

URGENT RELEASE

MALAYSIAN CONTRACTOR WINS ANOTHER BIG WIN AT INTERNATIONAL TUNNELLING AWARDS

KUALA LUMPUR, 19th November 2019- The Autonomous Tunnel Boring Machine (A-TBM), developed in-house by MMC Gamuda KVMRT (T) Sdn. Bhd, has won the Technical Product/Equipment Innovation of the Year award at the 2019 International Tunnelling and Underground Space Association (ITA) Tunnelling Awards night. The event was held on 18th November 2019 night at the 8th Annual Cutting-Edge Conference at Miami, Florida, where tunnelling experts and fraternities gathered to recognise and celebrate the best and latest in tunnelling achievements.

The A-TBM was named as finalist together with three other contenders (from Italy, Australia and Switzerland respectively) where each innovation underwent two stages of evaluation by a panel of 17 industry-expert judges, chaired by ITA President Jinxiu (Jenny) Yan herself.

The A-TBM stands out as a novel approach to tunnelling as the world's first automated system comprising of custom artificial intelligence control algorithms enabling autonomous control of TBMs. The state-of-the-art system analyses machine data in real time and assumes control of steering, advance, excavation and slurry sub-systems with minimal human input. These operations involve TBM parameters that used to be monitored manually under less than ideal conditions underground in operator's cabin, but has now been automated, and enabled for remote monitoring with the incorporation of Industry 4.0 technologies such as Big Data and Internet of Things. The system has demonstrated faster response times, improved accuracy and tangible productivity benefits including prolonged cutting tool life and shorter cycle times.

The A-TBM prototypes were in fact tested in the Klang Valley Mass Rapid Transit (KVMRT) Sungai-Buloh-Serdang-Putrajaya (SSP) Underground Package which passes through four distinct geological formations of Kuala Lumpur where MMC Gamuda is the main work package contractor. The autonomous system was integrated into eight TBMs, where all the mining drives have been successfully completed with minimal incidents. This echoes the success of the Variable Density TBM introduced by MMC Gamuda in the KVMRT Sungai-Buloh-Kajang Underground line- the world's first TBM capable of mining safely in complex geologies and also winner of Technical Innovation of the Year 2014 Award from ITA.

Present to receive the award from ITA was MMC Gamuda Deputy Project Director, Ng Hau Wei. He tells us "our tunnelling team has poured a lot of sweat and tears into the innovation and overcame insurmountable road blocks to get to where we are today. This award goes to all the Malaysians out there who trusted us to deliver the SSP project safely and excellently with the use of technology."

Also present to pitch the A-TBM live to an audience of over 300 tunnelling experts, Acting Tunnel General Manager, Justin Chin, shares his heartfelt joy for the opportunity of connecting and sharing their journey on a global stage. On the award win, he says, "We're ecstatic that we could bring home this award for MMC Gamuda and Malaysia just two years since we started the Autonomous TBM project. Clearly, the tunnelling industry is primed for another technological breakthrough and we're proud to be leading the way".

Pictures



Proud Autonomous TBM innovators: Engineers, John Lim Ji Xiong and Liew Kit Shen, Acting Tunnel General Manager, Justin Chin Jing Ho and Deputy Project Director, Ng Hau Wei pose with ITA Executive Council Member, Hangseok Choi (left to right) with their hard-won Technical Product Innovation of the Year trophy from ITA.



Breakthrough celebrations: The recent successful TBM breakthrough at MRT Ampang Park station attest to the prowess of the Autonomous TBM which was incorporated into the Variable Density TBMs to facilitate mining works.



About MMC Gamuda KVMRT (T) Sdn. Bhd. (MGKT)

MGKT is the appointed Underground Works Package contractor for the Klang Valley Mass Rapid Transit Sungai-Buloh-Serdang-Putrajaya Project. With a sterling track record in managing large-scale projects on time coupled with its ability in engineering innovation, MMC Gamuda is tasked with the design and construction of the tunnelling package covering 13.5km of MRT underground tunnel with eleven underground stations.

About ITA Awards

Held since 2015, the ITA awards event attracts up to 1,000 attendees with competition mounting each year within the highly niche yet fast expanding industry. ITA as host of the annual awards was founded in 1974 to form a global tunnelling community where tunnelling knowledge can be shared and the use of underground space can be promoted strategically. ITA currently has a global membership of 78 Member Nations and 266 Corporate or individual Affiliate Members.

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