SECOND ANNOUNCEMENT

香港
鋼結構學會
Hong Kong Institute of Steel Construction

Department of Civil and Environmental Engineering
土木及環境工程學系

Half-day seminar on

DESIGN OF LONG SPAN COMPOSITE BEAMS TO EUROCODE 4

Organized by
The Hong Kong Institute of Steel Construction
Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University
Supported by
Joint Structural Division, The Hong Kong Institution of Engineers

Date:	18th August 2015
Venue:	Room Y302, Hong Kong Polytechnic University, Hunghom, Kowloon
Time:	1:45 pm (registration) for 2:00pm to 5:30 pm

Scope and Objectives

Long span composite beams are commonly used in modern building structures. However, the current requirements stipulated in Eurocode 4 for minimum degree of shear connection of composite beams especially with asymmetric steel sections are significantly more onerous than those for composite beams with symmetric sections. This is due to the lower position of the plastic neutral axis, which could in theory lead to larger slip in the shear connectors. Therefore, the design presents difficulties, particularly when composite slabs with profiled steel sheeting in the transverse direction are used, which is a common practice for secondary beams in building structures.

This course discusses the design of long span composite beams with profiled steel sheeting and issues currently faced by designers using Eurocode 4. Since the design of these beams is normally governed by serviceability criteria, it could be argued that the minimum degree of shear connection requirements could be less restrictive particularly if it can be proven that they still behave in a non-brittle manner. However, there is currently little experimental evidence to support this. A joint European project namely 'DISCCO' Development of Improved Shear Connection Rules in Composite Beams is funded by the European Commission to investigate the flexural behaviour of long span composite beams with large diameter cells and high asymmetry. All the test beams are designed and constructed to simulate an un-propped construction typically used for this form of composite construction. The degree of shear connection calculated for the test beam is around 38%, which is significantly lower than the minimum shear connection required using the equation given in Eurocode 4 and even less than the current absolute minimum limit of 40%. The test results shown that the beam performed satisfactory in flexural bending with this low degree of shear connection.

Speaker

Professor Dennis Lam is the Chair of Structural Engineering in the School of Engineering and Director of Bradford Centre for Sustainable Environments at the University of Bradford, UK. He is a Chartered Engineer, Fellow of the Institution of Structural Engineers and Member of the Institution of Civil Engineers. Before joining the academia, he had spent more than ten years in engineering practices. He is currently a Visiting Professor at Tsinghua University and Hong Kong Polytechnic University. He is the European Editor-in-Chief for Steel & Composite Structures and serves on the editorial boards for six other international journals in structural engineering. He chairs the Working Group of the European Standard Committee, CEN/T250/SC4 responsible for the revision of the Eurocode 4.

Official Language

English will be the official language.

Fees & Registration

The registration fee includes a copy of lecture note

Regular Registration: **HK$ 500** each for HKISC/ HKIE Members; **HK$ 600** each for non HKISC/ HKIE Members.

Group Registration: **HK$ 500** each for group registration of at least 5 people

CPD Certificates This seminar is recommended for **HALF** CPD day. An attendance certificate will be issued.

Please send the completed registration form with registration fee to **Ms. Carol Deng**, The Hong Kong Institute of Steel Construction, *Room ZS 972, Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon* **by 14th August 2015** (Fax No.: 852-2334 6389, E-mail: samchan@hkisc.org). You can download this form on HKISC web (http://www.hkisc.org). For technical information, please contact Professor S.L. Chan at 2766 6047

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REGISTRATION FORM

(To be replied on or before 10th August 2015)

Please follow the 2 steps registration procedure:

1. Fax the completed registration form to Ms. Carol Deng for preliminary registration .
2. Post the completed registration form together with a crossed cheque payable to **Hong Kong Institute of Steel Construction Limited** , Ms. Carol Deng, The Hong Kong Institute of Steel Construction, c/o Room ZS 972, Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong.

   on or before 10th August 2015.

To: Ms. Carols Deng, HKISC **Fax: 852- 2334 6389**

A. Personal Details:

Title	Name in full (Block Letter)	Name of Company	Tel. (or Fax)	E-mail address
1.				
2.				
3.				
4.				
5.				

Postal Address
(for official receipt): _____

B. Registration Details:

Item	Registration Fee	Total no. of registration	Sub-total
1. Regular registration (Member*price)	HK$ 500 each x	_____ person(s)	= HK$ _____
2. Regular registration (Non-member*price)	HK$ 600 each x	_____ person(s)	= HK$ _____
3. Group registration (at least **5** people)	HK$ 500 each x	_____ person(s)	= HK$ _____
		Total amount:	**HK$**

***Note**: The registration fee includes a copy of proceedings, a copy of CPD certificate and tea refreshment*
**HKIE or HKISC member*

I enclosed a crossed cheque (cheque no._____) with the sum of HK$ _____for the registration fee of the captioned Seminar.

Signature: _____ Date: _____

CPD Certificates of Attendance *Please tick the appropriate box to indicate your choice:*

☐ Yes, I/ we would like to have CPD certificate(s). ☐ Not request for certificate(s).