

NO DIG

INTERNATIONAL

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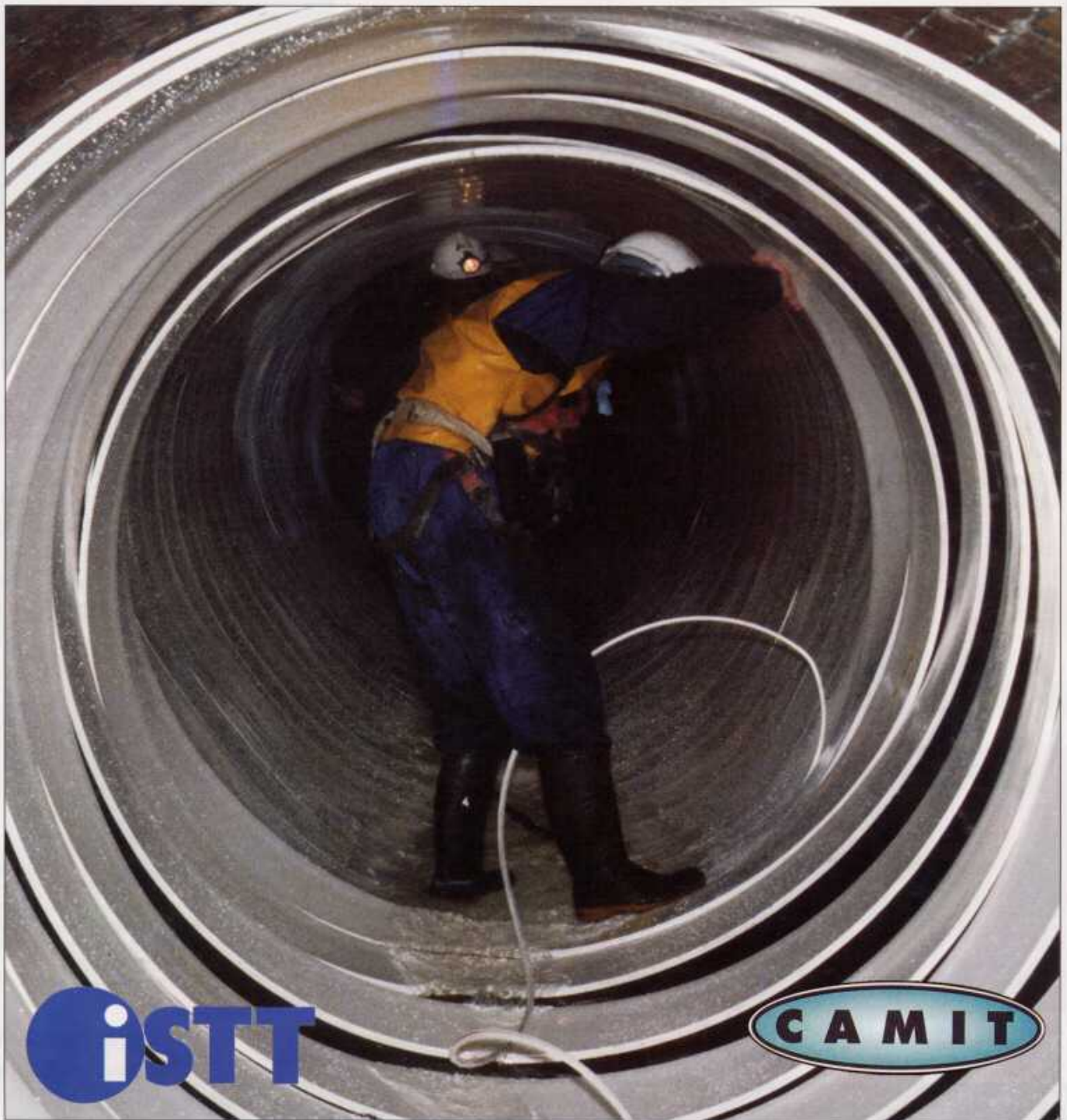
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The crossing was completed in just five days. The versatility of steered auger boring for curved drives creates new opportunities for this technology, in addition to more conventional applications for steered bores where high accuracy is required.

DRILL ROD VIDEO

Vermeer has produced a drill rod care and maintenance video, covering drill rod features, steering limitations, inspection, preventative maintenance and the importance of proper drill rig alignment.

The video is available free from Vermeer (+1 888 837 6337) or from the company's dealers worldwide.

RELINING REFUSE CHUTES

Polymer-based drain-relining technology has been used in the repair of a tower block rubbish chute. Installed at Ryecroft Green, an 11-storey Local Authority-owned block of flats in the Pudsey area of Leeds, U.K., the system allowed the chute to be relined within a two-day period, helping to avoid the considerable disruption associated with conventional cement-based relining techniques.

The work was carried out by drain relining specialist Lanes for Drains, using a resin based ambient cure polymer relining system that was fed into the 30 m shaft from the roof of the building. Once the system had cured – a process that took only hours – access points were cut into the membrane from each floor, allowing the chute to be brought back into service with the minimum of delay.

Lanes for Drains Technical Manager Peter Ringland commented: "Polymer relining can usefully be applied across a broad spectrum of vertical shafts including cast iron drains, helping to keep levels of disturbance – and therefore cost – to an absolute minimum."

SWAGE IN GERMANY

The municipal authority in Giessen, Germany, a town with a population of 73,000, was recently faced with rehabilitating two defective water mains of 400 and 500 mm diameter, which had suffered severe corrosion due to aggressive ground conditions. The mains supplied Giessen with about 60% of its drinking water.

A prompt solution was called for as road resurfacing was planned directly over the pipe line. Open-cut methods would have required sheet piled retaining walls 4 m deep across the B49 dual carriageway. To keep costs and disruption to a minimum, a swagelining procedure was chosen, using

SDR 17 PE pipes of outside diameters 400 and 500 mm for the two pipelines.

Contractor DIGA from Essen used a 40 t RW40 winch from German manufacturer Bagela for the swagelining operation which was carried out under licence from British Gas.

The pipe was heated with hot air to a temperature of 65°C and pulled through a swaging machine which reduced the diameter by about 10%. As long as the pipe is held in tension, it cannot revert to its original diameter.

The success of the procedure depends on the efficiency and constant pull of the winch. If the pipe is pulled with too much force through the swaging machine, the diameter reduction needed to install the liner may not be achieved. If the force is too low, a premature reversion may occur, causing the liner to jam in the host pipe.

The winching force was set initially at 15 t, and the liner was pulled with a constant speed of 0.5 m/min through the swaging machine. After three hours of pulling, the speed was reduced to 0.3 m/min and the force was increased to 18 t. Due to friction between the liner and the host pipe, the winching force in the final stage was increased to 22 t, the winch now pulling 260 m of pipe at a constant speed of 0.5 m/min. The constant tension was regulated by the automatic control systems fitted to the Bagela winch.

The water supply was restored soon after installation of the liners, and after 24 hours the liners had reverted to their original size, becoming a tight fit within the old pipes.

The feedback from the Giessen municipal authority was positive. The duration of the project had to be minimised due to the cost of providing external water supplies, and the anticipated programme was easily met. The authority will give serious consideration to the swagelining process for future projects.

GAS CROSSINGS

Italian company S E Tecnologie Avanzate and Greek partner ERGO SA of Athens have performed the first five gas crossings in the municipality of Filorei, Athens. Commissioned by the Public Gas Corporation of Greece (DEPA SA), the crossings form part of a project to increase the gas distribution network by 4.8 km.



S E Tecnologie SE503 drilling rig in action in Greece.

An SE503 drilling rig was used to install a 200 mm diameter casing beneath a river, through variable ground containing cobbles, and a 125 mm diameter gas pipe was then pulled through the casing. The average length of the crossings was approximately 70 m, at a depth of about seven metres.

JOHNSTON MICROTUNNELLING



Johnston Construction launched a dedicated microtunnelling division, using its latest equipment acquisition, a Herrenknecht AVN1200 microtunnelling shield.

Johnston Construction, part of the civil engineering division of John Mowlem & Company plc, has launched a dedicated microtunnelling division headed by Ian Stanley who has many years' tunnelling experience. One of Ian's recent projects included the design and management of work involved in the installation of the sea outfall pipeline at Hordern, County Durham, as part of Northumbrian Water's programme of improvements in the North East. The project, named 'Tunnelling Project of the Year 1998' by the U.K. Society for Trenchless Technology, included a steeply inclined pipejack on a 1-in-7 gradient, from the cliff top to the sea bed.

Johnston Construction has already purchased a state of the art Herrenknecht AVN1200 microtunnelling shield for the new Microtunnelling Division, to complement the existing fleet of mechanical tunnelling equipment owned by the company. The AVN1200 is currently in use on a drainage contract at Meanwood for Leeds City Council.

Johnston Construction, part of John Mowlem & Company PLC since March 1998, has experience covering the use of a wide range of tunnelling machinery, from full-face earth pressure balance shields in water-bearing sands and silts, through to roadheaders in hard rock, together with traditional excavation techniques.

TRENCHLESS SURVEY

The Trenchless Information Centre in the U.S. is conducting a survey on the industry, and readers are invited to visit the Web site at <http://www.no-dig.com/survey.html>