites, videos, and technical documentation; send text messages; make phone calls; and save contact information seamlessly without ever leaving the application. The application will also store a history of all QR codes that have been scanned on that mobile device. "Providing innovative, eco-friendly solutions that improve efficiency is not just our business, it is our responsibility," said Eric Nilsson, vice president of corporate marketing at CertainTeed Corporation. "Looking ahead, QR codes can serve as a useful tool for our contractors in the field who typically only carry mobile devices."

CertainTeed's free QR Reader for the iPhone, Blackberry and Droid is available at the iPhone App Store, Droid Market and Blackberry App World or via the website: www.certainteeted.com/qr

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ZURICH RESTS ON HOBAS

HOBAS pipes were recently installed on a project in Zurich, Switzerland as auxiliary static support and a drainage system for the new Intra-Urban Train Tunnel.

The project involved the connection of two train stations under a densely populated city where the contractor was neither allowed to disturb inhabitants nor disrupt traffic, and moving of the historic buildings which were 'standing in the way' was impossible. To overcome these obstacles, HOBAS jacking pipes were chosen to be installed as an auxiliary static construction that would reliably help to support the urban district above rail tunnel. The tunnel for the railway, which is also drained using HOBAS Pipes, was subsequently bored underneath the pipe construction.

Zurich is the economic centre of Switzerland. Its main station is an important junction which handles about 1,800 trains transporting approximately 340,000 passengers in and out of the city each day. By 2020 this number is expected to have increased to 500,000 passengers, although the capacity of the rails and facilities is already fully exploited. An extensive construction project was therefore launched to connect two stations, Altstetten and Oerlikon. The main part of the project is the establishment of a through station under the main station and the 4.8 km long Weinberg tunnel, with HOBAS playing a decisive role in the latter.

The intra-urban Weinberg tunnel posed quite a challenge to the construction company. Since the clearance/ground cover beneath the surface in the area of the main station is quite small, a static pipe construction had to be jacked into place to prevent the buildings and streets above from subsiding before the tunnel could be bored. "According to the quotation request, the auxiliary pipeline should have actually been realised with concrete or steel pipes. When the party in charge heard about the outstanding properties of HOBAS CC-GRP Pipes, they were soon convinced that this composite was the best material for the project", explained Cornel Sennhauser, Sales Manager at HOBAS Switzerland. Seven pipe strings, six of which were HOBAS De 1940 pipes were jacked in a semi-circle over the proposed tunnel route and partly under the Limmat River. Once the pipe strings were installed and having pulled the boring machines back through the line into the starting pit the pipe was filled with concrete. The static requirements for building the 11.27 m diameter train tunnel were then fulfilled.

This cautious safety measure was necessary to minimise the subsidence of structures such as the train station bridge, the Coop building and the train station embankment which is heavily trafficked by bus, tram and private transport. Apart from this, local residents should barely notice the construction works.

The drainage system of the 4.5 km long Weinberg tunnel was also installed using

De 1940 Pipes were jacked in a semi-circle above the tunnel's proposed route.



HOBAS CC-GRP Jacking Pipes were installed as static pipe construction to prevent the buildings and streets above from subsiding.

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HOBAS CC-GRP Pipes. Fabricated with holes along their top side the DN 400 drainage pipes were installed in the centre of the tunnel floor and were cast in concrete to 180°. Fleece sheets cover the holes of the pipe and a seepage layer followed by a gravel bed were spread over the pipe before the rail tracks were installed on top. Water reaches the drainage pipes either through HOBAS shafts or through the drainage layers and is safely discharged using the hydraulic properties of the pipes' smooth inner surface. In total, 4,566 m of HOBAS pipe and 59 Shafts were utilised for the drainage system. The pipes light weight facilitated the installation in the 11 m diameter tunnel and also the push-to-fit HOBAS FWC Couplings assisted in speeding up installation.



DN 400 drainage pipes were installed in the centre of the tunnel floor and were cast in concrete to 180°.

The Weinberg tunnel should be opened for train service towards the end of 2013 and will significantly upgrade Zurich's infrastructure. Another four-track through station, Löwenstraße, was constructed parallel to the existing through station approximately 16 m beneath tracks 4-9. It is a great challenge to implement a large-scale project as such without disrupting the busy train traffic. With thorough planning and construction companies that work hand in hand, Switzerland will however soon be proud of its fully renewed train hub. Website: www.hobas.com

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JURASSIC COAST FIRST FOR ONSITE AND AQUALINER

The world renowned Jurassic Coast, which covers some 95 miles of stunning coastline from East Devon to Dorset along the English south coast, is renowned as the first place in the world where fossils were found in the rocks which are now known to record around 185 million years of the Earth's history and also therefore as the birth place of palaeontology.

Now the Jurassic Coast can record another first, which in time may possibly be seen as just as monumental and historical as the finding of fossils. This new claim to fame is that the Jurassic Coast at Portland, Dorset has recently seen the world's first commercial application of the latest development in pipeline rehabilitation technology, that being the new Melt-In-Place Pipe (MIPP™) system known as Aqualiner.



The Portland work site with its view over Chesil Beach and Weymouth in the background which lay on the world renowned Jurassic Coast.

PORTLAND PROJECT

The project to install the Aqualiner system was undertaken for client Wessex Water by its main rehabilitation contracting partner OnSite, which holds the exclusive Aqualiner installation licence for the UK.

Wessex Water's sewer team, under the guidance of Julian Britton, Senior Engineer for Wessex Water, has according to Nick Weatherby, Technical Director, Aqualiner 'Played a highly important role in the Aqualiner development process by providing, alongside other stakeholder companies, several test sites for trial installations where initial developmental teething problems have been ironed out and out of which this latest 'third generation' now commercial system has grown'.

Whilst the project on Castle Road, the first Aqualiner installation ever to be undertaken on a 'paid for' basis, may not have been the largest diameter or longest length pipeline ever to have been rehabilitated using lining techniques, it was a very significant project for the people of Portland as well as Aqualiner Limited.

Castle Road forms part of the main one-way system serving traffic entering and leaving Portland Bill, which is the land mass which is almost an island on the end of a narrow land spit off the Dorset coast near Weymouth. The 'island' has one entry and one exit route handling two-way traffic flows to and from the mainland running alongside the eastern end of Chesil Beach. Therefore, any work that could disrupt the traffic flow along this sole access route could have very serious consequences for the local population, businesses and the two best known facilities operating on Portland Bill, Portland prison, which houses some 680 inmates and the vital Portland Naval Base.

The lining operation itself comprised the rehabilitation of just 23 m of existing 225 mm diameter clay sewer pipe which runs beneath Castle Road at between 1.5 and 2 m deep. The work was scheduled to be completed in just one working day including set up, clean, survey, line and site break down, all of which had to be completed with full traffic flow allowed alongside the working area. All works were completed using access via existing manholes serving the sewer ensuring no excavation work was required on the busy Castle Road.

Preparing the calibration hose prior to the liner operation launch.

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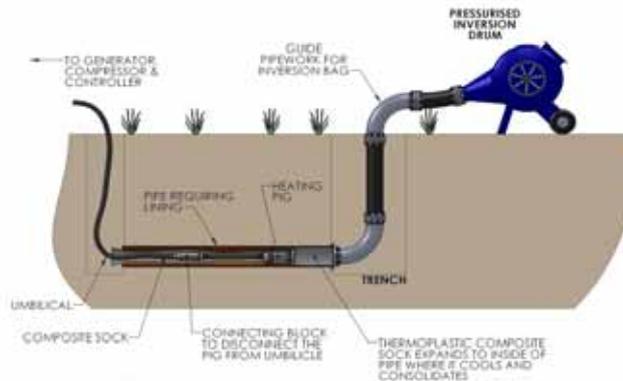
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To compare options, according to OnSite's engineer, to complete this same project using traditional open cut techniques would have required something in the region of 7 to 10 days with much greater potential for traffic disruption, noise and environmental impact for the local population on a major scale.

In the event, the lining installation process began at about 10.00 am and was completed by 12.15 pm, or just 2 hours and 15 minutes.



A schematic of how the Aqualiner system works.

AQUALINER

The Aqualiner system is in many ways similar to other rehabilitation systems currently available to the market but differs in some very significant ways.

Firstly, the Aqualiner system does not utilise resins or chemicals as part of the lining process. This is achieved because the liner material is specially designed to eliminate this aspect of an installation. The Aqualiner process is known as a Melt-In-Place Pipe (MIPP™) technique. The MIPP technique uses a liner material which comprises a combination of glass fibres (for stiffness and strength) and thermoplastic polymer fibres (which, after processing, becomes the matrix that surrounds the reinforcing fibres).

The liner installation technique follows what at first glance is a relatively simple process. Once the old pipe is prepared, the Aqualiner material is winched through the host pipe over the length to be rehabilitated. The main liner is normally installed with a protective outer pre-liner to prevent wear against the host pipe wall during the pull-in operation.

A power umbilical is then fed through the liner from the reception manhole end to the launch manhole. The umbilical is then connected to a heater pig which is placed just inside the liner. A liner inversion drum is positioned at the launch end of the process which is fitted with an appropriate length of inversion calibration tube. The drum is then connected over the end of the host pipe anchoring one end of the liner material in place.

The heater pig is a vital component in the lining process. Once up to temperature, around 200°C, the heat from the pig melts the thermoplastic component of the liner material which pushed against the inside wall of the host pipe by the pig. The melted plastic then permeates the structural glass fibre material. As this process occurs the calibration hose from the inversion drum pushes the heater forward into the host pipe melting the next 'section' of thermoplastic material. Once started the process operates continuously. At Castle Road the advance rate of the heater pig was about 3 min/metre. As the heater pig advances the umbilical is collected at the reception end of the lining run. On short runs this can be achieved by hand or for longer runs the umbilical is wound on to a cable drum.

Once the heater pig passes out of a section of liner the temperature of the thermoplastic material drops quickly causing the plastic solidify in place. Thus the liner is formed. This process occurs over the full length of the liner until the heater pig emerges at the reception manhole completing the lining installation. The inversion hose is retrieved, equipment is removed from the manholes and the liner ends are cut into the ends of the host pipe. If lateral connections exist along the pipe length these can be reopened using standard robotic cutters. In the case of the Castle Road project only one connection existed on the lining run. Once this work has been completed a final as built survey can be completed and the pipeline put back into operation.

Aqualiner, it is claimed, brings with it several advantages as compared with commonly used lining systems.

The absence of chemicals in the lining process means that odour emissions are significantly reduced, if not eliminated,

Traffic continues to flow around the site throughout the lining operation.

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during the installation process. The shelf life of the liner is unlimited because the materials do not react over time and are not altered until the installation process is under way. A further significant advantage of the Aqualiner system given the absence of chemicals in the liner process is that its standard material content and the strength this offers makes it not only suitable for installation in sewer systems but also pressure pipes including potable water pipes.

The process is also reversible. By heating the liner to the correct temperature the liner can be removed if required with all the materials being fully recyclable.

A significant advantage claimed by the developers of the Aqualiner system is that the fully structural liner that is formed using the technique comprises very strong component materials. This means that for any given load bearing requirement the liner material for an Aqualiner lining can be significantly thinner walled than more conventional lining systems. In the case of the Castle Road project a 3 mm thick liner was required, whereas for a conventional CIPP lining a wall thickness of around 4.5 mm would have been required. Not only does this mean that there is less material to handle at a lighter weight, so less potential hazard for operatives, but also the cross-sectional loss in the final lined pipe is significantly reduced. With the very low friction coefficient inner wall of the Aqualiner this may have the effect of not just maintaining but possibly improving overall flow capacity within the renovated pipe.

DISTINGUISHED GUESTS

As the Portland project was the first commercial operation with the technology anywhere in the world, Wessex Water invited David Thurston, Mayor of Portland and Alderman Les Ames, a long serving member of Dorset County Council, to witness the historic event on their home ground.

During the course of the lining operation both visitors were shown the installation first hand and were given a full explanation of how the system works by Aqualiner directors Gerry Boyce and Archie Adams. During their visit around the site Mr Thurston and Alderman Ames said they were most impressed by the technology and were proud to think that Portland was able to play its part in the commercial development of such an interesting and innovative technology.

Commenting on the operation for Wessex Water, Julian Britton said: "We are pleased to bring new innovations to the market that benefits our customers. It has been a long road to get to the point where Aqualiner has become a commercial system that we are able to utilise. However, this first commercial project in Portland may well mark a significant milestone for the technology. In the same way that lining engineers remember the first ever commercial CIPP lining installation, this project could well occupy a similar place in the rehabilitation industry's history for MIPP technology."

For Aqualiner Gerry Boyce said: "This is a very auspicious day for the Aqualiner system. We have overcome some very demanding technological obstacles to get here but now we feel that we have a world-beating system to offer to the pipe renovation industry."

Commenting, Dec Downey, Chairman of Aqualiner, stated: "Very simply, this is a key milestone for Onsite and Aqualiner in the planned roll out of the product in the UK. We, at Aqualiner, are extremely excited by the significant global commercial implications having achieved our first customer installation."

From the contractor's viewpoint Bryan Lord, Business Development Manager for Onsite commented: "Our association with the development of this new process has been demanding to say the least. Now with crews familiar with the necessary procedures and with a full understanding of the materials and installation requirements, we feel that we have a lining system that will be a leading technology in years to come and one that will enable us to bring to our clients a much wider choice when it comes to selecting the right rehabilitation system for their pipe networks." Website:

www.onsite.co.uk



The guests Mayor Thurston (centre) and Alderman Ames (right) are given an introduction to the Aqualiner system.

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MONTHS SAVED BY USING 'LIVE' GAS MAIN REPLACEMENT

Morrison Utility Services (MUS) was recently contracted by Wales & West Utilities to carry out 3.6 km of gas mains renewal in Cheltenham as part of the Western Gas Alliance.

MUS decided to use the Live Mains Insertion (LMI) method of replacing the cast iron mains by inserting new PE pipe whilst the gas still flowed, thus minimising disruption and speeding up the project by almost 30%.

The project, started in June 2009, was initially estimated to be completed within 75 weeks using the Dead Insertion technique on the larger diameter sections. By using the Live Insertion method throughout, the time taken has been reduced to just 53 weeks.

Martin Keer, MUS Project Team Leader, said, "I have used LMI for years on standard size replacements, but I had never used it before on large diameters. Having talked to a colleague in Bristol, we decided to try LMI on the larger diameter sections and it was a great success. As a result, we saved months by carrying out the jobs using live insertion instead of throwing the mains dead before inserting the PE and there is no doubt that the materials used worked out cheaper, especially taking into account the saving on Iris Stops."

The 3.6 km project involved mains renewals in seven locations around the city, including 812 m of 355 mm diameter PE inserted in an 18 in diameter main in St. Paul's Road which involved the connection of 200 services. This section was achieved in three separate pushes of 375 m, 312 m and 125 m and was completed in 12 weeks.

In Cleveland Street, it took just four weeks to LMI 230 m of 18 in diameter main with 400 mm diameter PE. As the work here coincided with the 2010 Cheltenham Festival in March and the enormously popular Gold Cup race, it was particularly important that traffic disruption was kept to a minimum. The fact that Live Mains Insertion requires only one excavation to be open during the insertion process helped to avert increased traffic congestion.

CUSTOMERS STAY ON GAS

LMI is a technique pioneered by Steve Vick International Ltd. In traditional 'dead' insertion, the gas is turned off during the insertion meaning that customers can be 'off gas' for a considerable time, especially if unforeseen problems are encountered.

In 'live' insertion, gas flow is maintained to customers using a special gland box whilst the new PE pipe is pushed into the old main. The supply is turned off for the brief time it takes to connect services to the new main. This connection of services can also be carried out at a later time to suit the contractor and gas consumers, which is an important benefit for city centre commercial customers.

Steve Vick International supplies all the equipment and consumable products, including seals and expanding foam sealants, used to carry out the Live Mains Insertion procedure.

In Cheltenham, Morrison Utility Services used Steve Vick's 500 mm Pipe Pushing Machine to speed up insertion of the PE pipe into the host main and ensure a safer environment for operators and passers-by. The company also provides full technical support including on-site support when required.

Wales and West Utilities carries out a large percentage of its replacement work using the Steve Vick International Live Mains Insertion technique.

Gwyn Reed, also of Morrison Utility Services commented: "By carrying out the entire project in Cheltenham using the LMI technique, we have completed the work almost five months ahead of schedule and within budget. There is no doubt we will be using LMI on large and smaller mains as often as we can in the future." Website: www.stevevick.com



A Live End Seal of diameter 355 mm (18 in).

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HORIZONTAL DIRECTIONAL DRILLING

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A SOLUTION FOR LIMITED BORE DEPTH — GRD

GRD slanted/inclined bores for geothermal energy production are often the only alternative to vertical bores. One of the reasons is that authorities in Germany only allow bores to be carried out in bore depths to the first groundwater level, around a maximum of up to 35 m. (Bore depth limitation).

A family in Nürtigen in Germany that experienced this as well, wanted to operate a geothermal heating pump in their new home. In the adjacent neighbourhood there are already several geothermal heating tube units with bores to 100 m depth, which gave the family the model to work on. The property is on the borderline, but is within water protection zone number 3.

Bores, which had been granted for the neighbours outside the protection zone, were generally not allowed here and the request was denied. By using the GRD slanted bore technology an exceptional agreement was made for a maximum bore depth of 27 m.

Furthermore, a 'brine', which could endanger the groundwater was not allowed, with potassium carbonate being used as in this case instead. Further regulations on the project included:

- No drilling fluid was allowed, only a dry bore method could be used
- The heating tubes had to be grouted with a sulphate consistent cement.

This was a challenge, even for the GRD slanted bore technology. However, ultimately all requirements were fulfilled to the full satisfaction of the authorities involved.

Short slanted bores are also even more efficient than vertical bores, as the three-dimensional and radial arrangement allows the geothermal potential to be physically recorded much better. A survey at the University of Siegen has proved this. [Further information can be found under 'Press Releases' at website: www.tracto-technik.com]



In water protection areas Zone 30 is commonly found.

The GRD boring rig in its working position.



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For the required cold capacity of 18 kW a total of 11 bores, each with a length of 30 m were required.

The central bore point, where the access manhole was required after completion of the installation, was chosen so that the heating tubes could be lowered in various angles from 30° to 65° in all directions and also beneath the building, whilst at the same time retaining the necessary distances.

The house is situated in a sloping area with a slope of 30%. This was still not a problem for the GRD bore rig which to be set up on this relatively steep slope (using a crane) on the manhole. With the usual heavy vertical bore rigs it would not have been possible to carry out the 11 bores required due to the situation of the premises and the geothermal minimal distances involved.

Even the soil was anything but bore friendly. The pre-inspection, carried out by a private geological company indicated a marl soil (lumpy marl) with high clay marl particles, which could be penetrated without the need to add water. Adding water would have caused the soil to soften and pose the danger of instability and sliding on the slope. As the application of drilling fluid was out of the question, this proved to be an additional obstacle. This left only the possibility of carrying out a dry bore with the GRD technology, which the bore team carried out to a high standard.

After the bores were completed the REHAU endless coaxial heating tubes were installed and grouted with the respective sulphate-consistent cement.

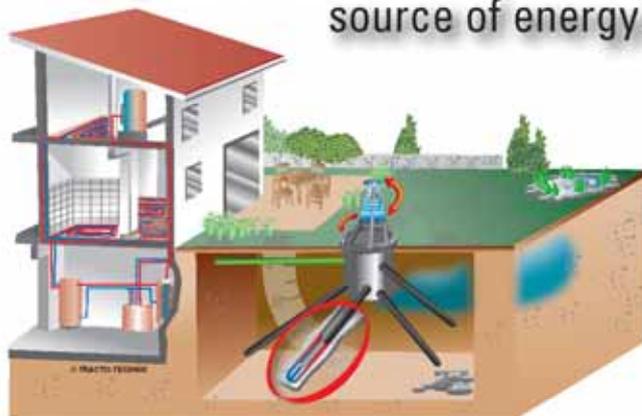
Despite these unusual and difficult conditions, the EWS unit was installed successfully. Since the project, the family has moved into the house and is experiencing their first heating period.



The bore manhole with the heating tubes in position.

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Geothermal Radial Drilling

ASSET MANAGEMENT, MAPPING & SURVEY

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NEW MAINLINE SURVEY SYSTEM COMPLIMENTS EXISTING PIPE INSPECTION TECHNOLOGY

AM Industrial (UK) Ltd (AMI) recently supplied a new Mainline pipeline inspection survey van system to Upstream Pipeline Services Ltd of Creech St Michael, Near Taunton, Somerset, UK.

Established in August 1999, Upstream Pipeline Services Ltd (UPSL) carries out work for a wide variety of clients including the Highways Agency, various Water Companies, the Environment Agency, Local Councils, Engineering Consultants and Building Companies across the U.K.

Commenting on the purchase of the new survey van, Steve Parsons, managing director of Upstream Pipeline Services said: "The new van will compliment our current fleet. The full mainline unit with its Pan & Rotate camera and spare 50 m link cable, now gives us the capability of surveying both large and small diameter pipes with just a simple wheel change on the camera crawler." When asked why UPSL chose the AM Industrial system from those available on the market Steve went on to say: "In looking at the systems available to us we found the AMI kit was not only competitively priced but also easy to use, portable and quick to set up. The all round service package was also a bonus."



Both mainline and rod camera systems are easily accessible from the back of the survey van.

COMPLETE SOLUTION

The AMI equipment chosen by UPSL comprised:

- A Mainline Desk top Control console with a Docking station for the Panasonic tough book and Mpeg 4 digital encoder
- An SP100 Pan & Rotate camera with twin integral LED lamps for use in pipe diameters from 150 mm along with auxiliary high powered LED twin lights which allow the system to operate in pipe diameters up to 1,200 mm
- An SP150 Midi crawler with a full range of wheels and a jack up gantry for use in pipes from 150 mm to 1,200 mm diameter
- An SP heavy duty Kevlar-reinforced camera control cable with a length of 250 m
- An SP50 Pushrod coiler with 60 m of semi rigid rod and an auto uprighting colour camera
- All of this equipment has been fitted into a completely customised vehicle based on a Ford Transit chassis.

Upstream contacted AMI with a specific requirement for the new survey vehicle. This was that the mainline control unit had to be one that could operate with a whole range of crawlers including the SP75 Mincam crawler, the SP150 Midi Crawler and the SP300 Mainline Crawler. The cross-compatible control unit was built into a strong portable flight case and recessed into the worktop for van dedicated use but with a design that also allows quick and easy removal to deploy the unit as a portable inspection system which could for example be put into a 4x4 etc. According to Martin Woods, director of AMI: "Flexibility of the system was key to Upstream's requirements and they did not want to be confined to equipment that was fixed permanently into a single survey vehicle, as with a rack mount type system."

The Panasonic tough book computer, preloaded with WinCanV8 mobile reporting software, was selected as the most ruggedised



The demountable control unit allows for remote operations off the new AM Industrial Ltd survey van.

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PC platform and one that was suited to both vehicle and portable use. Survey images and data are stored on the hard drive through the Mpeg digital encoder, which operates through a high quality touch screen monitor. The vehicle and equipment is also supplied ready to accept a P1512 Sonar underwater pipe profiler system.

The pushrod equipment included in the package is designed for small diameter pipe of 100 to 150 mm. It comes with extra long link cable which allows the pushrod to operate at up to 50 m from the control unit.

Steve Parsons went on to say that as well as offering generic parts, competitive parts pricing, a broad industry knowledge, an excellent service package and a complete van fit out, a main factor behind the selection of the AMI solution was the colour. “Due to the nature of the work we carry out on the

highways network the highly visible yellow shows up well in the van which will add to the safety of the work team as well as the general public. I would find it hard to believe that anyone would be unable to see the top manhole roller, which again is yellow, and also covers the entrance to the manhole. All in all I think the package is very good.” he said. Website: www.amindustrial.co.uk



Upstream managing director Steve Parsons (right) and technical director Guy Robinson (left) with the New AM Industrial supplied and fitted survey van.

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The new Ditch Witch® 830R/T high-frequency electronic locating system is designed to provide best-in-class performance at a very high active frequency.

The 830R/T (receiver/transmitter) system is designed to provide best performance at a high active frequency.

One advantage of a high-frequency locator is its ability to trace poor conductors, such as ungrounded tracer wire, and locate short lengths of utility infrastructure better than low-frequency units.

The system boasts numerous automatic features such as gain control, auto depth, and visual and audio feedback which make the 830R/T easy for even novice operators to confidently identify and trace metallic pipe or cable, water, and gas distribution lines. The ruggedly built, construction-grade 830R/T system has an IP65 environmental rating, so it can stand up to the rigors of the construction site and the toughest weather conditions.

On-the-job dependability is further enhanced by the system's long battery life: 150 hours on the transmitter, 75 hours on the receiver. Adaptive filtering, one of the system's many industry-exclusive features,

ensures that the 830R/T is highly responsive in all modes of operation, providing left-to-right guidance very quickly regardless of mode or operator style. In PV (Peak Verify) mode, another exclusive feature, the 830R/T system gives operators an additional way to confidently verify the locate. Website: www.ditchwitch.com



The Ditch Witch 830R/T (receiver/transmitter) system.

SUPPORT EQUIPMENT, ACCESSORIES & SERVICES

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GPS VEHICLE TRACKERS

Through its worldwide dealership network, the Ditch Witch® organisation now offers optional GPS systems for tracking and managing both construction and non-construction equipment.

These state-of-the-art systems are web-based, with no software to install, so they are accessible from any computer, laptop or mobile device. Each GPS system can be configured for daily updates or for 5 or 10 second live tracking, speeds that are claimed to be the fastest updates in the industry.

The Ditch Witch equipment tracker is offered as part of a comprehensive planned maintenance program that can include monitoring of a customer's equipment hours of operation by the dealer. With this feature, the dealer can inform the customer when it is time to schedule an appointment for equipment service.

The equipment tracker also can be used to locate stolen equipment and help prevent theft. With the GPS system's 'geo-fence' feature, an automatic notification is sent out via text message or e-mail if the equipment goes outside of the fence.



GPS Screenshot.

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AT-X5 and VT tracking units.

The Ditch Witch vehicle tracker is designed to track and manage non-construction equipment via GPS. Capabilities of this device include remote locking and unlocking of vehicles, monitoring of vehicle-mounted pumps, theft detection, and monitoring of driver activities. Customers can choose the types of monitoring services that fit their needs and budget. Both the equipment tracker and vehicle tracker are small enough to fit in the palm of a hand, so they can be installed in a concealed location. Each device is engineered with a rugged housing and solid-state circuitry for reliable performance in tough jobsite conditions. Website: www.ditchwitch.com

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NEW INNOVATION FOR SEWER RENOVATION

With a concern for environmental conservation, local government agencies are obliged to renovate their sewer networks. They have a choice of techniques to use from the most basic, which involves digging a trench and replacing the old pipe with a new one, to the most advanced: trenchless pipe relining, also called Cure-In-Place Pipe (CIPP). This technique consists of unrolling a flexible liner inside the sewer in need of renovation, inflating it, and then finally transforming it to a rigid layer by curing it with hot water or steam circulation. The new pipe all prepared in situ is then ready for use. The absence of digging a trench has 3 main advantages: firstly added security, if some gas mains are in close proximity to the network in need of repair. Also, huge reductions of traffic congestion can be achieved as the roads are kept intact. Finally much shorter construction time is possible in comparison to conventional techniques.



Installing the new Galtzaberde liner on a recent project.

In order to form a rigid pipe, the liners are firstly impregnated with resin, either epoxy or polyester. However these resins have some drawbacks, such the emissions of styrene in the case of polyester resin. To overcome this issue, Cray Valley, a leading global polyester resins manufacturer, in cooperation with EBL Polyester, one of the French leaders in trenchless CIPP pipe lining technology, have just developed a system without styrene.

The new liners, called GALTZABERDE, which means 'green sock' in Basque, reduces the exposure for workers and residents to unpleasant smells. In addition, this technology has excellent stability and no dangerous substances in its formulation, in comparison to liners using epoxy resins. This technological challenge also consisted of obtaining a liner whose mechanical properties had to be equivalent to those of the standard liner. France has been slow to renovate its sewer network, but now it is trying to catch up. Germany is renovating 1,500 km of its network per year, whereas France does not exceed 300 km. Website: www.crayvalley.com

ELECTRIC HAUL UNIT FOR LARGE CAPACITY SPOIL REMOVAL

Akkerman Inc. recently unveiled the 1548 Haul Unit featuring enhanced operator safety and comfort combined with improved productivity for spoil removal starting with its 600 TBM and all the way up to its BS 1440 excavator shield.

The improved 1548 Haul Unit functions with a 11.2 kW (15 hp) electric drive. The all electric drive employs progressive technology for greater efficiency and minimised maintenance. The unit boasts consistent low-end torque with an extended range of speed resulting in shortened turnaround times, even with heavy spoil loads and moderate grades. The regenerative motor braking feature recaptures traditionally lost energy, thus increasing battery life. An inching component provides precise operator control for accurate conveyor alignment.



The new 1548 Haul Unit.

Numerous comfort and safety features have been incorporated into the 1548 Haul Unit. The enclosed operator platform provides personal protection during movement. The control centre and direction speed control lever is amply visible and ergonomic. The centrally located battery gauge hour meter, clearly displays the battery charge level. The removable main power switch prevents accidental powering-on during non-use. The 1548 Haul Unit features independent hydraulic service and mechanical parking brakes. The fail safe braking attribute will safely bring the unit to a stop upon release of the direction speed control lever.

The 1548 Haul Unit conveniently adjusts from 508 mm (20 in) to 610 mm (24 in) gauge track with the addition of a bolt-on track kit. It accommodates the full range of Akkerman dirt buckets, including extended sizes as well as all Akkerman battery packs. Website: www.akkerman.com

SPONSORS LINKS

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[Perforator Ltd](#)

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No-Dig contractors for: Sewer installation, renovation & maintenance including CIPP, Structural, Infiltration & Connection linings; Patch repairs; CCTV pipe inspection and assessment; pipe cleaning, flow monitoring; Auger boring; HDD; Microtunnelling; Shaft Sinking; Headings; Lateral Cutting; Pipe Bursting; Sliplining & Consultancy



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McElroy Manufacturing is the leading manufacturer of polyethylene pipe fusion equipment and provider of customer-driven solutions to PE engineers and contractors worldwide.



UKSTT NEWSLETTER



Brought to UKSTT
Members by:



IN THE NEWS

National - A big welcome to new council members - Colin Tickle, UKSTT chairman, was delighted to welcome Dec Downey, one of three new council members, at the first UKSTT council meeting since the society's AGM in October. Dec, who recently stepped down from the role as chairman of ISTT which passed to Prof Ariaratnam, is a past chairman of UKSTT. Also elected were Roger Kern and Ernie Wardle. Colin took the opportunity to record the departure from council of Steve Kaminik and offer his sincere appreciation for all the support and effort that Steve has given the society over the years.



International - At the International No Dig in Singapore whilst Dec Downey stepped down from his role as chairman of ISTT, Norman Howell, past chairman of UKSTT, was re-elected within the International Society for Trenchless Technology (ISTT) to remain on the Executive Council (ESC).

UKSTT TAKES THE ROAD TO COVENTRY

Despite most of council being away at the International No Dig conference in Singapore when UKSTT Patron, Severn Trent Water held a workshop and presentation event at their new headquarters in Coventry recently, UKSTT ensured it had a stand to promote knowledge use and awareness of trenchless systems materials and techniques to delegates throughout the day. This was the first event to be held in Severn Trent's prestigious new building that will house nearly 1,700 staff delivering all the core or support services to the business.

Supported by national and local business as well as NJUG the workshop was focussed on 'Delivering Customer and Community Excellence'. The workshop provided information on how Severn Trent Water has transformed the way it plans and undertakes work to deliver a better service to customers and reduced disruption to communities in which works take place. Ranked as an excellent example of good practice, the workshop provided an invaluable insight into how Severn Trent Water has taken on the increasing challenge of reducing the durations of works through better and more inclusive planning and needing to improve communications with communities and their representatives still further.

UKSTT LECTURE TEAM AT BRUNEL UNIVERSITY

Following on from previous years' lectures at Brunel University, Uxbridge as well as the final year engineering group's recent visit to No Dig Live in October, the successful team of Sandra Rolfe-Dickenson, (Montgomery Watson Haza) (MWH) and John De Rosa (Subterra) along with Peter Crouch, UKSTT Technical Secretary, prepared and delivered a full day of lectures tool box talks, break out sessions, and film and video clips as well as case study groups to explore the world of pipeline design in a 'real world' context.

*Peter Crouch in
full flow.*



Covering materials science, selection, and properties as well as structural design and jointing systems, the day also offered lots of opportunity for students to discuss and debate options and related environmental and cost impacts and gain appreciation of risk, health and safety constraints, and good practice amongst many other aspects covered on the day.

The full day included work from all three sponsoring organisations and our thanks again to both Sandra and John and their respective companies for supporting the society in this way.

UKSTT AWARDS DINNER

By the time you read this the revised awards entry guidance documentation will be posted on the UKSTT web site with award co-ordinators hoping for yet another record breaking entry level this year.

This will be another excellent evening to look forward to, celebrating the best in trenchless activity and the brightest in the industry.

With Chris Packham again hosting the awards process, which will be held on Friday 15 April 2011 in Birmingham, and will bring again bring with him a 'friend'. 'Pink Strings', the very popular young string quartet from last year will be adding continuity and delightful background listening and John Archer, a Comedian and magician will provide the feature after dinner entertainment. So we are all set for another excellent evening.



UKSTT NEWSLETTER



Brought to UKSTT
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John is the current 'Magic Circle Stage Magician of the Year' and certainly one of the best comedy magicians in the UK today. So if you are looking to get in a nomination for any of the awards get your thinking caps on, select the projects you wish to use to illustrate your success and achievements in the world of trenchless during 2010, and start preparing those entries. It is never too early.

It is also never too early to contact Val at UKSTT's offices at Leamington Spa and sort out sponsorship or business promotion opportunities as well as reserve tickets for evening to support the society and its members, your colleagues, as well as all the entrants at this major industry evening with your chairman Colin Tickle.

Come along make an evening of it enjoy the social and professional networking as well as the entertainment and the quality of submissions. Tickets are £60 + VAT per person. Website: www.ukstt.org.uk

*Chris Packham and
friend at the 2010 event.*



EVENTS AND MEETINGS



SED 2011 CANCELLED

RBI has regretfully taken the decision to cancel the Site Equipment Demonstration (SED) 2011, which was due to take place between 17 and 19 May 2011.

The recession in construction has continued to affect suppliers' marketing budgets and despite the hard work of the sales team and goodwill from the market, the current level of commitment to next year's show is not what was hoped and RBI feels the show is unlikely to meet expectations. Therefore RBI feels that there was no alternative but to cancel the show.

Since the closure of Contract Journal, RBI has supported SED with the monthly magazine Site Equipment Manager, and the website SED365.co.uk. Both these brands will close with immediate effect as a result of the cancellation of the show.

Robert Brighouse, managing director RBI thanked previous supporters of SED and the other RBI construction brands over the years saying such support was much appreciated.

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MAJOR SUCCESS FOR INTERNATIONAL NO-DIG 2010 SINGAPORE

The international trenchless technology community gathered in force in Singapore for the ISTT's 28th annual International No-Dig 2010 Exhibition & Conference which was held between 8 and 10 November.

This was the first major trenchless technology exhibition to be hosted by ISTT in Singapore and it was certainly a huge success. The location was chosen as Singapore is a regional centre of excellence for trenchless technology, established through the major microtunnelling and rehabilitation projects undertaken by the national water agency, Public Utilities Board (PUB). Singapore is also an ideal hub to draw delegates from around the region, as well as fitting location to showcase the very best and latest technology from around the world.

Nearly 1,500 visitors from 38 countries attended the three day exhibition and conference. The exhibition featured more than 100 companies from 19 countries.

Visitors to the exhibition will have been impressed with the range of products, services and equipment on display and the Level 4 location of the exhibition halls at Suntec's prestigious convention centre did not deter exhibitors from showing a wide range of equipment, both large and small. Equipment on display included a range of HDD machines brought from Singapore, China and Malaysia, including Vermeer Asia Pacific's 130 x 150 rig which has an impressive pull-back of 59,000 kg.

The Exhibition was officially opened by Mr Khoo Teng Chye, Chief Executive of Singapore's Public Utilities Board (PUB), amidst a carnival atmosphere provided by two Chinese drummers who filled the exhibition hall with their rhythmic beats. After cutting the ceremonial ribbon, Mr Khoo toured the exhibition, with a special visit to the Singapore National Pavilion, featuring 18 locally based companies. The opening ceremony included recognition of outgoing Chairman Dr Dec Downey and the introduction of new ISTT affiliates from China, Turkey and Singapore.

The exhibition was busy throughout the three days with a steady stream of industry visitors.



Exhibitor feedback shows a strong indication that the quality of attendees was of the highest level. Many reported brisk business with some even selling equipment from the stands. The visitor interest was such that many were engrossed in discussions to the bitter end of each day, resulting in a delayed exhibition closure on the first two days.

Visitors to the IDS stand.

EVENTS AND MEETINGS



The international Conference featured 60 peer-reviewed papers on trenchless research, techniques and case studies on both rehabilitation and new installation. The programme co-ordinator was the newly appointed Chairman of ISTT, Dr Sam Ariaratnam who, in addressing the conference, commented that the Singapore programme was one of the most comprehensive and impressive range of papers in ISTT's history.

Day two of the Conference was opened by keynote speaker, Mr Mohd Akhir Bin Mhd Jiwa, Director General of Sewerage Services Department, Ministry of Energy, Green Technology and Water, Malaysia.

Mr Mohd Akhir addressed the conference on the growing use of trenchless techniques in Malaysia, with examples of a recent major infrastructure project completed in Kuala Lumpur including some of the geological challenges. As the benefits of using trenchless are more widely recognised, in terms of environmental protection, reduced disruption and construction time, the Malaysian Government has a structured plan to see the increased use and many local authorities are already specifying trenchless methods in their tender documents.

The Gala Dinner and ISTT Awards presentation took place at the Pan Pacific Hotel on 9 November with three awards presentations; Interflow and Sekisui Rib Loc for the 2010 Trenchless Project, Whirlwind Utilities of UK for the Trenchless Innovation Product for the WACU cleaning system developed in conjunction with Yorkshire Water and the Student Award went to Zuzana Halova of Czech Republic for her paper on non-conventional solutions of utility installations.

Leanne Ford, UKSTT Young Engineer of the Year, also took the opportunity to invest her prize money to visit Singapore, attend the conference and share a few days trading experience with the PUB sewer renovation team which has restored over 1,000 km of its 3,400 km network in recent years.

NEW CHAIRMAN FOR ISTT

Dr Sam Ariaratnam, Professor at the Del E Webb School of Construction, University of Arizona is the New Chairman of ISTT. Dr Sam, a recognised expert in HDD, trenchless pipe replacement and underground utility asset management took over the chair from Dr Dec Downey at the ISTT Board Meeting, 7 November in Singapore during the Singapore event. The new Vice Chairman is Derek Choi from Hong Kong and four new members were elected to the Executive Steering Committee; Enrico Boi (Italy), Takehiro Toyoda (Japan), Jeff Pace (Australia) Sergio Palazzo (Brazil). The UK will be represented on the ESC by Norman Howell who was re-elected and Dec Downey who will serve on the Committee as Past Chairman. Four new national Societies were also welcomed at the Board Meeting including China, Columbia, Singapore and Turkey. At the Conference opening ceremony Dec Downey was presented with a plaque commemorating his 3+ year's service as Chairman and an iPad. Some six of the nine UKSTT past chairman were also in Singapore supporting the event.

The Gala evening guests were afterwards treated to a display of local entertainment including a Chinese Lion Dance, as well as an array of Malaysian drummers and dancers.

At the close of the event, ISTT Chairman, Sam Ariaratnam, expressed thanks to the Gold sponsors of the show, Vermeer Asia Pacific and also Silver Sponsors, Pure Technologies Inc.

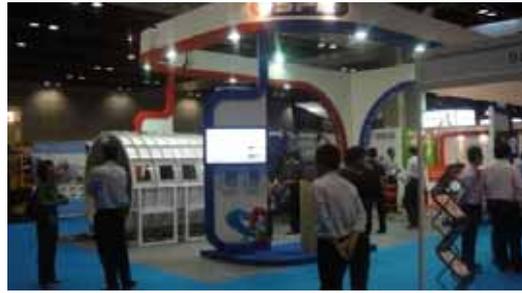
INTERNATIONAL NO-DIG 2010 was organised on behalf of ISTT by UK-based Westrade Group Ltd which organised the very first No-Dig Exhibition in London in 1985. Westrade Group

have worldwide experience of organising events, with its own series of TRENCHLESS shows in the Middle East and Asia, which are also supported by ISTT.

The next INTERNATIONAL NO-DIG will be held in Berlin, between 2 and 5 May 2011. ISTT will return to the region in support of Westrade Group's TRENCHLESS ASIA in March 2012. Full details, including dates and location are to be announced very soon. Website: www.westrade.co.uk



Dec Downey receives his award from ISTT Executive Director John Hemphill



The Sekisui stand.

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EVENTS AND MEETINGS



2011

January 16-20

New Ways to Perform Piping Design & Layout - Doha, Qatar

Details from: www.fleminggulf.com

January 25-27

UCT – Underground Construction Technology International Conference & Exhibition - Houston, USA

Details from: www.uctonline.com

February 8

Pilot Tube Microtunneling Seminar - Colorado, USA

Details from: www.microtunneling.com/topics/mt_course_information_basic_outline_09.htm

February 9-11

Microtunneling Short Course - Colorado, USA

Details from: www.microtunneling.com/topics/mt_course_information_basic_outline_09.htm

March 1-3

International Conference & Exhibition on Tunnelling & Trenchless Technology - Selangor, Malaysia

Details from: www.iem.org.my

March 8-10

6th Annual CGA Excavation Safety Conference & Expo - Orlando, USA

Details from: www.CGAconference.com

March 16-18

Inter Tunnel 2011 - Moscow, Russia

Details from: www.intertunnelrussia.com

March 27-31

NASTT No-Dig Show - Washington, USA.

Details from: www.nastt.org

April 15

UKSTT Annual Awards Dinner - Birmingham, UK

Details from: www.ukstt.org.uk

May 2-5

International No-Dig 2011 - Berlin, Germany

Details from: www.nodigberlin2011.com

May 24-25

Iran PipeTech 2011 - 3rd Iranian Pipe & Pipeline Conference - Tehran, Iran.

Details from: www.iranpipetech.com

September 7-8

dt Exhibition - Cheltenham, UK

Details from: www.dtexhibition.com

October 3-6

No-Dig Down Under 2011 - Brisbane, Australia

Details from: www.trenchless2011.com

October 26-28

International Conference on Pipelines and Trenchless Technology (ICPTT) - Beijing, China

Details from: www.icptt.org

2012

May 14-16

International No Dig Show 2012 - São Paulo, Brazil

Details from: www.nodigshow2012.com (available soon)

If you have an event, course or meeting scheduled for 2009 or 2010 and would like to add it to this listing please forward details to: ian@nodigmedia.co.uk