# Smarter tunnelling

The deterioration of the country's underground infrastructure systems and the ever-increasing demand for utility services is driving an even greater need for subsurface utility construction and rehabilitation that causes minimal disruption to surface traffic and business, and trenchless technologies is the solution

When subsurface pipeline construction and rehabilitation company, Trenchless Techologies cc took the plunge and pioneered the launch of trenchless technologies in the early 1990s, the prospect of establishing a niche in a field in which traditional open-cut construction methods were deeply entrenched seemed remote. Rightly so, this was during an era in which the current energy-saving craze had not even taken off.

Now it is just incredible how Trenchless Technologies has witnessed this branch of technology become one of the fastest growing sectors within South Africa's construction and civil engineering industry.

*Terra-Jet 7520 Directional Drill in Centurion*

*Rotoloc in use*

## Less inconvenience

"Traditional open-cut construction methods have adverse impacts on the surrounding communities, businesses and commuters owing to undesirable noise and dust pollution, traffic disruptions and safety concerns.

"What's more, direct costs are greatly increased as the excavation of continuous trenches often requires the restoration of surfaces such as sidewalks, pavements and landscaping," explains Trenchless Technologies Managing Member Sam Efrat.

## Quicker turnaround and cost savings

When compared to traditional open-cut construction methods, trenchless pipeline construction and rehabilitation applied in the correct application offers quicker turnaround times and cost savings of up to 20%. A vast majority of the technologies have the ability to undertake piping installation or rehabilitation work underneath existing services such as buildings, roadways, railways, rivers and established forestry, all the while keeping a small work footprint.

What's more, with microtunnelling - a more sophisticated trenchless technology - it is possible to install pipelines with the same or even greater accuracy than by open cut methods.

## Phenomenal growth

Technologies such as directional drilling have experienced phenomenal growth in South Africa. In the last three years alone, the number of directional drilling machines in the South African market has grown to close on 90 machines.

Even though more than a third of the Trenchless Technologies' business originates from directional drilling, Efrat explains that the company aims to increase this quota to more than 50% and position itself as the preferred supplier of directional drilling to a variety of industries. Trenchless Technologies currently operates four directional drilling machines with the aim of acquiring an additional machine before the end of the year.





## The telecommunications factor

Efrat says that the growth in the directional drilling market is largely due to the growth of South Africa's telecommunications sector. With the introduction of major telecommunication companies, such as MTN, Vodacom, Neotel and Cell C, the demand for the laying of fibreoptic technology for the purposes of faster internet connectivity has increased significantly.

"As many of the fibreoptic cables are placed down the sides of suburban streets and main arterials, the use of a non-invasive method of installation is paramount. Our expertise in directional drilling is being utilised by many of the telecommunication companies for the laying of fibreoptic cables on an ongoing basis," explains Efrat.

In addition to Trenchless Technologies' work in the telecommunications sector, the company also carries out work for large industrial corporations; small to medium-sized contractors; and for many of South Africa's municipalities.

To date, Trenchless Technologies has successfully installed over 300 000 metres of trenchless pipe countrywide.

## Greater need

Efrat says that the deterioration of the country's underground infrastructure systems and the ever-increasing demand for utility services is driving an even greater need for subsurface utility construction and rehabilitation that causes minimal disruption to surface traffic and business.

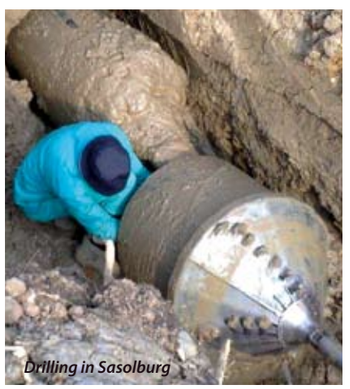
The mining sector potential

Looking ahead, Efrat says that having traditionally focused on the municipal sector, Trenchless Technologies plans to extend its offering to include the mining industry – an industry which Efrat describes as a huge untapped market for trenchless technologies.

*Port Elizabeth 900 Sewer after lining with Ribloc Ribline*

*Pentz Drive- Cape Town- Sliplining Sewer with 630 HDPE*

*East London 800mm Butt-Welding*



*Drilling in Sasolburg*

## About Trenchless Technologies

**Trenchless Technologies cc** was formed in 1991 specifically to cater for the growing need for non-disruptive, cost-effective solutions to pipe laying problems.

Upon the emergence of trenchless technology in the international market in the 1980s, Efrat quickly realised the potential that it held for an emerging market such as South Africa, and spearheaded the launch of Trenchless Technologies in 1991.

Trenchless Technologies was established as one the first contractors in the South African market to offer pipeline rehabilitation through the use of subsurface technologies, including sliplining and pipebursting. As the market grew, Trenchless Technologies expanded its offering to include the installation of new pipes through subsurface technologies such as pipe ramming and directional drilling.

Trenchless Technologies not only offers one of the widest ranges of trenchless services in South Africa, but it also is the sole Southern African agent for the sales and servicing of the Swiss-made Terra Hammer's range of trenchless pipelaying equipment, including: directional drills, moles, pipe rammers and pipecracking equipment. The company is also the sole agent for the patented Sekisui Rib Loc range of products. Efrat explains that the Australian-made range of Rib Loc products, which includes Expanda, Rotaloc and Ribline, are ideal for sewer applications from 150 to 3000mm diameter.

"Over the years, we have established ourselves as one of just a few companies in South Africa with the ability to install, inspect, repair, rehabilitate and replace underground infrastructure in the water, sewer, electrical and fibreoptic sectors. In addition to being able to offer turnkey services to these sectors," explains Efrat.

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