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## Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch)

Newsletter – Special Issue (January 2026)

### CIC Construction Innovation Award 2025

Grand Prize

*for Hong Kong Construction Projects*

On 21 January 2026, **Prof. K. F. Chung** attended the **CIC Construction Innovation Award 2025 Presentation Ceremony**, and received *the Grand Prize of the CIC Construction Innovation Award 2025* together with **Ir Michael Fong H.S., Director of Civil Engineering and Development** on behalf of a CEDD project. The Grand Prize was presented by **Ir Ricky C.K. Lau, Permanent Secretary (Works), Development Bureau**.



Ir William Luk, Ir Francis Leong, Ir Prof. K.F. Chung, Ir Ricky Lau, Ir Michael Fong, Ir Joyce Lau and Ir Gavin Wong

Among a total of about 150 project entries, the CEDD project of applying S960 high strength steel in two large-scale pedestrian footbridge systems, namely, Footbridges F4 and F6, in the North Metropolis Area of the New Territories was selected to receive **the Local Grand Prize of the Award**. The title of the winning project was “*Groundbreaking Application of Ultra-high Strength S960 Steel in Civil Infrastructure: Paving the Way for Hong Kong's Green Construction*”. The project client was Civil Engineering and Development Department while the project team was led by AECOM Asia Co. Ltd. and Joint Venture of Daewoo E&C, Chun Wo C&E, Kwan Lee Holding (DCK JV).

Under a MOU signed between CNERC and CEDD in June 2023, Prof. K.F. Chung was engaged by the Joint Venture in the past three years to provide technical support to the innovative use of ultra-high strength S960 steel in construction as stiffened box sections for Footbridges F4 and F6 as replacements to in-site reinforced concrete box girders. Significant savings in materials, and construction costs and time were achieved.

With established expertise in effective use of high strength steel in construction, Prof. K.F. Chung and Dr. H.C. Ho of CNERC carried out a critical review on various clauses in Parts 1, 5, 8 and 12 of Structural Eurocode EN 1993-1: *Design of steel structures* which covered structural steel up to Grade S700. Relevant design rules for welded box sections subject to *local plate buckling* and *overall member buckling*, and provisions on longitudinal and transverse stiffeners were critically reviewed and examined. A comprehensive review on experimental and numerical investigations on S960 steel members in the literature was also carried out. Consequently, an expert technical guide was then developed to facilitate application and extension of relevant existing design rules from various parts of EN 1993-1 to allow a safe and efficient design of both Footbridges F4 and F6 using the S960 steel. It should be noted that a total of 23 stiffened box sections of the S960 steel with different sizes and lengths were fabricated as stocky columns and simply supported beams in accordance with the technical guide. They were successfully tested to obtain scientific data on their structural behaviour under typical loading and support conditions. It was demonstrated that the design rules provided in the technical guide were highly efficient for the S960 stiffened box sections of the proposed footbridges.

*Commendation of Judging Panel to the winning project:*

*The world's first application of S960 steel to two pedestrian bridges in the Northern Metropolitan area to reduce their structural self-weights, and also the number of piles, thereby reducing carbon emissions.*

The Presentation Ceremony was held at the Zero Carbon Park of the Construction Industry Council, and it was attended by about 150 engineers and construction professionals. It should be noted that the event was officiated by **Ir Prof. Thomas O.S. Ho, CIC Chairman** who gave a Welcoming Address to all the attendees, and then, by **Ir Ricky C.K. Lau, Permanent Secretary (Works)** who delivered an Opening Address.



Ir Lau emphasized on effective use of S690 and S960 high strength steel in construction.

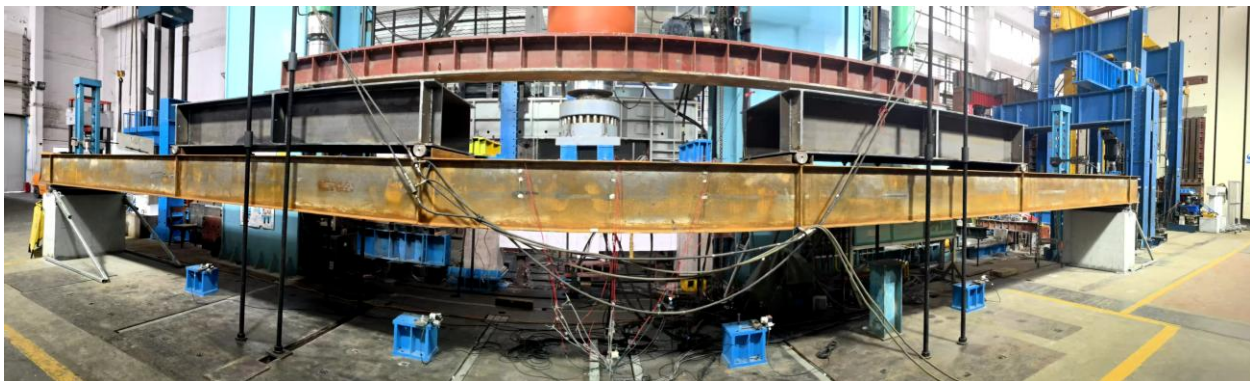
During his Opening Speech, Ir Lau emphasized on construction innovation through the use of new materials, efficient methods and effective advanced technology. He also highlighted recent success of effective use of S690 and S960 high strength steel in bridge construction in civil engineering projects in Hong Kong.



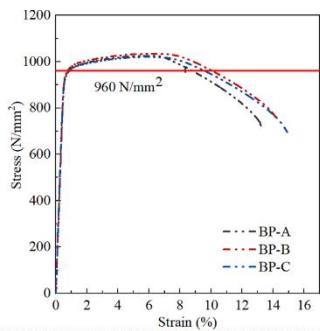
Footbridge F4 across Ng Tung River



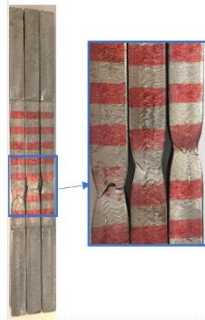
Footbridge F6 at Lung Yeuk Tau Interchange



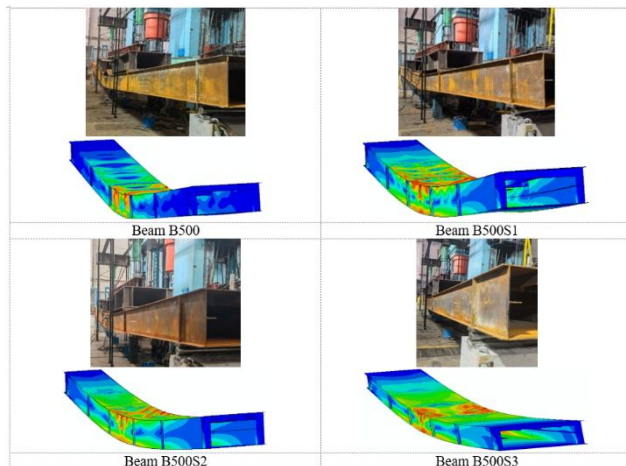
Experimental investigation into structural behaviour of S960 stiffened box sections under lateral loads  
 Cross-section dimensions:  $D = 500 \text{ mm}$ ,  $B = 1,270 \text{ mm}$ ,  $t = 10 \text{ mm}$ . Beam span,  $L = 16 \text{ m}$ .



(a) Stress-strain curves of coupons of S960 steel plates



(b) Fracture of tensile test coupons



Engineering stress-strain curves of S960 steel obtained from standard tensile tests

Numerical investigation into structural behaviour of S960 steel stiffened box sections

The **Construction Innovation Award** was organized by the Construction Industry Council ([www.cic.hk](http://www.cic.hk)) every two to three years since 2015. The Award aimed to spearhead development, promotion and implementation of new construction materials, methods, technology for enhancing competitiveness of the construction industry in Hong Kong. It was widely regarded as one of the most prestige construction awards in Hong Kong and in Asia.



### Members of Judging Panel of the Construction Innovation Award 2025

- **Ir Prof. Albert CHAN Ping-chuen**  
*Distinguished Research Professor,  
The Hong Kong Polytechnic University*
- **Ar Donald CHOI Wun-hing**  
*Member, CIC InnoAward 2025 Organising Committee*
- **Ir Albert CHENG Ting-ning**  
*Executive Director, CIC*
- **Prof. FANG Dong-ping**  
*Professor and Dean, Department of Construction Management,  
Tsinghua University*
- **Prof. ZHANG Li-min**  
*Chair Professor & Head, Department of Civil and Environmental Engineering,  
The Hong Kong University of Science and Technology*
- **Ir HON Chi-keung**  
*Chairman, Management Board, Building Technology Research Institute*
- **Ir Ricky LEUNG Wing-kee**  
*Executive Director (Engineering & Technology), Airport Authority Hong Kong*
- **Prof. Washington OCHIENG**  
*Head, Department of Civil and Environmental Engineering,  
Imperial College London, U.K.*
- **Prof. David GANN**  
*Emeritus Professor of Innovation and Technology Management,  
Department of Management and Entrepreneurship, Imperial College London, U.K.*



A presentation on the winning project by Ir Bear Ding.



A group photo of the project team with Ir Ricky Lau and Ir Prof. Thomas Ho after the Ceremony.