

Cape Town takes delivery of micro-tunnelling machine

The City of Cape Town has taken delivery of a new piece of machinery set to expedite its bulk sewer upgrade programme.

The AVN 800 XC Herrenknecht micro-tunnelling machine was acquired at a cost of just over R10.6m and comes with technology that enables safe, fast and efficient tunnelling in even the most difficult pipe jacking projects.



The machine has been used in more than 1,000 projects around the world. It is controlled with a laser navigation system that allows for precise positioning, has a built-in crusher that can reduce boulders to smaller pieces, and offers extra safety in less stable geological conditions (which is useful for tunnelling operations in the sandy Cape Flats soil).

Cape Flats project

The AVN 800 XC will be put to the test by CSV Construction during the final phase of the Cape Flats 3 Bulk Sewer Project (CF3). The CF3 is a critical component of the city's sewer network and will serve a population of nearly one million residents in the Bonteheuwel, Heideveld, Manenberg, Gugulethu and Nyanga areas. This project forms part of the city's Sanitation Master Plan to enhance the sewer reticulation system and will ultimately be completed by the end of 2017 at a total cost of approximately R250m.



The extra capacity that the CF3 construction will provide will allow the city to periodically decommission other sewer infrastructure in the area for much-needed maintenance, repairs and rehabilitation.

The second phase of the CF3 will be constructed below ground, with the greater part thereof being situated in close proximity to or within existing roadways. The least disruptive route for the local community and motorists passing through the affected areas has been chosen for this construction. In addition, new construction technologies that do not require the digging of trenches are being used to limit the inherent disturbance caused by construction work. The Herrenknecht microtunnelling machine will be crucial in this regard.

Greater efficiency

"Acquiring this technology is a major step forward for the city and will allow for greater efficiency of future bulk pipe replacement projects. The project team is to be congratulated for their vision and innovation. Staying on the cutting edge of new technology is crucial to ensuring that the city is able to provide the best possible service to residents," said the city's Mayoral Committee member for Utility Services, Ernest Sonnenberg.



"We are pleased that this phase of the project can now begin as its completion will ensure that we have sufficient capacity in our sewer network to limit the impact of blockages. However, I would also like to call on our residents to refrain from disposing of items into their sinks and toilets that could block up the network.
"Common causes of blockages are rags and cooking fat or grease. While newer technologies and infrastructure projects can assist us, we need the cooperation of residents to ensure that sewage overflows are prevented," said Sonnenberg.
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