



CIE-HKIE-IEM Tripartite Seminar on The Management and Case Study on Adjacent Underground Construction

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Tripartite Seminar was originated from a bilateral institutional collaboration between The Institution of Engineers Malaysia (IEM) and Chinese Taipei APEC Engineer Monitoring Committee in Chinese Institute of Engineer (CIE). In 2009, The Hong Kong Institution of Engineers (HKIE) and the Hong Kong Geotechnical Society (HKGES) had sent a delegation to attend the CIE-IEM Joint Seminar in Yilan, Taiwan. Since then, the first CIE-IEM-HKIE Tripartite Seminar cum APEC Seminar was held in May 2011 in Hong Kong and the second seminar was hosted by IEM GETD on 23 October 2012 in Kuala Lumpur. This year, the tripartite seminar (Photos 1 to 6) was hosted by CIE in Taipei at Howard Civil Service International House on 15 November 2013 and followed with a technical visit (Photos 7 to 18) to "The Suhua Highway Mountain Section Improvement Project" on 16 November 2013.

HKIE has organised a delegation of 10 members whereas the delegates from IEM, Malaysia are listed in Table 1. Partial subsidy was given to the presenters for the airfares and travelling expenses with utilising the retained profit under GETD incentive account in organising the past tripartite seminar in Kuala Lumpur.

A total of ten papers (three papers from IEM and HKIE each and four from CIE) on the topics as listed in Table 2 were published and presented under the theme of the seminar. A copy of the proceedings was deposited in IEM library for members who are interested on the topics.

The aforementioned project for the technical visit consists of 8 tunnels totalling 23.4km, bridges of 8.5km (balanced cantilever segmented bridges and cable-stayed bridges) and cut-and-fill road works of 6.5km with a total project budget of NT\$49.2 billion (RM5.4 billion). Due to increasing pressure from environmental conservation and concern of environmental impact during construction, the project is executed with high level of environmental requirements (Photos 14 and 15), construction carbon footprint management, heritage preservation and safety requirements (Photos 16 to 18). To achieve the promise of transparency, the project team engaged with a real time monitoring system and full details of every aspect of the project with immediate update, which is accessible by general public via website (www.suhua.gov.tw). This benchmarking project would serve a good reference to Malaysian engineers, project clients and contractors for construction at sensitive areas.

CIE has extended their memorable hospitality to the delegates with free accommodation and registration fee to the delegation leader and presenters, two dinners (Photos 19 to 23) and seafood lunch (Photo 24) during the site visit. Special thanks shall be expressed to Ms. Chuo, secretariat of Chinese Taipei APEC Engineer Monitoring Committee, Chinese Institute of Engineers in arranging the accommodation, transport to IEM delegates and keeping a smooth running of the entire seminar.

The next tripartite seminar will be held at Hong Kong next year. Announcements will be made progressively advising the details of the seminar after the organising committee from HKIE is formed.

Table 1 : List of Malaysian delegation

Ir. Liew Shaw Shong (Delegation Leader – Chairman of GETD)
Ir. EG Balakrishnan (Presenter – GETD committee member)
Ir. Dr. Chan Swee Huat (Presenter)
Ir. Loh Yee Eng (Presenter)
Engr. Richard Ong Tiam Hwa (Delegate - GETD committee member)
Engr. Dr. Gue Chang Shin (Delegate - GETD committee member)
Mr. Tan Chee Yen (Delegate - Co-author)



Photo 1 : Opening speech by Dr. John Li Chien-Chung, Vice Chairman of Chinese Taipei APEC Engineer Monitoring Committee, Chinese Institute of Engineers



Photo 2 : Presentation by Ir. Loh Yee Eng



Photo 3 : Presentation by Ir. Dr. Chan Swee Huat



Photo 4 : Presentation by Ir. EG Balakrishnan



Photo 5 : Presentation of Memento by Ir. Liew Shaw Shong to Mr. Yu Ter-Chyuan, Executive Secretary of Chinese Taipei APEC Engineer Monitoring Committee, Chinese Institute of Engineers



Photo 6 : Group photo of delegates of CIE, HKIE and IEM



Photo 7 : Technical briefing during site visit to The Suhua Highway Mountain Section Improvement Project on 16 November 2013



Photo 8 : Group photo at the site visit to The Suhua Highway Mountain Section Improvement Project on 16 November 2013



Photo 9 : On-site briefing at Tunnel portal



Photo 10 : Briefing inside the tunnel



Photo 11 : Mobile steel frame formworks for tunnel lining construction



Photo 12 : Reinforcements and water proofing membrane for concrete lining construction



Photo 13 : Group photo outside the tunnel portal



Photo 14 : Temporary steel bridge crossing over stream with primary objective of implementing environmental protection measures



Photo 15 : Mobile water treatment to treat water discharge from tunnel before discharging to river (To confirm effectiveness of water quality management, Koi fishes were put in the holding pond connecting to upstream collected water before discharging to river)



Photo 16 : Traffic signalling with time control using Radio Frequency Identification (RFID) technology for positioning workmen and vehicles inside the tunnel



Photo 17 : LCD display at tunnel portal showing locations of workmen and construction vehicles inside the tunnel using RFID



Photo 18 : Overview of tunnel portal with traffic signalling control system and RFID positioning system of workmen and construction vehicles inside tunnel



Photo 19 : Group photo after the dinner hosted by Union of Professional Hydraulic Engineer Associations on 14 November 2013



Photo 20 : Presentation of plague and IEM Coffee Table Book by Ir. Liew Shaw Shong to Mr. Chen Ming-Hsin, Chairman of Union of Professional Hydraulic Engineer Associations



Photo 21 : Group photo of delegates presented at the dinner hosted by Professional Geotechnical Engineers Association of Taiwan on 15 November 2013



Photo 22 : Presentation of Memento by Ir. Liew Shaw Shong to Mr. Chou Kung-Tai, Chairman of Professional Geotechnical Engineers Association of Taiwan



Photo 23 : Presentation of Memento by Ir. Liew Shaw Shong to Ir. Terence Chan CF, Chairman of HKIE GETD



Photo 24 : Seafood lunch organised by the site construction team and CIE to HKIE and IEM delegates