

Building the Guangzhou metro with help from Leister

Involvement in major project in the "Middle Kingdom"

Guangzhou, better known as Canton, is a thriving big city in the south of China. Around 10 million people live around the Pearl River delta. Due to its proximity to Hong Kong, it played a decisive role during the economic opening up of China and is still an important gateway to the West today. As well the world's highest television tower (610 m), currently under construction, the well-organised public transport is also exemplary. The vibrant metropolis has adapted to its millions of commuters and built an impressive transport network. A large part of the crowds travels underground. Four lines are already operational, a fifth is under construction. Since August 2004, builders have been working on the line traversing the west and east of the city around the clock. The 43km long line with 29 stops is supposed to be put into operation as quickly as possible and provide additional relief for overground traffic.

Working below ground

For the strenuous welding work to connect geomembranes in the tunnel, there were constant problems with the Chinese welding equipment. The heating elements could not cope with the continuous stress. The welding temperature was difficult to control, often increasing during the sub-tropical temperatures and burning the PVC material. The machines regularly failed. A further disadvantage of these devices was their susceptibility to corrosion from the PVC which needed to be welded. The quality of connection of the geomembranes did not satisfy the client's high demands. Therefore, the risk of penalties for delay also increased for the



The light, handy TWINNY S brings the weld seam down almost by itself...

company carrying out the work, the China Railway Tunnel Group (CTG). In short, CTG was forced to source better machines from a different manufacturer as quickly as possible.

Short delivery times

They decided on Leister. Their high-quality equipment has an excellent reputation in China as well, and is known for its extraordinary reliability. Moreover, Leister can guarantee very fast deliveries. The Leister sales partner located in Guangzhou, Digital Steel Welding Equipments Ltd, could supply the necessary machines very quickly. As well as the TWINNY S hot air welding machines, TRIAC S hand-held welding devices and accessories were also ordered. An important quality criterion of Leister



...and just as effortlessly upwards.



The TWINNY S gets into even tight spaces easily.

machines is their resistance to corrosion, and this goes for welding machines as well as handheld devices. This is a real plus, particularly when using PVC, as here. The CTG employees received comprehensive training with the purchase of the equipment. If unexpected problems should occur, there is a Leister service centre nearby.

A more than satisfied customer

Leister can prove once more that its products withstand all the demands placed on them, even when they are so extreme. The buyer, CTG – China's largest company for tunnel projects – is more than satisfied with the performance of the Leister equipment. The people responsible there believe that the welding quality and reliability are incomparable. They are confident that by using Leister machines their mammoth project will still be finished before the end of 2009. They also want to rely on the Swiss products in the future and use them in other major projects.



Welding work:	China Railway Tunnel Group (CTG)
Material:	PVC 1.5 mm
Sales partner:	Digital Steel Welding Equipments Ltd.
Device supplier:	Leister Process Technologies

Text:	Christophe von Arx, Leister Process Technologies
Photos:	Digital Steel Welding Equipments Ltd.

One of the many stops along one of the metro lines which is already finished.

Headquarters:

Leister Process Technologies
Galileo-Strasse 10
CH-6056 Kaegiswil/Switzerland
phone: +41 41 662 74 74
fax: +41 41 662 74 16
leister@leister.com