



**Technical Visit to Tunnel Boring Machines (TBMs)  
Refurbishment Centre, Perak**  
by Dr Rini Asnida binti Abdullah

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The Tunnelling & Underground Space Technical Division (TUSTD) of IEM organised a technical visit to the TBMs Refurbishment Centre in Pusing, Perak on 2<sup>nd</sup> December 2016. The group comprised of 15 participants, departed from Bangunan Ingenieur at 7:45 am and arrived at the TBMs Refurbishment Centre at about 11.00 am. Mr Ng Kok Peng, Manager Plant (Tunnel) welcomed us and he briefed us on the background, overview and objectives of setting up the centre. This centre was set up by MMC Gamuda KVMRT (T) Sdn Bhd (MGKT) mainly to refurbish the TBMs that were used in the KVMRT SBK Line project and soon to be deployed to the SSP Line. The setting up of this centre was first of its kind in Malaysia.

Later, we were given a tour to the refurbishment centre and briefing of the ongoing refurbishment works as well as viewing of the upgrading works being carried out on the TBMs. It was a great experience for us to get close up with the TBMs and gain better insights of the functions and operation of this underground machine, normally working at considerable depth.

The main concern of the machine is that in the SSP Line, it will encounter granite material which was not previously encountered in the SBK Line. In addition, they would also have to increase the capacity of the machine to cater for higher pressure of up to 6 bars in the SBK Line. These refurbishment works were conducted by experienced local engineers and tunnelling crew with close supervision by an expert from Herrenknecht AG, Germany.

The visit ended at 12:30 pm. A presentation of a memento to Mr. Ng Kok Peng was conducted after lunch as a gesture of appreciation. After which, we made our trip back to Bangunan Ingenieur and arrived safely at 4 pm.



Full view of TBM components (from left; front to rear).



Briefing by the engineer on the TBM functions and components.



Group photograph with a TBM in the background.