



WORKSHOPS 2009

June 11-12



WS 14: Seeing Through Glass Design

Presenter: Charles Bostick, Consulting Architects

Course Summary

"Is it possible to do this glazing as we have drawn it and, if yes, how?"

This question has its basis in the schools and universities - until recently glass was not a structural element but rather an infill panel. In school we all learned how to deal with wood, stone and masonry, concrete and steel - the classic structural materials to hold up a building. With the development and advent of Peter Rice's point glass connector in the 1980's this changed and glass was added to the list, but really did not pick up until the advent of computers and quick, complicated structural analyses, such as finite element calculations in the 1990's - and then a further boost recently with the introduction of polycarbonate interlayers, such as Sentry Glass Plus from DuPont, that increase glass' structural capacities and safety.

These new developments and directions on using glass in construction have led to an increased demand in the fine manufacture of glass - especially in the cutting and milling of glass. If planners had the same knowledge of glass used as a building material as they do of wood, stone, masonry, concrete and steel, then the use of glass might get another boost.

This workshop hopes to contribute to this trend by giving its participants an introductory primer designed to give planners and designers an overview of the current maximum capabilities and possibilities of glass construction AND teach a basic outline method of designing with glass.

GLASS is the only major building material still experiencing significant technological advances.

WORKSHOP LOCATION:
UNIVERSITY OF TAMPERE, PINNI B
KANSLERINRINNE 1

Bullet Point Summary

7 Easy Steps To Glass Design: Enclosures, floors, beams, columns:

- Basic Characteristics of Glass as a Material – physics, manufacture, cutting/milling
- Design Criteria – loads, insulation, sun shading, vision, security, aesthetics
- Selection of glass type – unit build up, tempering, coatings
- Selection of glass size – architecture, manufacture, economics
- Selection of structural system – facades, skylights, floors, bridges, beams, columns
- Selection of glass fastening system – linear, point, mechanical, bonded
- Bringing it all together – planners, manufacturers, contractors

Course Timetable - Friday 12.6.2009

- 9.00 Start and Introduction
- 9.15 1st session
 - Basic characteristics of glass as a material
 - Design criteria
- 10.45 Coffee/tea
- 11.00 2nd session
 - Selection of glass type
 - Selection of glass size
 - Selection of structural system
 - Selection of glass fastening system
- 12.30 Lunch
- 13.30 3rd session
 - Bringing it all together - planners, manufacturers, contractors

Registration for Workshops at www.gpd.fi





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THURSDAY 11 June

Structural Properties of Laminated Glass

Presenters: S. J. Bennison & I. Stelzer,
E.I. DuPont de Nemours & Co. Inc

Milestones to better understand the Flat Glass Business (history - today - tomorrow)

Presenter: B. Savaëte, BJS. Différences

Industrial Glass Coating Technologies and systems powered by nanotechnology (Beneq)

Presenter: M. Saikkonen, Beneq Oy

Glass Tempering Process (level1): Fundamental steps in tempering and machine test runs

Presenters: V-J. Kuusiniemi & T. Pesonen &
M. Äppelqvist & S. Suominen, Glaston Finland Oy

Glass Bending & Tempering process: Theory and machine test runs

Presenters: V-J. Kuusiniemi & T. Pesonen &
M. Äppelqvist & S. Suominen, Glaston Finland Oy

Laminating of Heat treated and other speciality glass

Presenters: M.P. Verleyen, Solutia Europe; M. Rantanen & J. Ala-Savikola, Glaston Finland Oy; R. Giovannini, Glaston Italy; A. Uusikartano, Suomen Turvalasi Tambest; C. Bostick, Consulting Architects; J. Gilleeney, Independent Glass

Glass processing basics for Solar industry specialists

Presenters: R. Nieminen, Glaston America Inc.;
I. Hiekkänen & T. Pesonen, Glaston Finland Oy

Understanding glass strength, stress analysis and design methodologies for architectural glass

Presenter: Dr. L. Jacob, Jacob & Associates Pty Ltd.

FRIDAY 12 June

Cutting, Grinding, Washing: Three fundamental steps in Float Glass Processing

Presenters: P. Pokoern, Bohle AG; M. Emonds, ACW

Coated Glass - Applications and markets

Presenter: S. Nadel, Applied Materials

Seeing Through Glass Design

Presenter: C. Bostick, Consulting Architects

Basics of Glass Coating Processes and Coated Glass

Presenters: P. Vuoristo & T. Mäntylä,
Tampere University of Technology

Digital Printing on Glass

Presenters: Y. Ninoy & T. Salenius, DIP Tech Ltd.

Glass Tempering Process (level2): Glass Factory profitability and tempering technology know-how

Presenters: V-J. Kuusiniemi & T. Pesonen &
M. Äppelqvist, Glaston Finland Oy; F. Serruys,
Saint-Gobain Glass Solutions

Profitability of a Glass Processing Factory

Presenter: K. Heikkilä, Glaston Singapore

Solar Power - Opportunities for the glass industry

Presenters: R. Nieminen, Glaston America Inc.; I. Hiekkänen, Glaston Finland Oy; M. Rajala, Beneq Oy; A. Karpinski, Kuraray Europe GmbH; O. Mal, AGC Flat Glass; B. Szyszka, Fraunhofer IST; S. Byers, Ritec International Ltd.; V. Geyer, Scheuten Solar; G. Strij-Hipp, BSW Solar

New trends in the Infrared Non-contact Temperature Measurement for the glass industries

Presenters: R. Gärtner & E. Drews, Raytek GmbH

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