Report on Talk on SMART Tunnel Project

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Chairman

The talk on the SMART Tunnel Project was delivered by Mr. Gusztáv Klados of MMC-Gamuda JV (Figure 1) in the evening of 14 August 2007 at the IEM Conference Hall, Bangunan Ingenieur, at 5.30 p.m. The talk was attended by a packed hall of more than 120 participants (Figure 2). The talk ended at 7.30 p.m. with many interesting questions from the floor. Engr. Dr Ooi Teik Aun, Chairman of the Tunnelling and Underground Space Technical Division (TUSTD) presented a certificate and token of appreciation to Klados for his excellent lecture (Figure 3).

Figure 1: Mr. Klados delivering his lecture

Figure 2: A packed hall of more than 120 participants

Figure 3: Chairman of the Tunnelling and Underground Space Technical Division presenting token of appreciation to Mr. Klados

The construction of the SMART Project has been well reported in the International Conference on Tunnelling and Trenchless Technology in 2006 held in Kuala Lumpur. The project required a 9km long excavated large diameter tunnel of 13.26m – at the time of construction, it was and still is the second largest in Asia – in the Kuala Lumpur Limestone Formation. The Limestone Formation is well known for its well developed solution features such as interconnected caves, cavities, sinkholes, dolinas and its erratic rockhead is known to drop by 20-30 meters within a few meters. The formation along the tunnel alignment is overlain by loose alluvium or by mine tailings. The low, 1-1.6D cover in a city environment added to the challenging nature of the tunnelling.

Several shafts to connect the roads with the ramps had to be excavated by drilling and blasting more than 0.5 million cubic meters of limestone, close to the centre of the city. The erratic rockhead made the task of both the consultants and contractors interesting and challenging in regards to providing support for the excavations.

Mr. Klados also described the selection and adaptation of the excavation methods and design changes to mitigate the risks and allow the successful completion of one of the most difficult tunnelling projects ever undertaken in Malaysia and perhaps in the world. ■

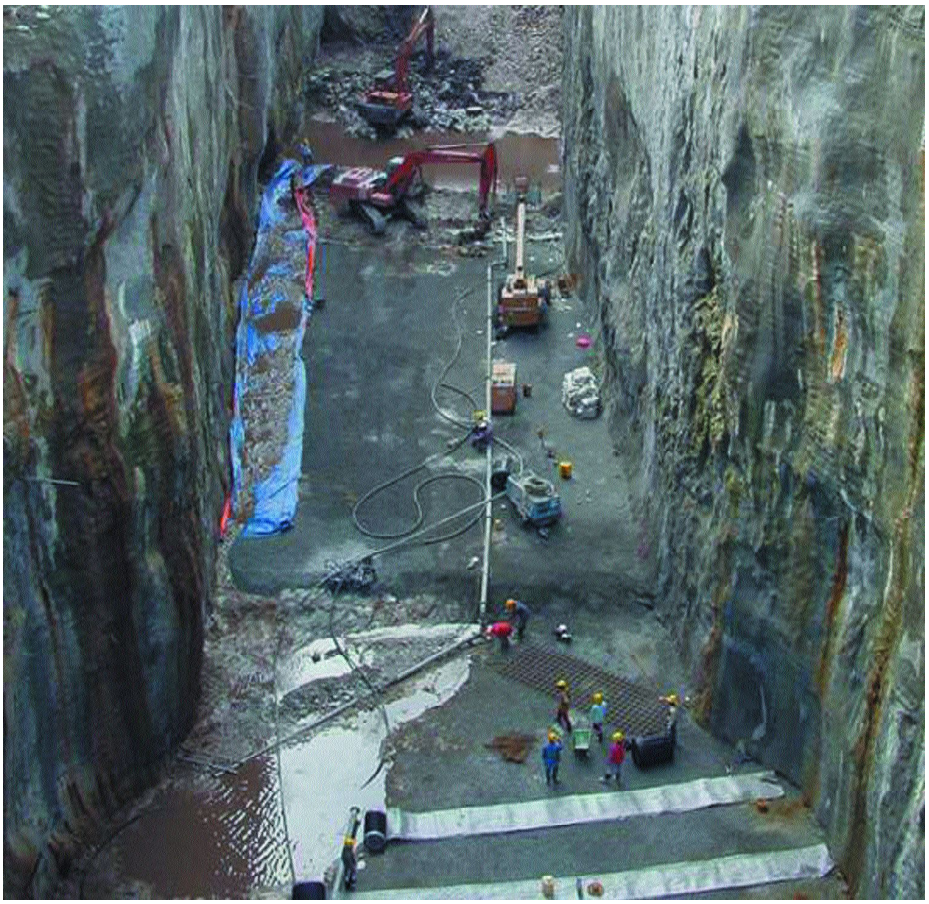

Figure 4: A view of the excavation in Limestone of the SMART Project