

Riding The Waves of Change: From British Standard to Euro Codes

CIVIL AND STRUCTURAL TECHNICAL DIVISION



reported by
Ir. Lo Seng Ling

Ir. Lo Seng Ling is currently a member of the Civil and Structural Technical Division session 2014/2015.

IEM'S Civil and Structural Engineering Technical Division (CSETD) and Hiap Teck Venture Berhad (HTVB) jointly organised by a one-day seminar titled Riding The Waves of Change: From British Standard to Euro Codes, on 24 March 2015. The seminar, fully sponsored by HTVB, was held at the Setia Alam Convention Centre in Shah Alam and attended by 13 participants from various industries.

The speaker was Professor Dr Chiew Sing Ping, former Head of the Division of Structural Engineering and Mechanics in the School of Civil and Environment Engineering, Nanyang Technological University of Singapore. He was the Past President and Honour Fellow of Singapore Structural Steel Society. Currently he is a Member of the Panel of Expert Advisor of the Land Transport Authority of Singapore, a Member of the Building and Construction Authority Academy Advisory Panel, and a Board Member of the Professional Engineers Board of Singapore.

The seminar was divided into four sessions: Introduction, high strength materials, steel structures and composite steel-concrete structures.

In the first session, Dr Chiew pointed out that the Structural Euro Codes was fully implemented in Singapore on 1 April 2015. Euro Codes impacts the choice of materials used and it is very critical to evaluate whether certain materials can still be used, due to the more stringent requirements of the Euro Codes. The adoption of new seismic design requirements in the Euro Codes posed significant challenges to structural engineers who had long been exposed to the non-seismic British design codes.

In the second session, the discussion focused on the advantages of using high strength materials such as concrete, reinforced steel and structural steel as according to Euro Codes requirements. In addition, Dr Chiew discussed the materials and detailing requirements for seismic design in the Euro Codes.

In the third session, he gave some practical examples associated with the design of steel

structures that comply with the Euro Code 3 (EC3). Also discussed were design requirements such as imperfections and structural analysis, high strength steel in EC3, web bearing and web buckling.

In the fourth session, Dr Chiew explained the design of composite steel-concrete structures according to Euro Code 4 (EC4). He compared the design requirements between EC4 and BS5950 in terms of safety factors and material strength. He discussed the design of the headed stud shear connector according to EC 4 and BS5950, and pointed out that generally, the resistance of headed stud shear connectors determined by EC4 was lower than that determine by BS5950. Lastly, he presented the designs of the composite column, beam and slab to EC4 and BS5950.

A Q&A session followed, after which Ir. David Ng from CSETD presented a memento and certificate of appreciation to Dr Chiew. ■

IEM DIARY OF EVENTS

Title: Engineering Shopping Malls 2 (Sunway Resort Hotel and Spa, Petaling Jaya)

2 December 2015

Organised by : Mechanical Engineering
Technical Division

Time : 8.00 a.m. – 5.30 p.m.
CPD/PDP : 3.5

Title: Technical Visit to Khantan Plant, Ipoh (Batu 131/2, Jalan Kuala Kangsar, 31200 Chemor, Ipoh, Perak)

11 December 2015

Organised by : Civil and Structural Engineering
Technical Division

Time : 8.00 a.m. – 6.00 p.m.
CPD/PDP : 4

Kindly note that the scheduled events below are subject to change. Please visit the IEM website at www.myiem.org.my for more information on the upcoming events.