

**ICE HKA G&S Seminar on “Application of ultra-high strength S960 steel - from concept to reality”
2025.01.09**

Institution of Civil Engineers (ICE) Hong Kong and the Young Member Section for the Hong Kong Institution of Engineers jointly organized a technical seminar entitled “Application of ultra-high strength S960 steel - from concept to reality” on 9 January 2025 at The Hong Kong Polytechnic University. The event was supported by Civil Engineering and Development Department of the Government of HKSAR, and the Hong Kong Institution of Highways and Transportation.

Highlights:

The technical seminar focuses on the groundbreaking application of ultra-high strength S960 steel in engineering and construction, specifically within the context of the Contract No. ND/2019/04 project in the Fanling North New Development Area. This initiative, which includes collaboration between the Civil Engineering and Development Department, The Hong Kong Polytechnic University, AECOM Asia Company Limited, and the Daewoo-Chun Wo-Kwan Lee Joint Venture, represents a significant advancement in civil bridge construction, marking the world's first implementation of S960 steel. The seminar aims to explore the practical applications of S960 steel throughout various stages of the project, including research development, design, fabrication, construction, and quality assurance. Attendees gained insights into the benefits of using S960 steel, such as reduced weight and fewer piles, which contribute to lower carbon emissions and improved sustainability. Additionally, the use of S960 steel allows for off-site prefabrication, enhancing project efficiency and overall productivity.

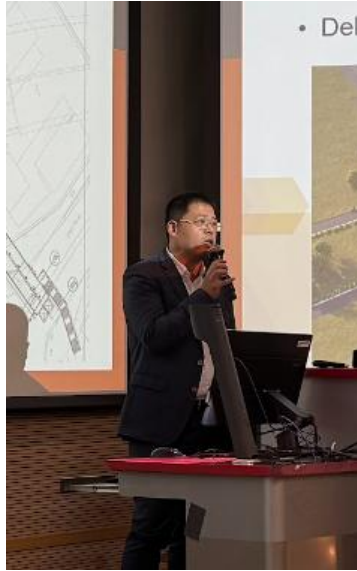
With 250 registrations, this event attracted a diverse audience of professionals eager to discuss the challenges faced during the project and the innovative solutions developed in response. Participants will engage in discussions to deepen their understanding of best practices for utilizing ultra-high strength S960 steel in future construction projects, ultimately contributing to advancements in engineering and sustainable construction methods. This seminar promises to be an invaluable opportunity for networking and knowledge exchange among industry experts and stakeholders.

Programme:

6:30pm	Opening session By the Institution of Civil Engineers (Hong Kong)
6:45pm Presentation 1	Effective use of High strength S690 and S960 steels in construction by Ir Prof. K. F. Chung, the Hong Kong Polytechnic University
7:15pm Presentation 2	University – Government – Industry (UGI) Collaboration for S960 Steel Application by Ir Tom W. L. Leung, NDO, CEDD, the Government of Hong Kong SAR
7:35pm Presentation 3	Technical Guidance for adoption of ultra-high strength S960 steel in pilot steel footbridge projects by Ir Dr. H. C. Ho, the Hong Kong Polytechnic University
8:00pm Presentation 4	Design of two footbridges in the form of plated box girders by Ir Y. W. Leung, YWL Engineering PTe Limited.
8:20pm Presentation 5	Construction of ultra-high strength S960 steel footbridges by Ir Bear Ding, DCK JV
8:40pm Presentation 6	Construction of ultra-high strength S960 steel footbridges by Ir Raymond Hon, AECOM
9:00pm	Q&A Section
9:30pm	End of the event



Speakers (from left): Prof. K. F. Chung, Ir Tom Leung and Dr. H. C. Ho



Speakers (from left): Ir Y. W. Leung, Ir Bear Ding, and Ir Raymond Hon



Q & A Section



Presentation of souvenirs



Attendants of the seminar

Moreover, this event was featured in “Hong Kong Engineer” of The Hong Kong Institution of Engineers as extracted below.

Young Members Committee

Technical seminar on application of ultra-high strength S960 steel - from concept to reality

By Mr Tom LUI

The captioned technical seminar was held on 9 January 2025. Experts from academia, government, and industry explored the advances in S960 steel applications.

Distinguished speakers of the seminar included Ir Prof K F Chung and Dr H C Ho from Chinese National Engineering Research Centres - Hong Kong Branch (CNERC - HK); Mr Tom Leung from the Civil Engineering and Development Department; Mr Y W Leung from YWL Engineering Pte Ltd.; Mr Bear Ding

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from Chun Wo Construction & Engineering Co Ltd. and Mr Raymond Hon from AECOM Asia Co Ltd. The event attracted nearly 200 attendees, demonstrating strong industry interest in the material.

A key focus was the successful application of S960 steel in the Fanling North New Development Area, Phase 1 - Fanling Bypass Eastern Section. This case study highlighted the superior mechanical properties of the steel and its efficiency, and sustainability. The steel will serve as a benchmark for future infrastructure projects by reducing material consumption while ensuring durability.

Ir Prof Chung and Dr Ho discussed the high-performance characteristics of S960 steel and emphasised its load-bearing capacity and environmental resistance. Mr Tom Leung addressed the steel's role in public works, stressing innovation and sustainability in Hong Kong's infrastructure.

Mr Y W Leung covered the design considerations of the steel, including dynamic and static loads and safety implications. Mr Bear Ding highlighted the logistical challenges such as

transportation, storage, and welder expertise in ensuring quality. Mr Raymond Hon examined pre-heating and welding techniques critical for the steel's structural performance.

The audience's active engagement reflected a strong interest in S960 steel's broader implementation. The seminar concluded with a call for continued collaboration among engineers, researchers, and policymakers to promote widespread adoption and enhance sustainability and innovation in construction.



The speakers, the YMC Committee, and other organizing parties