



Seminar on Technological Know-How of Heat Treated Glass Quality Control of Glass for Greener Future

Organized by

Hong Kong Institution of Engineers – Materials Division

In collaboration with

Hong Kong Institution of Certified Auditors



Title of the Seminar

Technological Know-how of Heat Treated Glass in relation to quality control for Greener Future

Date, Time and Venue of the Seminar

Date: 13 August 2010 (Friday)

Time: 9:00am to 5:00pm

Venue: HKPC Seminar Room

Description of the Seminar

Failures of large panes of heat-treated glass, including the Low-E glass panes that have been produced for **Greener** future, have been very common. Such failures have been attributed to poor quality control adopted by glass fabricators. This leads to creation of mass construction wastes.

This seminar will give an overview of the common types of flat glass manufacturing process (in particular, the **Greener** Processing Options) and details of heat treatment processes adopted by the industry to enhance the strength of flat glass, including Low-E Glass that helps significantly to reduce energy consumption in building. Great emphasis will be given on the various quality checking techniques that should be adopted at various stages of the production of heat-treated glass, including tempering and heat soaked processes. Participants will learn the technical basis for each type of quality check tests and acquire an understanding of how these tests can be properly conducted so that product quality can be enhanced and thus minimizes wastage resulting from breakage or other forms of failures.

This seminar is intended for all technical engineers as well as other specialists, including product certification auditors and inspections personnel who will be involved in quality and technical assessments for production of heat-treated glass.

Seminar Contents:

- a. An introduction to HKISC product certification scheme for heat-soaked tempered glass;
- b. History of Glass;
- c. General introduction of manufacturing processes of glass:
 - i) different types of process, and the characteristics of products including measures for energy saving and reduction of carbon emission
 - ii) raw materials including those recycled materials;

Co-organizers

Funding Organization



香港特別行政區政府商務及經濟發展局
**Commerce and Economic
Development Bureau**
The Government of the Hong Kong
Special Administrative Region





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- iii) temperature control at various stages and why are they critical;
 - iv) associated quality checking procedure, including details of various forms of defects that could be formed and non-destructive tests used to assess the presence of these defects.
- d. Properties of Glass and the effect of various treatment processes.
- e. Strengthening of glass by tempering process:
- i) process control, (full temper and heat-strengthen)
 - ii) critical parameters (including discussion of common problems encountered),
 - iii) associated quality check procedure and their underlying theory, including quality checking of incoming glass panes, measurement of residual stress, fragmentation tests, impact test, dimensional check, flatness check, after strengthening.
- f. Heat-soaked process:
- i) measures to reduce construction waste by eliminating spontaneous breakage
 - ii) process control, calibration of the heat soak bath, thermocouple placement, glass panes placement, etc;
 - iii) critical parameters;
 - iv) common malpractices;

At the end of the seminar, there will be an examination. Participants who passed this exam will be awarded a certificate of achievement. This workshop is also entitled for a 6-hour CPD.

Speakers:

Ir Dr Eric C. H. Lim, Consultant, Safety, Accident and Failure Experts Limited
(With an introductory talk by Ir C K Cheung, Honorary President of HKICA)

Registration

HKICA, HKIE, HKCI and HKISC Members & Registration in excess of 3: HK\$ 1,300 per person
Others: HK\$ 1,500 per person

The registration fee includes a set of notes and a CPD certificate:

CPD Certificate A CPD certificate of attendance will be issued, and for those who passed the examination, a certificate of achievement endorsed by HKICA will be issued.

Please follow the two-step registration procedure:

1. Fax the completed registration form to *HKPC* (Fax: 27885522) for preliminary registration.
2. Mail the completed registration form together with a crossed cheque payable to **HKIE-PSDAS-09118** to Ms. Kit Ho at 5/F Materials Technology Division, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong, Kowloon on or before **9 August 2010**. Please note that registration will only be confirmed upon receipt of payment and on a first-come-first-served basis. For details of registration, please contact *Miss Kit Ho* at Tel.: 27885533 or email: hkiemat@hkpc.org

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REGISTRATION FORM

(To be replied on or before Monday, 9 August 2010)

To : **HKPC**
Fax : 27885522

A. Personal Details: (For members, please bring your membership card for registration)

Title	Surname	Other Names	Name of Company	Contact No.	E-mail address
1.					
2.					
3.					
4.					

Postal Address: _____

B. No. of Registrations:

Registration Fee	No. of registrations	Total (HK\$)
HK\$ 1,300 (HKICA, HKIE, HKCI and HKISC Member)		
HK\$ 1,500 (Other Member)		

The registration fee includes a set of notes and a CPD certificate. Please note that registration will only be confirmed upon receipt of payment and on a first-come-first-served basis.

I enclose a crossed cheque (cheque no. _____) with the sum of HK\$

_____ for the registration fee of the captioned Seminar.

Signature: _____ Date: _____

Any Opinions, findings, conclusions or recommendations expressed in this material/ any event organized under this Project do not reflect the views of the Government of the Hong Kong Special Administrative Region or the Vetting Committee for the Professional Services Development Assistance Scheme.

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