

Rocla Supplies Jacking Pipes For Water Pipeline

No population can survive without potable water, making the management of water a crucial element of local municipality responsibility. The need to maintain and upgrade water related pipelines and related technical equipment, as has recently been highlighted, is of paramount importance to ensure that community health, hygiene and safety are not compromised.

Rocla, part of the IS Group, has been contracted to supply a part of the 1,100 meters of jacking pipe for two of the 19 sections (1 x 90 meter and 1 x 288 meter sections) for underground construction to the upgrades for the Palmiet Pumping Station to Signal Hill Reservoir project currently being constructed for Rand Water.

Two contractors, Wepex and Esor, both sought product from Rocla, as a result of their superior jacking pipe offering and availability. Contracts Manager, Pipe Jacking Division for Wepex, Luke Woodhams said “The Palmiet/Signal Hill project is an 18 month project with hard rock, alongside residential and national roads, needing to be blasted. The Rocla 100D jacking pipe has a nominal diameter of 2500 mm and outside diameter of 3000 mm and a proof load of 250 kN/m. It is a perfect pipe for this project, which will be to carry water supplies for human consumption as well as to withstand the immense pressure of vehicle weight” said Woodhams.

Steel pipes will be inserted into the jacking pipe for extra support and for their anti-corrosion properties.

Self-Compacting Concrete

The Rocla 100D jacking pipe is made from self-compacting concrete and classified to SANS 677. Manufactured through a vertical cast process, self-compacting concrete renders a better surface finish, whilst the benefit of the vertical cast (VC) process instead of the traditional roller suspended (RS) process is that a more consistent thickness throughout the thickness of the product is achieved compared to the RS operator-related effort of compaction.

The VC process gives an improved compaction around the reinforcement, improving the bond to the reinforcement, offering greater ease at filling extremely thin walled sections.

Self-compacting concrete can increase safety on the job by eliminating the need for consolidation; offers improved pumpability and labour efficiencies; shorter construction time making it a cost effective option; can be placed at a faster rate with no automated vibration and thereby requiring less screeding and enables a quicker concrete vehicle turn-around time assisting contractors in the quicker servicing of a site.

Woodhams added “Rocla had the right pipe with good availability. Their product is of an excellent quality and at a good price. We are very pleased with the service from Rocla and would definitely use Rocla again when we can”.

Civil Engineering and Construction Group, Esor is involved in the Phase B section of the Palmiet/Signal Hill project, Anton Naude, Director of Pipejacking commented “The Rocla product is very competitive, the jacking pipes need to be able to last the

lifespan of the project, which they will easily do due the quality of the pipes. These are huge jacking pipes that have an approximate mass per meter of 5680 kg/m and a mass of 8518 kg/pipe”.

“Currently the upgrades are running under the road from Alberton to Germiston, and it was essential that we had the right product and the right technology in place to eliminate traffic disruption” said Naude.

“One of the challenges facing the contractors on this Rand Water upgrade project is that the old pipes are running parallel to newly positioned jacking pipes, and it is imperative that the old piping is not damaged while the installation of the new Rocla replacement jacking pipe is underway – we are confident all will be well” he added.

The Palmiet Pumping Station to Signal Hill Reservoir project commenced in April and is due for completion by November 2014.

Pipe jacking is a technology where specifically made pipes are tunneled through the ground by hydraulic jacks thereby eliminating the need to dig up the road infrastructure. It offers greater transparency in terms of time and costs and is an environmentally friendly process.

Rocla is part of ISG – Infrastructure Specialist Group