MMC PLSB sets another achievement in Malaysia Book of Records

Award is for the 'Breakthrough of the Longest Microtunneling Diameter Nominal 1800 Multi Curvature Sewerage Pipeline in Full Rock' in Cheras Perdana

by HARIZAH KAMEL

MMC Pembetungan Langat Sdn Bhd (MMC PLSB) recorded another achievement in the Malaysia Book of Records for the "Breakthrough of the Longest Microtunneling Diameter Nominal 1800 Multi Curvature Sewerage Pipeline in Full Rock" in Cheras Perdana, Bandar Tun Hussien Onn, Cheras.

In a statement recently, MMC PLSB said the 511-metre pipejacking works started on Oct 26, 2020, from Cheras Perdana to Taman Megah, which is part of the overall 108km alignment of Langat Sewerage Project implemented by the Department of Sewerage Services (JPP) under the Environment and Water Ministry.

The full rock site served as a challenge to the team where they used a special custom-made cutterhead for the tunnel boring machine (TBM) manufactured by Herrenknecht AG in Germany to drill full face granite with hardness over 120MPa with an S-curve alignment through a fixed coordinate.

"This innovative technique is the first to be practised in any sewerage project in Malaysia and is believed to be a valuable engineering option for other future projects of relevant needs," it said.

The ceremony was officiated by JPP deputy DG Ir Ahmad Rozian Othman and was witnessed by MMC Engineering Sdn Bhd CEO and Langat Sewerage Project director Mohd Abdul Fatah Endut.

During the ceremony, Malaysia Book of Records business development director Jwan Heah handed over a certificate of achievement to JPP, MMC PLSB, MMC Engineering and ICOP Construction (M) Sdn Bhd.

The final breakthrough was completed on Dec 24, 2020, while the country was observing the Movement Control Order.

In 2019, MMC PLSB celebrated its first achievement in the Malaysia Book of Records with the "Breakthrough of the Longest Microtunneling DN1800 Curvature Sewerage Pipeline".

MMC PLSB is responsible for building the Langat CSTP by treating raw sewage using modified conventional activated sludge technology

Pics courtesy of MMC

MMC PLSB said the Langat Sewerage Project is near completion at 96% physical progress with Langat Centralised Sewage Treatment Plan (Langat CSTP) currently processing sewage about 330,000PE which resulted in over 80% of ammonia removal as per requirement by the Department of Environment.

In its full capacity, Langat CSTP can process up to 920,000PE. The project is expected to be completed this year before entering the operation and maintenance phase.

MMC PLSB is responsible for building the Langat CSTP by treating raw sewage using modified conventional activated sludge technology adopting step feed multi-stage de-nitrification with a deep aeration process that will improve cleanliness and water quality of the Langat River.

The project also boosted a new technology in constructing a total of 108km-long new gravity sewer networks covering Kajang to Cheras.

Last year, MMC PLSB bought two 750mm microtunneling boring machines (MTBMs) and one 450mm MTBM for a sum total of RM9 million.

These small size MTBMs are specifically designed and custom-made for MMC PLSB to jack through solid rock underground.

MMC PLSB is also at the helm of the rationalisation and decommissioning of 123 public sewage treatment plants (STPs) at federal and state lands, 19 private STPs at government premises and upgraded 11 existing STPs into network pump stations to support the latest system and ensure efficiency in sewage treatment.

The full rock site serves as a challenge to the team where they use a special custom-made cutterhead for the TBM to drill full face granite

The 511m pipejacking works started on Oct 26, 2020, from Cheras Perdana to Taman Megah

The TBM lowering process. The project boosts a new technology in constructing a total of 108km-long new gravity sewer networks