

TWO TERRATEC EPBMS READY FOR BANGKOK FLOOD PREVENTION



A total of three new TERRATEC TBMs will take part in the Metropolitan Waterworks Authority's Ninth Bangkok Water Supply Improvement project in Thailand.

TERRATEC celebrated the successful Factory Acceptance Tests of two new 4.39m diameter Earth Pressure Balance Tunnel Boring Machines (EPBMs) and one 4.8m diameter EPBM destined for the Metropolitan Waterworks Authority's Ninth Bangkok Water Supply Improvement project in Thailand. The events were attended online by representatives of Bangkok's Metropolitan Waterworks Authority (MWA) and contractor

Italian Thai-Nawarat Joint Venture.

The new TBMs will be used to build a water tunnel at the west of Bangkok with a total length of 9.1 km with tight alignments. This project is a joint venture between Italian-Thai (ITD) and Nawarat (NWR). ITD will operate two TBMs (S105 & S106) and NWR will operate one TBM (S102). To accommodate the alignment requirements of the project,

the TERRATEC machines are designed with active-type articulation that can accommodate the minimum radius curve of 90m and 80m. This will mark the 6th, 7th and 8th "tight radius" machines by TERRATEC operating in Thailand.

The geological conditions along the tunnel alignments will consist of silty clayey sand, very stiff clay to hard clay and therefore the TBM's soft ground cutterhead features a spoke design with

a 70% opening ratio and copy cutters.

Traditionally reinforced, 250mm thick by 1200mm wide, Universal reinforced concrete segments (4 + 1) will be installed as the machine progresses and a secondary steel lining will be inserted after the completion of the tunnel.

Muck removal, segment transport and supply of consumables will be via rail-bound equipment using battery locomotives.

Designed to increase the water supply capacity, the Ninth Bangkok Water supply improvement project is one of a series of tunnelling projects being undertaken by the MEA, which are being built to meet

increased water demands, reduce water leakage and improve water quality in the Thai capital.

Machine operation will be assisted at all times by TERRATEC's highly-experienced Field Service staff, providing quality after-sales support to ensure optimum performance and successful project completion.

Following the successful factory acceptance tests, the machines will be now shipped to Thailand and are expected to arrive at the end of 2022. The TBMs will then be transported to the project site with excavation due to

commence early next year.

TWO TERRATEC EPBMS READY FOR BANGKOK FLOOD PREVENTION PROJECT

In November, TERRATEC celebrated the successful Factory Acceptance Test of a new 6.49m diameter Earth Pressure Balance Tunnel Boring Machine (EPBM) destined for the Khlong Prem Prachakorn Drainage Tunnel Project in Bangkok, Thailand. The event was attended online by representatives of Department of Drainage and Sewerage BMA and contractor Italian Thai-Nawarat Joint Venture. The second Factory Acceptance Test for another EPBM will take place

in early Jan. 2023.

The two new TBMs will be used to build a water draining tunnel that is 13.3km long and 5.7m-wide, going from Klong Bang Bua to the Chao Phraya River. In addition to this tunnel, a water pumping station will be built along with a water draining building and four water receiving buildings.

To accommodate the alignment requirements of the project, the TERRATEC machines

are designed with active-type articulation that can accommodate the minimum radius curve of 50m and 25m.

The geological conditions along the tunnel alignments will consist of soft, medium, stiff sandy clay & sand and therefore the TBM's soft ground cutterhead features a flat spoke type with copy cutters.

Traditionally reinforced, 300mm thick by 1400mm wide, Universal reinforced concrete segments (5 + 1) will be

Two new TERRATEC TBMs will take part in the Khlong Prem Prachakorn Drainage Tunnel Project for the Department of Drainage and Sewerage Bangkok Metropolitan Administration (BMA) in Thailand.





will be installed as the machine progresses. Muck removal, segment transport and supply of consumables will be via rail-bound equipment using battery locomotives.

Designed to improve water management in Thai capital, Bangkok from floods when it rains heavily, the project is to build a water pumping station and water draining buildings. Four water receiving buildings and a water draining tunnel with 5.7 m diameter and 13.4 km in length will be constructed.

Machine operation will be assisted at all times by TERRATEC's highly-experienced

Field Service staff, providing quality after-sales support to ensure optimum performance and successful project completion.

Following the successful factory acceptance test, TBM S101 has already been delivered in Dec. The second TBM S100 will be shipped to Thailand and will arrive in early 2023. The two TBMs will then be transported to the project site where they will be launched in mid of 2023.

TERRATEC has a well-established regional base in Thailand, having sold its first machine in the country more than ten years ago for the Metropolitan Rapid Transit (MRT) Blue Line Extension

Project. With outstanding tailor-made robust TBM design, prompt onsite assistance, readily available stock of TBM spares and specialised TBM support throughout the tunnelling operation, TERRATEC has become the country's leading TBM supplier.

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A video featuring TERRATEC's Annual Review in 2022.



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