FOSROC

constructive solutions

CASE STUDY

Bangalore Metro Rail

Bangalore (India)

CUSTOMER
Construction Heavy Civil Infrastructure - EDRC

SECTOR
Infrastructure

DATE
2020

PRODUCT
- Conbextra GP2

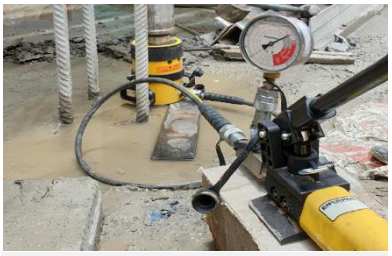
THE PROJECT

The Bangalore Metro Rail Project – Phase 2 involves the construction of a 2.8 km long tunnel, from Shivajinagar Station to Tannery Road Station. Rock strata was machine was employed instead of the cut and cover method adopted in much of the rest of the line. After the excavation of the launch shaft, rock anchoring was required for the placement of the 60 ton TBM Machine.

Application of grout

THE SOLUTION

Precisely lowering and positioning a very heavy and very expensive machine, the client was understandably extremely quality conscious, and thus had asked for high strength, free flow, non-shrink cementitious grout. The grouting was to be done for a 2000 mm depth, with a 50mm dia. rod with 100 mm dia. hole to take the load of 60T with pull out bond strength of 4Mpa. Conbextra GP2 was identified as the best-fit product by the L&T design team to meet the performance requirements, as it has a long and well documented track record in the Indian construction industry.



Fixing pull out testing equipment

THE BENEFITS

Fosroc were able to provide assistance in selecting and training the product application as well as pull-out testing.

Conbextra GP2 expands when cast to create a strong anchorage against rock. The pull out bond strength exceeded requirements (20Mpa @ 28 days). Pull out strength for 7 days was shown to be up to 45T without steel failure or grout failure

The product was found to be very versatile, as it performed even in difficult conditions of high heat and wet substrates. The quality of production means the product is highly dependable mix after mix.

Dial gauge reading after application of load

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