



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

香港理工大學, 土木及環境工程學系

THE HONG KONG POLYTECHNIC UNIVERSITY
Department of Civil and Environmental Engineering

Full-day Seminar on Design and Application of Laminated Glass with Composite Action

Organized by
Façade Group, Hong Kong Institute of Steel Construction

Supported by
Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University
Structural Division, The Hong Kong Institution of Engineers

Sponsored by
Kuraray (Shanghai) Co., Ltd.
Tianjing North Glass Industrial Technical Co., Ltd.

Date	:	03 August 2018
Venue	:	Room TU107, The Hong Kong Polytechnic University
Time	:	8:45 am (registration) for 9:15 am to 5:45 pm

Scope and Objective

Code of Practice for Structural Use of Glass 2018 was launched on 9 February 2018 by Buildings Department. For the new safety requirements against broken glass, laminated glass would be required for balustrade and large-scale glass wall systems. In current local practice, the laminated glass is conventionally designed by using the individual glass pane stiffness without composite action. Simplified design provision for laminated glass with composite action is introduced in the new Glass Code together with some quality control testings.

Principal feature of laminated glass is the safety performance under impact and breakage. The interlayers absorb the energy of the impact and resist penetration. Although the glass may break, the glass fragments remain firmly bonded to the interlayer, minimizing the risk of injuries. There is always the possibility of glass breakage in glass skylights, canopies, sloped glazing, glass floor, glass staircase etc. and glass balustrade. Without laminated glass, that could mean a big safety problem caused by shattering glass.

Moreover, there is an increasing trend in the use of laminated glass in residential buildings, commercial buildings and retails. This trend is being driven by the increased desire for more open designs with less visible framing and structural supports, resulting in glazing designs that provide greater transparency and visibility. Glass laminates such as SentryGlas® ionoplast are able to fulfill the high architectural safety standards at a reduced thickness compared to glass laminates with PVB interlayer. SentryGlas® interlayer was chosen primarily for its enhanced strength compared to laminates with PVB (which allowed a 30% thinner glass construction), its post-glass breakage retention properties and its visual clarity when used in combination with low-iron vision glass.

The seminar is tailor-made for the practising building professionals comprising Authorized Persons, Registered Structural Engineers, Technically Competent Persons and Façade practitioners to attend.

Language: English and Cantonese.



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Fees & Registration

Registration rates are devised, please make your reservation now.

Registration	HKISC member	HKIE member or Group of 5+	Others
	HK\$1,000 each	HK\$1,200 each	HK\$1,500 each

The registration includes a copy of the lecture notes, a copy of full-day CPD certificate and tea refreshments.

Should you have further query, please do not hesitate to contact Mr. Tommy Li at man@hkisc.org.

Programme

Time	Programme
8:45 am – 9:00 am	Registration
9:00 am – 9:15 am	Welcome speech
9:15 am – 10:30 am	Safety Requirements and Design Considerations to the Code of Practice for Structural Use of Glass 2018 <i>Ir Dr. Dominic Yu, Principal of Alpha Consulting Limited</i>
10:30 am – 11:00 am	Tea Break
11:00 am – 12:30 pm	Local Practice for the Design and Testing Requirements of Laminated Glass <i>Ir Dr. Dominic Yu, Principal of Alpha Consulting Limited</i>
12:30 pm – 2:00 pm	Lunch
2:00 pm – 4:00 pm	Structural Analysis and Behaviour of Laminated Glass with Composite Action in Europe <i>Mr. Malvinder Singh Rooprai, Technical Consultant of Kuraray Trosifol®</i>
4:00 pm – 4:30 pm	Tea Break
4:30 pm – 5:30pm	Production of Jumbo Size Laminated Glass and Case Studies <i>Mr. Ji Haiping, Sale Director of Tianjing North Glass Industrial Technical Co., Ltd.</i>
5:30 pm – 5:45 pm	Q & A Collection of CPD certificates



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REGISTRATION FORM

(To be replied on or before 27 July 2018)

Full-day Seminar on Design and Application of Laminated Glass with Composite Action

Please follow the 2-step registration procedure:

1. Fax the completed registration form to *Mr. Tommy Li* (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. Tommy Li*, at:

Room ZS 972, Department of Civil and Environmental Engineering,
The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong, China.

on or before the deadline.

To: Mr. Tommy Li

Fax: 852- 2334 6389

Personal Details:

Title	Name in full (Block Letter)	Name of Company	Tel.	E-mail address	HKISC/HKIE Membership No. (if any)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

Postal Address: _____

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). Not request for certificate(s).

Registration Fee

Registration	HKISC member	HKIE member or Group of 5+	Others
	HK\$1,000 each	HK\$1,200 each	HK\$1,500 each

Biography of speakers



Ir Dr. Dominic YU

BEng (Civil), MSc (Fire), PhD (Str.), MHKIE, MHKISC, MHKICA

Principal (Structural Fire and Façade), Alpha Consulting Limited

Dr. Dominic YU is a specialist in the structural design and use of glass. He is a Principal (Structural Fire and Façade) of Alpha Consulting Limited, providing consultancy services on glass and facade engineering, non-linear integrated design and analysis, structural fire engineering analysis and design, steel and composite design etc. He is a Part-time Lecturer in Fire Safety Engineering Programme of University of Central Lancashire & CityU SCOPE. He is also a Visiting Lecturer for MSc Module of Façade Engineering in Civil Engineering Programme at the Hong Kong Polytechnic University. Before joining Alpha Consulting Limited, Dr. Yu served as a Specialist and Test Consultant of Research Engineering Development Façade Consultants Limited (RED Façade and Fire HOKLAS Testing Laboratory).

Dr. Yu obtained Doctoral Degree of Philosophy in Structural Engineering, Master Degree in Fire Safety Engineering, and Bachelor Degree in Civil Engineering. He worked as a Research Associate in the Department of Civil and Structural Engineering at the Hong Kong Polytechnic University to serve as a Technical Secretary of the consultancy study contributing to the “Code of Practice for the Structural Use of Steel 2005” and the 2011 version; and compiled the Explanatory Materials of the Steel Code for Buildings Department. Dr. Yu is also served as Professional Consultant for consultancy study of “Structural Use of Glass” for Buildings Department. He is also actively serving the industry and the university by delivering various technical seminars and lectures.



*Malvinder Singh Rooprai, M.E (Structures)
Technical Consultant (Asia Pacific Region), Kuraray India Pvt. Ltd.*

Malvinder Singh Rooprai is working for *Trosifol*® PVB division of Kuraray India Pvt. Ltd as Technical Consultant for Asia Pacific region. Kuraray acquired the Glass Laminating Solutions Business of DuPont in June 2014 and is based out of New Delhi. He works on finite element modeling of laminated glass for analyzing the effects of viscoelastic behavior of polymeric interlayers on the structural performance of laminated glass panels in architectural applications. He has provided consulting reports on structural performance of laminated glass to Architects and Façade Engineers and Structural consultants on some of the mega projects in the region like Shanghai Tower in China and World One in Mumbai – India. He has presented papers on laminated glass with SentryGlas® in events like GPD Finland, World of Facades (India) & Façade Design and Engineering Conference and presented on the same in similar events in Singapore.

He has worked as a Structural & Façade Engineer for nearly 6 years with a façade fabrication company (a subsidiary of construction giant DLF Ltd) in India. He did his Masters in Structural Engineering from Thapar University, Patiala – India and did his dissertation work on *Wind Load Modeling in Tall Rectangular Buildings including Interference effects by Artificial Neural Networks*.

His lecture will focus on Structural Analysis and Behaviour of Laminated Glass

- Various Analysis Methods
 - Empirical Formulas
 - Effective Thickness Method (Advantages & Limitations)
 - Finite Element Method
- Bond Strength Measurements for interlayer at Elevated Temperatures.

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Mr. Ji Haiping

Sales Director, Tianjin North Glass Industrial Technical Co., Ltd.

Mr. Ji has more than 20 years of experience in engineering glass processing industry. He has been engaged in glass processing equipment manufacture, production management, marketing and other aspects. Therefore, he has a comprehensive perspective on the glass processing industry. His recent projects include International Commercial Center (Hong Kong), One Island East (Hong Kong), Central Government Complex at Tamar (Hong Kong), International Financial Center (Shanghai) and Shanghai Tower (Shanghai).