

TECHNICAL VISIT TO KVMRT LINE 2 – V207 MINED TUNNEL SITE

WOMEN ENGINEERS SECTION

reported by



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View of the V207 tunnel site in Taman Universiti

The Tunnelling & Underground Space Technical Division of IEM organised a site visit to KVMRT Line 2 – V207 Mined Tunnel on 11 August, 2018. Apart from 26 IEM members, the visit also attracted 24 participants from PT. Geotechnical Engineering Consultant in Kota Bandung, Indonesia. The visit provided a platform for interaction and the exchange of ideas as well as fostered good relationship between the two groups.

Leaving Bangunan Ingenieur in Petaling Jaya at 9:00 a.m., the delegation reached the MRT Sri Kembangan Information Centre at 9:30 a.m. where Mr. Vincent Neng, V207 Project Manager, gave a briefing of the project. He said that due to the short tunnel length of just 182m, the V207 was a mined tunnel measuring 12.1m wide and 10.1m high and it cut across a hilly area.

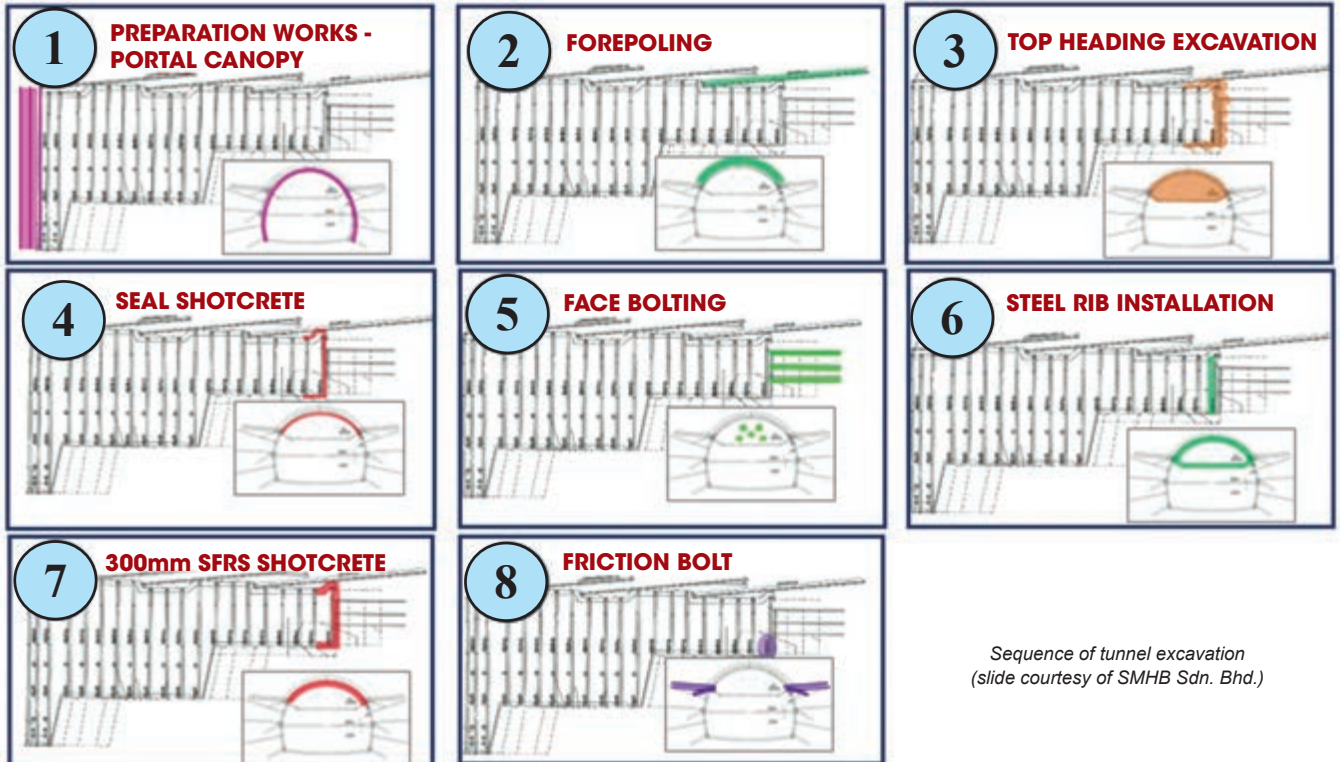
The tunnel system was proposed to accommodate a twin-track railway line crossing mountainous terrain comprising the Kenny Hill Formation of interbedded weak rocks and residual soils. Mr. Neng briefed the group on the

various construction stages using New Austrian Tunnelling Method (NATM).

The NATM integrates the principles in the behaviour of rock masses under loading condition and monitors the behaviour of underground work during construction. The NATM is not a set of specific excavation and support techniques; it is often referred to as a “design as you go” approach, which makes the mined tunnel interesting and challenging.



Project briefing by Mr. Vincent Neng



(a) (b)

Tunnel support system: (a) Steel ribs and (b) Forepoles

The sequence of tunnel excavation for V207 is shown in the diagram here. Forepole and friction bolts are selected to support the arch of the top heading around the tunnel crown as well as tunnel walls. This is coupled with steel ribs plus steel fibre reinforced (SFR) shotcrete as temporary supports for primary permanent cast in-situ concrete lining during the mined tunnelling works.

After the briefing, the participants proceeded to the V207 tunnel site in Taman Universiti where they had a close view of the actual tunnel portal construction. A representative of OTA Tunnel Squad Sdn. Bhd. gave a briefing on both the geological mapping work and excavation of the mined tunnel in greater detail. The visit ended at noon after a group photo session in front of the tunnel portal. ■



Group photo in front of the V207 tunnel worksite