



Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University

HALF-DAY SEMINAR ON HIGH PERFORMANCE STEEL MATERIALS

高性能鋼材研討會

Organized by 主辦單位

The Hong Kong Institute of Steel Construction
香港鋼結構學會

Supported by 支援單位

Joint Structural Division, Hong Kong Institution of Engineers
香港工程師學會—結構分部

Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University
香港理工大學土木及環境工程學系

Organizing Sponsor 資助單位

Wo Lee Steel Co. Ltd.
和利鋼鐵有限公司

Date 日期: 7 November 2014 (Friday afternoon) 2014年11月7日 (週五下午)

Venue 地點: Room Y409, The Hong Kong Polytechnic University, Hung Hom, Kowloon
香港理工大學Y409室 (香港九龍紅磡)

Time 時間: 1:45 pm (registration 登記) for 2:00 pm to 5:30 pm

Scope and Objectives 範圍及目的

With the advent in the research in the use of high performance steel in Mainland China, its application is not only widely adopted in buildings and bridges but also in car industry and mechanical manufacturing industry. This seminar aims to introduce the advances and trend in the use of high performance steel as well as in cold forming of such high performance steel.

中國在高性能鋼材的研究及應用已有極大發展，不但應用在建築、橋樑等結構中，亦應用於汽車、鐵路及機械生產。本研討會將介紹中國在高性能結構用鋼及高性能冷彎型鋼的技術發展及應用趨勢。

High Performance Structural Steel 高性能結構用鋼

The main characteristics of High Performance Structural Steel include great yield strength, tensile strength, resistance to earthquakes and high welding performance. High Performance Structural Steel is subdivided into three types: High Performance Construction Steel, High Performance Bridge Steel, and High Performance Corten Steel. Over 30,000 tons of High Performance Constructional Steel has been used in huge scale construction projects, like Beijing National Stadium, China Central Television (CCTV) and Canton Tower. Secondly, with excellent weather resistance, high yield strength and increased welding performance properties, High Performance Bridge Steel has been used in the construction of the Beijing Guangzhou High Speed Rail Wuhan Changjiang Bridge, the combined highway-and-railway bridge with largest length span and capacity in the world. Last but not least, High Performance Corten Steel, mainly used in railway vehicles, is highly resistant to corrosion.

高性能結構用鋼的主要優點在於強度及韌性、抗撕裂及抗震能力，以及焊接性能。其主要有三種類型，分別是建築用鋼、橋樑用鋼及耐候鋼，並且已被應用在中國不同的建築上，例如北京國家體育場(鳥巢)、中央電視臺及廣州電視塔，皆使用超過三萬噸建築用鋼。此外，多條長江大橋，例如世界上跨度最大及載荷最大的客貨公鐵兩用斜拉橋——京廣高速鐵路武漢天興洲長江大橋，採用嶄新技術而研發的橋樑用鋼，克服傳統橋樑鋼於強韌性、耐候性及焊接性之間不能兼顧的問題。至於耐候鋼，強調抗腐蝕能力，主要應用於鐵路車輛。

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高性能鋼材研討會

High Performance Cold-forming Steel 高性能冷彎型鋼

The advantages of Cold-forming Steel involve better resistance to earthquakes, environmental-friendly, industrialized producing and increasing the usable floor area effectively so as to achieve superior constructional performance as well as economies of scale.

Nowadays, the Cold-forming Steel has been used widely in large scale projects all over the world, such as Beijing Capital International Airport (BCIA), London Heathrow Airport, Hong Kong Convention and Exhibition Centre (HKCEC) and so on. Moreover, Cold-forming Steel has already been applied to building, automobile production, railway vehicles and construction machinery due to the excellent surface quality, evenwall thickness, good cross-sectional shape and low cost. Therefore, the celebrity of High Performance Cold-forming Steel has improved greatly.

高性能冷彎型鋼以鋼結構的形式運用於建築領域。冷彎型鋼與傳統鋼混相對具有更大優勢包括：優越抗震性，環保，工廠化生產以及有效提高房間實用面，以達致更優越建構性能及經濟效益。冷彎型鋼產品被廣泛運用於國內外重要專案建設中，包括北京首都機場，倫敦希思羅機場以及香港會議展覽中心等等，涵蓋領域寬廣，產品知名度高。另外由於冷彎型鋼具優良表面品質，壁厚均勻，截面形狀良好以及低成本，現時已廣泛應用於建築，汽車生產，鐵路車輛及工程機械。

People in engineering and construction industry, technician and interested parties are welcome to join.

本研討會歡迎工程及建築界人士，專業技術人員以及任何對使用鋼材有興趣的人士等出席。

HALF-DAY SEMINAR ON HIGH PERFORMANCE STEEL MATERIALS

高性能鋼材研討會

Time 時間	Programme 流程
1:45 pm - 2:00 pm	Registration 登記
2:00 pm - 3:00 pm	High Performance Structural Steel (Speaker: Dr. Luo Hai He) 高性能結構用鋼介紹 (演講者駱海賀博士)
3:00 pm - 3:10 pm	Q & A Section 問答環節
3:10 pm - 3:25 pm	Tea refreshment 茶點時段
3:25 pm - 4:25 pm	Steel Structure Design & Application (Speaker: Dr. Liao Wen Xuan) 鋼結構設計及應用 (演講者廖文選博士)
4:25 pm - 4:35 pm	Q & A Section 問答環節
4:35 pm - 5:05 pm	High Performance Cold-forming Steel (Speaker: Dr. Zhu Shao Wen) 高性能冷彎型鋼介紹 (演講者朱少文博士)
5:05 pm - 5:15 pm	Q & A Section 問答環節
5:15 pm - 5:30 pm	Collection of CPD certificates 分發 CPD 證書 End of Seminar 研討會結束

Registration fees and Official Language 註冊費和官方語言

Registration fee

一般費用

HK\$500

Member of HKISC or HKIE (a group of 5 participants)

香港鋼結構學會會員及香港工程師學會會員(5 個或以上報名)

HK\$400

The seminar will be conducted in Putonghua. The registration includes a copy of the lecture notes, a copy of half-day CPD certificate and tea refreshment.

本研討會將會以普通話進行。所有參加者將獲茶點招待，演講筆記以及 CPD 證書乙份。

HALF-DAY SEMINAR ON HIGH PERFORMANCE STEEL MATERIALS 高性能鋼材研討會

Biographies of Speakers 演講者背景

Dr. Zhu Shao Wen is the Deputy Chief Engineer at WISCO Jiangbei Cold-formed Co., Ltd. He received his Ph.D. in 1987 from Wuhan University of Science and Technology on the topic of high-performance steel and application of cold forming steel production. Dr. Zhu has presided over the drafting of 11 national and industrial standards including: GB/T 6728 (Cold Formed Steel Hollow Sections for General Structure: dimensions, shape, weight and permissible tolerances) and GB/T 6723 (Cold Forming Sectional Steel-Open Sectional Steel for General Structure: dimensions, shape, weight and permissible tolerances). In addition, Dr. Zhu has hosted and participated in major talk in the developments of high performance structural steel on passenger vehicles, railways and tower cranes. To date, Dr. Zhu has received the Hubei Province Scientific and Technological award 5 times, published 28 papers and holds 15 patents.

朱少文博士，武漢鋼鐵江北集團冷彎型鋼有限公司副總工程師，在1987 年畢業于武漢科技大學，主要從事于高性能冷彎型鋼研發及生產應用研究工作。曾主持和起草國家標準GB/T 6728 (結構用冷彎空心型鋼尺寸、外形、重量及允許偏差) 、 GB/T 6723 (通用冷彎開口型鋼尺寸、外形重量及允許偏差) 等11 項國家或行業標準；主持和參與客車輕量化、鐵路車輛升級改造、塔機用尖角方矩管開發等重大課題，獲湖北省及以上各級科技進步獎勵5 項次，發表論文28 篇，授權專利15 項。

Dr. Luo Hai He is an engineer at Research and Development Center of Wuhan Iron and Steel (Group) Corp. He received his Ph.D. in 2009 from Huazhong University of Science and Technology on the topic of development and application of high performance structural steel. Dr. Luo has hosted and participated in major talks, including “The Development and Usage of Grade 600/650MPa Low Yield Ratio High Performance Bridge Steel”, “The Usage of High Strength Steel on Roads and Bridges”, and on “The Research of High Performance Cold Formed Steel”. To date, Dr. Luo has won 10 awards from WISCO on scientific and technological awards, published 25 papers and holds 12 patents.

駱海賀博士，武漢鋼鐵(集團)公司研究院工程師，在2009 年畢業于華中科技大學，獲工學博士學位，主要從事高性能結構用鋼的開發及其應用研究工作。曾主持和參與了“600/650MPa 級低屈強比橋樑鋼的研製及其工程應用”、“公路橋樑用高強度結構鋼的研製”、“高性能冷彎成型產品成套技術研究”等公司重大課題，獲武鋼公司各級科技進步獎勵10 項次，發表論文25 篇，授權專利12 項。

Dr. Liao Wen Xuan is the Chief Engineer at WUHANSHI YAYAUN REAL ESTATE CO.LTD. He received his Ph.D on structural design in 1986 from Wuhan University of Science and Technology while also working for the WISCO Design and Research Center structural design team. He has received several professional qualifications including Registered Structural Engineer (First Class), Registered Supervision Engineer and Registered Consulting Engineer.

Dr. Liao has supervised and designed over 30 major structural engineering projects including the extension of WISCO steelmaking plant and Hubei Swimming Training Center. In addition, Dr. Liao has also conducted research on steel applications and regulations, prepared technical designs for tenders and manuals, supervised engineering plans in significant projects, and delivered training seminars while receiving numerous awards for his work.

廖文選博士，1986 年畢業於武漢科技大學建築結構專業，並在武漢鋼鐵設計研究院從事結構設計工作。現為武漢市雅苑房地產開發有限責任公司總工程師、國家一級註冊結構工程師、註冊監理工程師、註冊諮詢工程師。廖文選曾負責武鋼建設公司鋼結構加廠房，武鋼二煉鋼轉爐擴容工程，湖北省游泳訓練館等 30 多項工程結構設計與監理，亦參與鋼結構應用領域的研究、鋼結構有關規範的編制調研、技術特殊專案的標書編制、有關專案施工圖設計審查及技術手冊的編制、設計方案的選擇和組織重大施工方案的審查，組織技術培訓講座等，其中有多項專案分別獲得有關獎勵。

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REGISTRATION FORM 報名表格

(To be replied on or before 4 November 2014 二零一四年十一月四日或之前回復)

Please follow the 2-step registration procedure:

1. Fax the completed registration form to **Mr Sam CHAN** (Fax: 852-2334 6389) for preliminary registration.
2. Post the completed registration form within 7 days together with a crossed cheque payable to **Hong Kong Institute of Steel Construction Limited** to **Mr Sam CHAN**, at:

The Hong Kong Institute of Steel Construction
c/o Room ZS972, Department of Civil and Environmental Engineering,
The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong.

on or before the 4 November 2014.

To: **Mr Sam CHAN**

Fax: **2334 6389**

Personal Details:

Title	Name in full (Block Letter)	Name of Company	Tel.	Fax	E-mail address	Institution/ Membership No.
1.						
2.						
3.						
4.						
5.						

Item	Total no. of registration	Sub-total
1. Regular registration (Member*price or 5+ registration)	_____ person(s)	= HK\$ _____
2. Regular registration (Non-member price)	_____ person(s)	= HK\$ _____

Postal Address
(for official receipt):

I enclose a crossed cheque no. (_____) with a sum of HK\$_____ for the registration fee of the captioned Seminar.

Signature: _____ Date: _____

CPD Certificate of Attendance. Please tick the appropriate box to indicate your choice:

Yes, I/ we would like to have CPD certificate(s).

Certificate(s) not required.