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Largest-ever tunnel boring machines in SEA for Genting ECRL project, says Dr Wee

By **TARRENCE TAN**

BENTONG: The two tunnel boring machines (TBM) that will be used to excavate the twin-bore Genting Tunnel portion of the East Coast Rail Link (ECRL) are the biggest of its kind in South-East Asia, says Transport Minister Datuk Seri Dr Wee Ka Siong.

He noted that the TBM cutter heads from China are equipped with four torque cylinders and weigh 900 tonnes each. They are 25m long and have an excavation diameter of almost nine metres.

Dr Wee added that the total weight of the TBM cutter head with gantry support structure (which includes control centres and machines) is 1,600 tonnes and 266m long.

“This makes the TBM machine the biggest in South-East Asia for rail and excavation works in Malaysia.

“This is a record that we created in Malaysia,” he said after visiting the construction site near Bentong.

Among those present were former Transport Minister Datuk Seri Liow Tiong Lai and Malaysia Rail Link Sdn Bhd (MRL) chairman Tan Sri Mohd Zuki Ali.

The TBMs were manufactured by the China Communications Constructions Company (CCCC) Tianhe Machinery and Equipment Manufacturing Co Ltd in Shanghai, China and they were custom made for use in hard rock conditions.

The TBM was shipped dismantled in 286 packages from Shanghai Port and arrived in Port Klang in July last year.

While visiting the construction site of the two tunnels near Bentong, Dr Wee said 131m had been dug by local and CCCC workers and another 50m had to be excavated before the TBMs could be deployed.

“We are expecting that in March this year, the TBM will enter the tunnels before it officially begins excavating,” said Dr Wee.

Dr Wee says the TBM has a maximum digging capacity of 700m per month at the 16.39km twin-bore Genting Tunnel between Bentong and Gombak.

Dr Wee also explained that the TBM’s three main tasks were tunnel excavation, removing excavation waste to the surface and installing concrete walls in the tunnel.

“These three functions should take up to three years to complete,” said Dr Wee.

Dr Wee said excavating the Genting Tunnel would be a challenging feat but CCCC officials were equipped with the proper knowledge to handle the TBM.

“They have vast experience in handling TBM work. For them, it isn’t as difficult as other jobs they have had elsewhere,” he said, adding that he believed this would be the longest rail tunnel in South-East Asia.

Mohd Zuki, who spoke prior to the press conference, said the Genting Tunnel construction site spanned over seven hectares and involved nearly 200 workers.

He also said the visit by Dr Wee’s and Liow’s came at the right time as the TBM were 85% assembled.

“MRL is optimistic that the high-technology TBM will be able to take on geological and engineering challenges excavating across the Titiwangsa mountain range.

He also said that the Genting ECRL Tunnel would be the first time a TBM would be used for excavation here, instead of blasting and drilling methods used before.

“MRL is confident that ECRL staff members have the experience to handle the TBM to build the longest rail tunnel in Malaysia,” added Mohd Zuki.

The 665km-long ECRL, which is scheduled for completion by December 2026, will traverse the East coast states of Kelantan, Terengganu and Pahang, and link the Klang Valley in the process.