THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

國家鋼結構工程技術研究中心香港分中心
Chinese National Engineering Research Centre
For Steel Construction (Hong Kong Branch)

CNERC

NEWSLETTER
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FEATURE STORY

The second expert meeting on CSCS Group Standard "Design of steel structures using 690-960MPa high strength steel" in Beijing

During 21 - 22 May 2025, the second expert meeting along with a special report meeting on CSCS Group Standard "Design of steel structures using 690 – 960MPa high strength steel" has been successfully held at Tsinghua University, Beijing. The special report meeting aims to introduce the research background and draft basis of group standard clauses, so as to lay a foundation for the smooth convening of the second expert meeting on 22 May 2025. The drafting work of the group standard is jointly undertaken by CNERC and Tsinghua University. As core members of CSCS group standard drafting team, Prof. K. F. Chung, Director of CNERC, Dr. H. C. Ho, Deputy Executive Secretary of CNERC, and Dr. Y. F. Hu, Research Assistant Professor, leading a delegation of seven research personnel attended the meeting. The meeting was co-chaired by Prof. Chung and Prof. Y. J. Shi from Tsinghua University.

The special report meeting was co-chaired by Prof. Chung and Prof. Shi

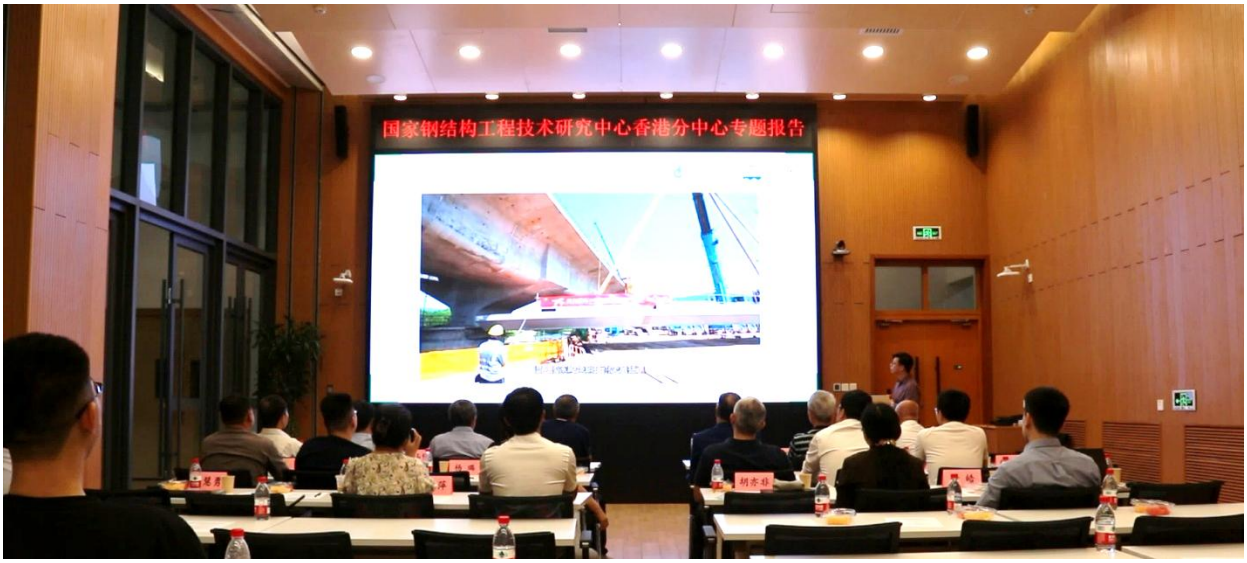
Lists of drafters：

No	Name	Title	Organization	Note
1	**K. F. CHUNG**	Professor	The Hong Kong Polytechnic University	Principal drafter
2	**Yongjiu SHI**	Professor	Tsinghua University	Principal drafter
3	**H. C. HO**	Principal Research Fellow	The Hong Kong Polytechnic University	Principal drafter
4	**Huiyong BAN**	Associate Professor	Tsinghua University	Principal drafter
5	**Y. F. HU**	Research Assistant Professor	The Hong Kong Polytechnic University	Principal drafter
6	**X. L. YU**	Senior Research Fellow	The Hong Kong Polytechnic University	Drafter
7	**M. F. ZHU**	Postdoctoral Fellow	The Hong Kong Polytechnic University	Drafter
8	**H. JIN**	Postdoctoral Fellow	The Hong Kong Polytechnic University	Drafter
9	**X. F. YANG**	Postdoctoral Fellow	The Hong Kong Polytechnic University	Drafter

Lists of experts：

No	Name	Title	Organization	Note
1	**Ailin ZHANG**	Professor	Beijing University of Technology	Expert
2	**Mingxuan HE**	Professor level senior engineer	China Baowu Steel Group Corp.	Expert
3	**Lijun WANG**	Design Master, Professor	Huachengboyuan Engineering Technology Group	Expert
4	**Zhan WANG**	Professor	South China University of Technology	Expert
5	**Tie XI**	Professor level senior engineer	Hebei Jinxi Iron and Steel Group Co., Ltd.	Expert
6	**Baowei DANG**	Executive vice president	China Construction Industry Association (Steel and Wooden Structures Branch)	Expert
7	**Yuyin WANG**	Professor	Harbin Institute of Technology	Expert
8	**Junjie LUO**	Professor	Guangzhou University	Expert
9	**Lu YANG**	Professor	Beijing University of Technology	Expert
10	**Fei XU**	Professor	Chongqing University	Expert
11	**Yanbo WANG**	Professor	Tongji University	Expert
12	**Ke KE**	Professor	Chongqing University	Expert

13	**Xuanding WANG**	Associate Professor	Chongqing University	Expert
14	**Cheng CHEN**	Associate Professor	Southwest Petroleum University	Expert
15	**Fangxin HU**	Associate Professor	South China University of Technology	Expert
16	**Mingxiang XIONG**	Associate Professor	Guangzhou University	Expert
17	**Andi SU**	Professor	Harbin Institute of Technology	Expert
18	**Zhipan ZENG**	Chief Engineer	Fujian Provincial Institute of Architectural Design and Research Co., Ltd.	Expert
19	**Juan WANG**	Professor	CapitaLand Co., Ltd.	Expert
20	**Lifen MA**	Chief Engineer	Zhenhua Port Machinery Company	Steel manufacturer
21	**Gaoyang YANG**	Chief Engineer	China State Construction Engineering Corp.	Steel manufacturer
22	**H. Y. LEE**	Chief Engineer	Hong Kong Constructional Metal Structures Association	Building contractor
23	**William LUK**	Director	Chun Wo	Building contractor
24	**C. F. CHAN**	General Manager	Gammon	Building contractor
25	**Dezhong ZHENG**	Mr.	China Construction Industry Association (Steel and Wooden Structures Branch)	
26	**Yanping SUN**	Ms.	Zhenhua Port Machinery Company	
27	**Qiang GUO**	Mr.	Zhenhua Port Machinery Company	



Experts meeting in progress

The special report meeting of CNERC (CNERC) was held on 21 May 2025, and presentations were given on the following topics:

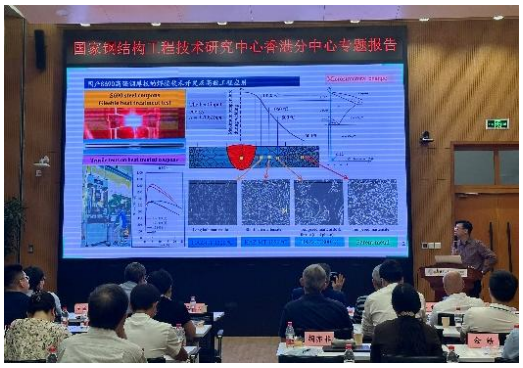
- Experimental and numerical investigations into welded H-sections and tubular sections
  Dr. Y. F. HU
- Column design of steel and composite columns under axial compression
  Dr. X. L. YU
- Effects of welding on structural performance of high strength steel thick welded sections
  Dr. H. JIN
- Numerical simulation on the structural behaviour of high strength S690 and S960 welded stocky columns
  Dr. M. F. ZHU
- Construction of footbridges of stiffened box girders with a total of 630 tons of S960 steel
  Dr. H. C. HO
- Structural behaviour of S960 welded sections: Experimental and numerical investigations
  Prof. K. F. CHUNG

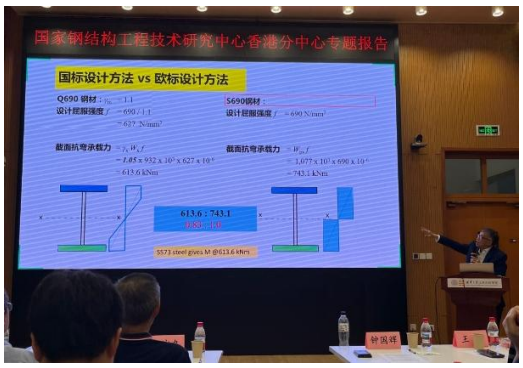
Dr. Y. F. HU

Dr. X. L. YU

Dr. H. JIN

Dr. M. F. ZHU





Dr. H. C. HO　　Prof. K. F. CHUNG

The special report is based on a number of experimental and numerical investigations on mechanical properties and structural behaviour of S690 and S960 welded sections completed by CNERC in recent years. Moreover, CNERC was appointed by the Civil Engineering and Development Department of the Government of Hong Kong SAR to provide technical advice on both welding technology and structural design of a public work project in Fanling North. A total of 630 tons S960 steel was adopted to build two large scale pedestrian foot bridge system.

Both the research work and the application of these S960 steel in construction projects were considered to be essential for technical promotion of the high strength steel construction technology. Many experts congratulated Prof. CHUNG and his team, and all of them commended highly the work of CNERC.

On 22 May 2025, the second expert meeting on the group standard “Design of steel structures using 690 ~ 960MPa high strength steel” was held in the New Civil Engineering Building at Tsinghua University. Prof. Yongjiu SHI from Tsinghua University, representing the standard drafting team and the conference organizer, delivered a welcoming address and hoped that the attending experts can provide valuable comments or suggestions on the first draft of group standard.

Photo of all attending experts

A welcoming address was delivered by Prof. Yongjiu SHI from Tsinghua University

Prof. K. F. CHUNG introduced the drafting progress of group standard to experts

Dr. Y. F. HU introduced the first draft of group standard to experts

Firstly, Prof. K. F. CHUNG and Dr. Y. F. HU provided a detailed introduction to the drafting progress, main contents and innovations of the group standard. Subsequently, the attending experts made intensive discussions encompassing the following issues of 690 ~ 960MPa high strength steel:

- Design parameters of the mechanical properties of high strength steel and relevant quality control requirements.
- Seismic performance-based design of high strength steel and technical requirements for seismic energy dissipation zones.
- The bending resistance design of cross section with plasticity development and section classification for: (1) compression member; (2) flexural member; (3) beam-column.
- Design buckling curve for high strength steel slender column, according to experimental data.
- Design method for welding joints of circular and square steel tubes, according to Eurocode 3.
- Design methods for the section resistances of CFSST and CFCST stocky columns and for the buckling resistance of CFSST and CFCST slender columns according to Eurocode 4; design method for composite beam according to the current GB standard.
- Special welding process and quality control requirements for high strength steel according to Eurocode and GB standard.
- Standardized expression of related provisions of welding process for high strength steel.

Prof. Yongjiu SHI

Prof. Ailin ZHANG

Prof. Lijun WANG

Prof. Zhan WANG

Prof. Tie XI

Prof. Yuyin WANG

Dr. Junjie LUO

Prof. Lu YANG

Prof. Yanbo WANG

Associate Prof. Xuanding WANG

Associate Prof. Cheng CHEN

Chief Engineer Lifen MA

After heated discussions, experts have reached a consensus on the following key issues:

- Agree that the partial material factor of 690 ~ 960 MPa high strength steel can be taken as 1.0 or 1.1 based on different quality controls to determine the design value of yield strength;
- Agree to adopt the plate width to thickness ratio and section classification method to select the relevant design values of section modulus, according to Eurocode 3;
- Agree to adopt the full plastic section modulus for design and the calculation method for bending resistance with plasticity development, according to Eurocode 3;
- Agree that 690 ~ 960 MPa high strength steel can be used for structural components such as buildings and bridges in China. Effective isolation and damping measures can be taken under major or rare earthquakes, and effective seismic performance-based design can also be adopted;
- Agree that when the seismic performance-based design method is adopted, the material properties of 690 ~ 960 MPa high strength steel without yielding under major or rare earthquakes shall meet: the yield ratio shall not exceed 0.95, and the elongation after fracture shall not be less than 12%. In general, plastic development is allowed to occur at the base of steel columns;

- Agree to adopt class a* buckling curve for welded H- and welded box- sections, according to experimental data;
- Agree to adopt Eurocode 4 design formulas to calculate the compressive resistances of axially and eccentrically loaded CFSST and CFCST stocky/slender columns with S690 steel and C60/75 concrete;
- Agree to adopt the welding process evaluation method and welding quality inspection method for 690 ~ 960 MPa high strength steel, according to Eurocode and GB standard.

Before the end of discussion, Design Master Lijun WANG emphasized: there is a relevant blank worldwide in design standards for the application of 690 ~ 960 MPa high strength steel. Therefore, the current group standard under drafting is critically important for global construction projects, and serves as a crucial basis for promoting the application of high strength steel structures both domestically and internationally. When our group standard adopts the Eurocode's design philosophy and expression method, it facilitates foreign engineers to learn from and reference China's design technology of high strength steel structures, and they also obtain a scientific and complete efficient design system. I think this is a good precedent.

Finally, Prof. K. F. CHUNG highly valued and appreciated the opinions and comments proposed by experts, and agreed to adopt them. A statement was made on the preliminary work and engineering applications of 690 ~ 960 MPa high strength steel closely related to the group standard drafting content. He sincerely hopes to work together with all experts to complete the group standard, and promote its extensive applications in practical engineering.

After the meeting, the experts visited the Major Engineering Structure Laboratory of Tsinghua University under the guidance of former Director Zonggang WANG. He gave a detailed explanation of the construction background and tortuous history of campus old and new laboratories, as well as the overview and function of experimental equipment and loading devices, and current experimental projects.

A group photo in Engineering Structure Laboratory of Tsinghua University

Expert Committee of CSCS Technical Group Standard “Design of steel structures using 690～960MPa high strength steel”

A group photo in front of the Cross Bay Link, Tseung Kwan O
group photo of the First Meeting of the Expert Committee

Special Symposium of CNERC, CNERC

Location: Room B200, New Civil Engineering Building, Tsinghua University

2025.05.21 Wednesday	**Research progress on 690-960 MPa ultra-high strength structural steel**
14:30 pm	Welcoming address by Professor K.F. CHUNG, Director of CNERC (CNERC)
14:40 pm Report 1	**Experimental and numerical investigations into welded H-sections and tubular sections** Presenter: Dr. Yifei Hu
15:00 pm Report 2	**Column design of steel and composite columns under axial compression** Presenter: Dr. Xianglin Yu
15:20 pm Report 3	**Effects of Welding on Structural Performance of High Strength Steel Thick Welded Sections** Presenter: Dr. Hao Jin
15:40 pm Report 4	**Numerical simulation on the structural behaviour of high strength S690 and S960 welded stocky columns** Presenter: Dr. Mengfei Zhu
16:00 pm	Coffee break
16:20 pm Report 5	**Construction of footbridges of stiffened box girders with a total of 630 tons of S960 steel** Presenter: Prof. K.F. CHUNG, Dr. H.C. Ho
16:40 pm Report 6	**Structural behaviour of S960 welded sections: Experimental and numerical investigations** Presenter: Dr. H.C. Ho, Prof. K.F. CHUNG
17:00 pm	**End**
18:00 pm	**Dinner** **Location: Jiasuo Restaurant, Tsinghua University**

Expert meeting on《Design of steel structures using 690 ~ 960 MPa high strength steels》

Location: Room B200, New Civil Engineering Building, Tsinghua University

2025.05.22 Thursday	**Expert Meeting on Group Standard of China Steel Construction Society**
9:00 am	**Second Expert Committee Meeting** Chairman: Prof. K.F. CHUNG & Prof. Y.J. Shi Welcoming address: Prof. Y.J. Shi **Major developments since First Meeting** Presenter: Prof. K.F. CHUNG & Dr. Y.F. Hu **Key contributions of the Standard** Presenter: Prof. K.F. CHUNG & Dr. Y.F. Hu
9:50 am	**Discussions by experts – I**
10:20 am	Coffee break
10:35 am	**Discussions by experts – II**
9:00 ~ 11:35 am	Summary of meeting minutes By Dr. X. L. YU and Dr. M. F. ZHU End of meeting
12:00 am	**Lunch** Location: Guanchou Yuan Dinning Hall, Tsinghua University
14:00 pm	**Technical visit** Location: Laboratory of Engineering Structure, Tsinghua University

NEWS

The Fourth Greater Bay Area Smart Steel Construction and Building Technology Exchange Conference

Dr. H. C. Ho, Deputy Executive Secretary of CNERC, was invited by the Guangdong Steel Structure Association as a keynote speaker of the Fourth Greater Bay Area Steel Structure Intelligent Construction and Building Industrialization Technology Exchange Conference on 8 May 2025.

NEWS

Mainland and Hong Kong Smart Construction Development Forum

Dr. H. C. Ho, Deputy Executive Secretary of CNERC attended the Mainland and Hong Kong Smart Construction Development Forum jointly organized by the Intelligent Construction Committee of the China Construction Industry Association and the Hong Kong Construction Industry Council on 9 May 2025.

NEWS

Visit to Central Iron and Steel Research Institute

On 20 May 2025, Prof. K. F. Chung, Director of CNERC, led a research delegation to Beijing for a collaborative exchange with the Central Iron and Steel Research Institute (CISRI). The delegation held in-depth discussions with Prof. G. H. Feng and his research team from the Institute of Metallurgical Technology, focusing on advanced metallurgical technologies for high strength steel.

Visiting Delegation:

- Prof. K. F. Chung, Director of CNERC
- Dr. H. C. Ho, Deputy Executive Secretary of CNERC
- Dr. M. F. Zhu, Postdoctoral Fellow of CNERC
- Dr. H. Jin, Postdoctoral Fellow of CNERC
- Dr. X. F. Yang, Postdoctoral Fellow of CNERC

Hosting Team:

- Prof. G. H. Feng and his research team, including: Prof. Y. B. Hu, Dr. X. Z. Zhou and Dr. X. B. Zhang, Institute of Metallurgical Technology, CISRI
- Prof. H. P. Liu, Material Digital R&D Center, CISRI
- Prof. Y. C. Qi and Dr. Y. Zuo, Welding Technology Research and Development Centre, CISRI

The visit aimed to deepen bilateral collaboration in the field of high strength steel, with discussions centring on the material performance requirements and long-term service conditions for structural steel in the construction industry. The exchange laid a solid foundation for future research cooperation between the two teams.

Academic exchange between CNERC and CISRI on metallurgical and welding technologies of high strength steel
From left: Dr. X. F. Yang, Dr. M. F. Zhu, Dr. H. Jin, Dr. H. C. Ho, Prof. K. F. Chung, Prof. G. H. Feng, Prof. Y. B. Hu, Dr. Y. Zuo, Dr. X. Z. Zhou, and Dr. X. B. Zhang.

Meeting Agenda:

- 9:00 am Opening remarks by leaders, outlining meeting objectives and collaboration goals

- 9:10 am
  Report 1: Research on corrosion-fatigue behaviour of S690 high strength steel
  Presenter: Dr. X. F. Yang

- 9:30 am
  Report 2: Effects of welding on structural performance of high strength steel thick welded sections
  Presenter: Dr. H. Jin

- 9:50 am
  Report 3: Numerical simulation on high strength S690 and S960 stocky columns consider phase transformation
  Presenter: Dr. M. F. Zhu

- 10:30 am
  Report 4: Welding and process technology research for high-strength low-alloy structural steel
  Presenter: Dr. Y. Zuo

- 10:50 am
  Report 5: Development and achievements of Material Digital Simulation Platform of CISRI
  Presenter: Prof. H. P. Liu

- 2:00 pm
  Report 6: Machine learning-based composition design for high-yield-strength TWIP steel
  Presenter: Dr. X. Z. Zhou

- 2:30 pm
  Report 7: Impact toughness enhancement in carbide-free bainitic steel
  Mechanisms of strain hardening effect on low-temperature toughness in high strength steel
  Corrosion behaviour of high strength steel in complex environments
  Presenter: Prof. G. H. Feng

Dr. Jin presents research on numerical simulation technology for high-strength steel welding, exchanging insights with experts.

Both teams engaged in active discussions, detailing their research focuses and technical strengths while conducting in-depth technical exchanges on key metallurgical and welding challenges.

The afternoon session focused on four collaborative projects:

1. Corrosion behaviour of high strength steel in complex environments
2. Coupled corrosion-stress mechanisms in high strength steel
3. Numerical simulation of HAZ microstructure in high strength steel
4. Microstructure property control technology for high strength steel

During the meeting, the CNERC delegation shared recent progress in the research on corrosion-fatigue behaviour, welding technologies, and numerical simulations of high strength steel. In turn, the team from CISRI's Institute of Metallurgical Technology presented their work on welding techniques for high-strength low-alloy structural steel, machine learning-based steel design, and carbide-free bainitic steel. Both sides conducted a thorough exchange on the practical applications and engineering demands of high strength steel in the construction industry, reaching a preliminary consensus on potential directions for future cooperation.

Prof. K. F. Chung and Prof. G. H. Feng, at the entrance hall of the Institute of Metallurgical Technology, CISRI.

Founded in 1952, CISRI is China's largest and most authoritative comprehensive R&D institution in metallurgy. Transformed in 1999 into a centrally administered high-tech enterprise, CISRI became a wholly owned subsidiary and core R&D platform of China lron & Steel Research institute Group Co., Ltd. in early 2007.

As China's national hub for advanced metallic materials and metallurgical innovation, CISRI hosts key national platforms including the "National Engineering and Research Center for Advanced Steel Technology". It has spearheaded critical material development and core technology breakthroughs, providing essential support for: "Two Bombs and One Satellite" Project, "Long March Launch Vehicles", Domestically-built aircraft carrier, and "Shenzhou Crewed Spacecraft". CISRI continues to make pivotal contributions to national economic development and defence modernization.

NEWS

Establishment of *Journal of Energy Infrastructure*

On 24 May 2025, Prof. K. F. Chung, Director of CNERC, was invited by Prof. Xuhong Zhou of Chongqing University to attend the Inauguration Ceremony of ***Journal of Energy Infrastructure*** (JEI) in Chongqing as the Chief Editor of the Journal.

JEI was officially launched during the Opening Ceremony of the "***Third Academic Forum on Mountainous Civil Engineering***" held at the Chongqing Science Hall. It was jointly established by the Chongqing University and The Hong Kong Polytechnic University, and both Prof. Xuhong Zhou and Prof. K.F. Chung were Editors-in-chief of the Journal. Both Prof. Xiuli Du and Prof. Qingrui Yue are Honorary Advisors to the Journal while Prof. Yuhang Wang and Prof. Fei Xu serve as Executive Editor-in Chief and Deputy Editor-in-Chief of the Journal respectively.

JEI is an international, open-access scholarly journal dedicated to advancing research on planning, design, operation, and sustainability of global energy infrastructure systems. It aims to bridge engineering, technology, and policy to address urgent challenges in energy transition, resilience, and decarbonization.

JEI promotes interdisciplinary work integrating civil, electrical, mechanical, and environmental engineering, alongside economics and policy analysis, to foster scalable, low-carbon solutions. It focuses on civil engineering research related to energy infrastructure with emphasis on the following areas:

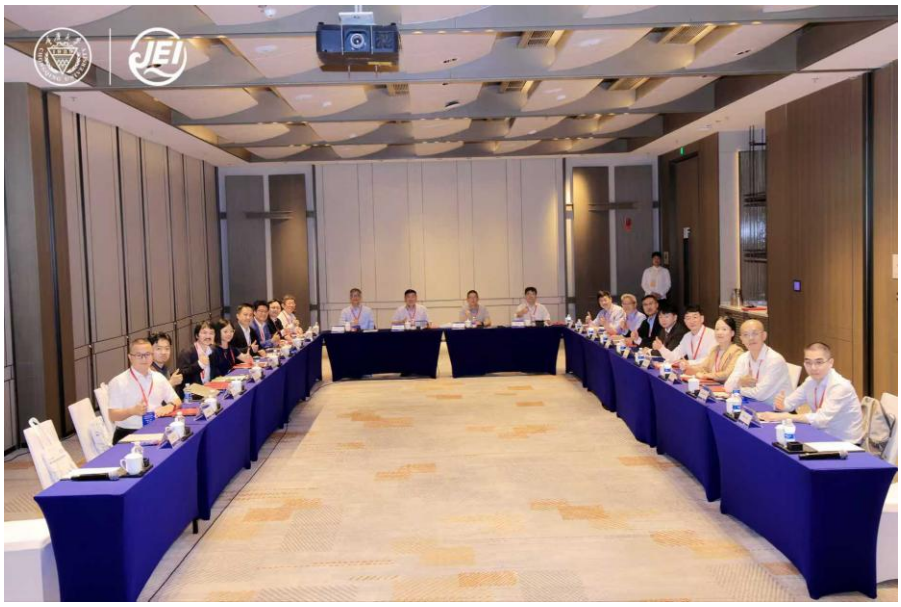
- Design and optimisation of infrastructure for multi-type energy systems
- AI-driven energy infrastructure
- Environmental engineering and construction technology
- Lifecycle performance of energy infrastructure
- Disaster resilience and multi-hazard engineering
- Durability and sustainability
- Advanced materials and structural innovation

Inauguration of JEI during Opening Ceremony of
"***Third Academic Forum on Mountainous Civil Engineering***"

Prof. Qingrui Yue, Prof. Xuhong Zhou, Prof. K.F. Chung and Prof. Xiuli Du during launching of JEI

"***Third Academic Forum on Mountainous Civil Engineering***" held at the Chongqing Science Hall

The First Meeting of the Editorial Board of JEI was held in the afternoon. A total of 17 members of the Editorial Board attended the meeting in person while 7 members joined on-line. A number of reports on the latest status and various development plans of the Journal were received. Group photos were taken during presentations of the appointment certificates to various members of the Editorial Board.



First Meeting of Editorial Boarding

Editorial Boarding Appointment Ceremony
Prof. Xuhong Zhou, Prof. Kwok-fai Chung, Prof. Qunyi Wei

Editorial Boarding Appointment Ceremony
Prof. Kwok-fai Chung, Prof. Xiuli Du, Prof. Xuhong Zhou

Editorial Boarding Appointment Ceremony
Prof. Kwok-fai Chung, Prof. Yuhang Wang, Prof. Fei Xu, Prof. Xuhong Zhou

Editorial Boarding Appointment Ceremony
Prof. Kwok-fai Chung, Prof. Jiulin Bai, Prof. Yingyi Liu, Prof. Ke Ke, Xuhong Zhou

Editorial Boarding Appointment Ceremony
Prof. Kwok-fai Chung, Prof. Yuner Huang, Prof. Fuyou Xu, Prof. Yongqian Liu, Prof. Decheng Wan, Prof. Lin Yuan, Xuhong Zhou)

Editorial Boarding Appointment Ceremony
Prof. Kwok-fai Chung, Prof. Xudong Qian, Prof. Tony Yang, Qingshan Yang, Prof. Zhengliang Li, Xuhong Zhou

NEWS

Joint Technical Seminar on Recent Research on Composite Structures in Chongqing University

On 25 May 2025, Prof. K. F. Chung, Director of CNERC, attended Joint Technical Seminar on Recent Research on Composite Structures, and made a presentation on research work on composite columns at the Seminar. The Seminar was organized by Dr. X. D. Wang of Chongqing University. Both Ms. Y. Ding and Mr. C. C. Tong, CNERC PhD. candidates, presented their research work on high strength shear connections at the Joint Technical Seminar. Dr. P. F. Men from Chongqing Jiaotong University also attended the Seminar. The Joint Seminar was organized as a platform for discussions and exchanges on research work on composite structures in bridge construction between Prof. Chung and Dr. Wang, and also among their research teams.

During the Seminar, Prof. Chung gave a technical presentation titled "***Investigations into confinement of composite columns***", and highlighted experimental and numerical investigations into confinement effects onto high strength concrete provided by high strength steel tubular sections. Ms Y. Ding introduced both experimental and numerical investigations into a novel high-strength bolted shear connection with large shear resistances, stiffnesses, and good ductility which was proposed for simple on-site assembly of composite beams. Mr. C.C. Tong introduced single-sided push-out tests and pull-out tests to examine structural behaviour of high strength bolted shear connections, and reported on key findings of a number of test series.

Afterwards, Dr. Wang gave a technical presentation titled "***Seismic behaviour of self-centring CFST bridge piers with bottom encasement: Experimental investigation, retrofit, and analysis***", and also a presentation titled "***Developing hybrid joints between prestressed concrete and structural steel: Toward simple and resilient bridge systems***". These two presentations described recent research work of Dr. Wang and his team on the seismic behaviour of a newly proposed system of self-centring CFST bridge piers, beam-column connections, and hybrid joints.

After the Seminar, the CNERC delegates were led by Dr. Wang to visit both the Structural Engineering Laboratory and the Shaking Table Laboratory of Chongqing University.

Prof. Chung gave a presentation at the Joint Technical Seminar

A group photo of CNERC delegates, and Dr. Wang and his students,
together with Dr. Men

Prof. Chung and Dr. Wang standing
in front of a hybrid joint of a prestressed coupling RC member two steel columns

Joint Technical Seminar on Recent Research on Composite Structures
Chongqing University

Date: 25 May 2025 (Sunday)
Time: 9:00 am to 12:05 pm
Venue: Faculty meeting room, Faculty of Civil Engineering, Chongqing University

Programme

Time	Presentation title	Presenter
9:00 am	Welcoming message	X D Wang
	Investigations into confinement of composite columns	K F Chung
10:00 am	Structural behaviour of high-strength bolted shear connections for simple on-site assembly of composite beams	Y Ding
10:25 am	Structural behaviour of high-strength bolted shear connections bolted shear connections under shear and pull-out forces	C C Tong
10:50 am	Break	
11:15 am	Seismic behaviour of self-centring CFST bridge piers with bottom encasement: experiment, retrofit, and analysis	X D Wang
11:40 am	Developing hybrid joints between prestressed concrete and structural steel: Toward simple and resilient bridge systems	X D Wang
12:05 noon	Closing	

NEWS

Building Technology Research Institute (BTRi) Conference 2025

Prof. K. F. Chung, Director of CNERC was invited as a Panelist to share his views on innovations at the BTRi Conference 2025 “Elevating to New Heights: Leading Construction Innovation in the New Era” at the JW Marriot Hotel in Admiralty on 2 June 2025.

NEWS

Prof. K. F. Chung, Director of CNERC, as the President and Founder of the Hong Kong Constructional Metal Structures Association, attended the signing of a strategic collaboration agreement between Xianggang and the Hong Kong Building Metal Structure Association and Foshan Dongyan Building Technology Co., Ltd. with Mr. Y. L. Wong, Director and Project Director of Dongyan Technology, and Liu Jiwen, Deputy General Manager of Xianggang, and unveiled the establishment of a joint R&D centre for high-strength structural steel on 13 June 2025.

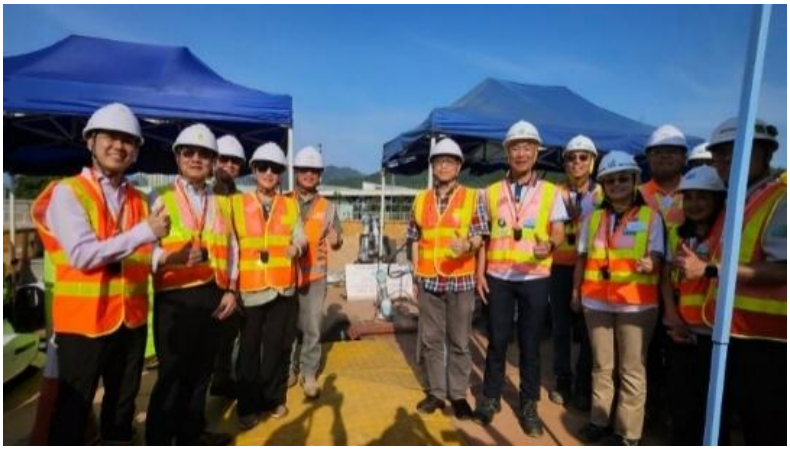
NEWS

Prof. K. F. Chung, Director of CNERC, was invited by the China Building Metal Structure Association to attend the “2025 National Building Steel Structure Industry Conference” held in Shenzhen by China Construction Steel Structure Co., Ltd., the Building Steel Structure Branch of the China Building Metal Structure Association, and the Guangdong Steel Structure Association on 14 June 2025, as well as participated in the symposium of presidents (Secretaries-General) of provincial and municipal associations and shared how CNERC has promoted the application of high-quality Chinese steel of high-strength 690 and 960MPa steel in public engineering projects with the support of the Government of HKSAR.

NEWS

Prof. K. F. Chung joined with Prof. J.G. Teng, Prof. Chris Chao and Prof. J.G. Lin in the Ceremony on Establishment of BaoSteel – PolyU Joint Research Centre held on 2 July 2025. The Ceremony was also attended by Mr. Zhou, General Manager of the BaoSteel Group and Mr. Mao, Director of BaoSteel Research Institute. This signifies a strategic collaboration for advancement of steel construction led by CNERC, and of steel materials led by ISE.

NEWS



Prof. K. F. Chung, Director of CNERC and his research team were invited by the Civil Engineering and Development Department of the Government of HKSAR to attend the celebration event on erection of the circular deck of S960 steel footbridge F6 with strand jacks at Lung Yeuk Tau interchange of Fanling Bypass Eastern Section on 4 July 2025, where Prof. Chung has made a technical presentation to all the participating government offficials, engineers and industrial practitioners.

NEWS

Prof. K. F. Chung, Director of CNERC, Dr. H. Jin, Postdoctoral Fellow, and Ms. Y. Ding, PhD student were invited by Chongqing Jiaotong University to attend the launching ceremony of the Ministry of Education International Collaboration Joint Laboratory for Smart Transportation Infrastructure and gave academic reports at the first academic committee meeting on 10 July 2025. In the afternoon of the same day, they also attended the Chongqing Jiaotong University-Hong Kong Polytechnic University Academic Forum on “Research Progress of 690~960MPa High-Strength Steel and Its Efficient Application in Bridge Engineering”.

NEWS

Prof. K. F. Chung, Director of CNERC, Dr. H. Jin, Postdoctoral Fellow, and Ms. Y. Ding, PhD student were invited by Academician X. H. Zhou and Prof. Z. H. Wang to visit the School of Civil Engineering of Chongqing University and inspected the Wind, Wave and Current Multifunctional Laboratory, the Structural Laboratory Exhibition Hall and the Bridge Dynamics Laboratory of Chongqing University on 11 July 2025.

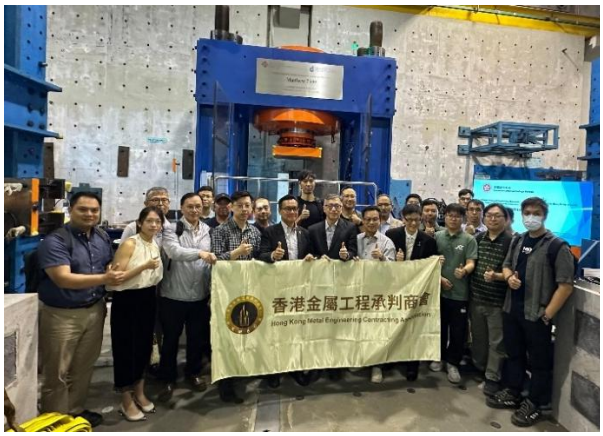
NEWS

Prof. K. F. Chung, Director of CNERC and Dr. H. C. Ho, Deputy Executive Secretary attended the “NCE Bridges Conference” in U.K. together with officials from Civil Engineering and Development Department of the Government of HKSAR and engineers from Chun Wo Development Holdings Ltd. on 17 July 2025.

NEWS

Dr. H. C. Ho, Deputy Executive Secretary of CNERC and the collaborative technical team from Jumbo Construction Technology Ltd. received the “Best Performance Award” presented by Ir C. K. Ricky Lau, Permanent Secretary for Development (Works) of the Government of HKSAR in the “Construction Robotic Practical Competition” organized by the Construction Industry Council at its Robotic Exhibition on 1 August 2025.

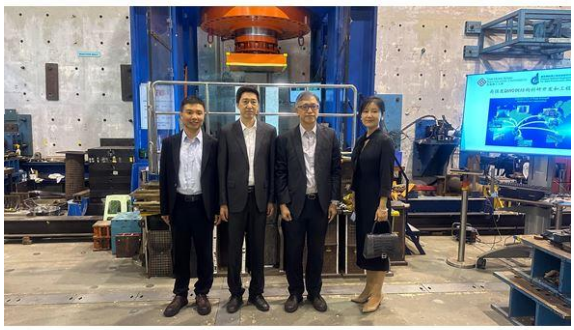
VISITS



Mr. Danny Chan, President of Hong Kong Metal Engineering Contracting Association led a delegation team to visit CNERC on 13 May 2025.

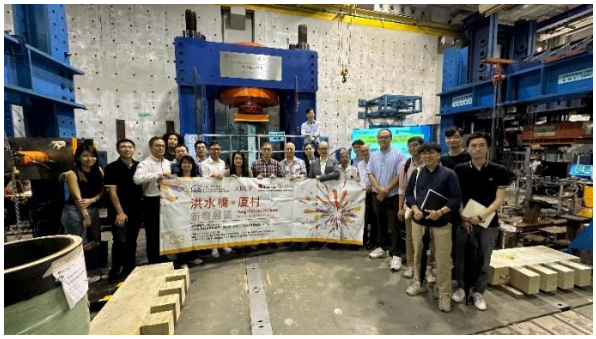
Representatives of Baosteel Co., Ltd. Hot Rolling Sales Department visited CNERC and had an in-depth technical exchange with the researchers of CNERC on application of S690 high-strength steel in civil engineering and building structures on 13 May 2025.

Prof. Ekki Yamaguchi of Kyushu Institute of Technology in Japan visited CNERC on 29 May 2025, and Prof. K. F. Chung, Director of CNERC, and Ms. Liz Guo, PhD student of CNERC had a technical exchange with him.



Mr. X. M. Mao, Vice President of Baosteel Central Research Institute, Mr. Y. Z. Ma, Director of the Hong Kong R&D Centre, and Ms. B. B. Chen, Senior Manager of the Hong Kong R&D Centre visited CNERC on 2 July 2025.

Ir Rupert Leung, Senior Director of Operations of Halcrow China Ltd. led a delegation team to visit CNERC on 4 July 2025.



20 engineers from Civil Engineering and Development Department of the Government of HKSAR, ARUP and Gammon Construction Ltd. attended a workshop on "Use of Ultra High Strength Steel S960 in Hong Kong" at CNERC on 4 August 2025.

CONTACT US

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