

## TUNNELLING & UNDERGROUND SPACE TECHNICAL DIVISION (TUSTD)

## VIRTUAL TALK VIA 'ZOOM PLATFORM' ON

"CHALLENGES AND PERFORMANCE OF A THIRTY-SEVEN-METRE-DEEP UNDERGROUND BASEMENT CONSTRUCTION IN KUALA LUMPUR DOWNTOWN"

Friday I 16 July 2021 I 3.00 p.m. – 5.00 p.m.

## **SYNOPSIS**



Probably one of the deepest underground basement ever constructed for a high-rise building in downtown Kuala Lumpur, a 37m-deep excavation was conducted for the upgrading of the MAS Building, on Jalan Sultan Ismail. The construction started with the demolition of the front podium of approximately 1,700m2 in area. The semi top-down construction method with kingposts was adopted akin to a strut-slab system, in place of the conventional steel strut and walers system.

This system has been proven effective in controlling the retaining wall deflections and adjacent ground deformations, while attaining a timely construction period.

The talk will outline the key construction challenges involving removal of the existing 450mm CBPs, and 1,000mm diameter building piles; installation of new CBPs ranging from 600mm to 1,350mm in diameter, of an average depth of 45m; 3,000mm diameter foundation bored piles of an average depth of 70m, and its load test performance; sequential ring slab construction and excavation in a semi top-down fashion; pre-loading against the CBP wall along St. Mary building. The problems which arose during the construction stage and the performance of the underground structure throughout construction will be discussed.

## **SPEAKER**

**Ir. Muhammad Hafiz Bin Jalaluddin** MIEM (2016), PE (Geotechnical) BEM (2016), started his career as a Design Engineer in 1996 in Pembinaan YCS Bhd after graduating with a Bachelor of Engineering in Civil Engineering from Universiti Pertanian Malaysia (1996) (now known as University Putra Malaysia), and was involved in the design and supervision of precast slabs and beams. He was involved in the construction of Carrefour, Wangsa Maju and Complex PKNS Bangi. He then joined Econpile (M) Sdn Bhd in 1998 and was with the company for the past 22 years.



He is currently the General Manager of Econpile (M) Sdn Bhd having undertaken and completed various piling and substructures works such as Ministry of Finance building Putrajaya, the CIQ complex Johor Bahru, One Menerung condominium Bangsar, Kenanga Wholesale City Kuala Lumpur, MRT package V1 and V6, Pantai Hospital Jalan Bukit Pantai K.L, MAS Building on Jalan Sultan Ismail, K.L. Apart from his extensive experience in geotechnical works, he has vast experience in the top-down construction method. His most recent experience, the MAS Building project for PNB Tower on Jalan Sultan Ismail, comprises 6 basements, and adopted the top-down construction method.

**Registration Fees (effective 1st August 2020)** 

IEM Members: RM 15.00 I IEM Non Members: RM 70.00 CPD Hours: 2.0 CPD Ref No: IEM21/HQ/225/T(w)

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