



WORKSHOPS 2009

June 11-12



WS 09: Glass Processing basics for solar industry specialists

Presenters: Ilppo Hiekkanen & Seppo Lautamäki & Ari Alanko & Mikko Rantanen, Glaston Finland Oy

Course Summary

The course is intended for solar manufacturers who do not have earlier experience on glass processing and technology.

In this course participants will learn what is solar glass and how it differs from other glass grades. We will start from float and rolled glass manufacturing processes which are the dominant manufacturing technologies of flat glass. Increasing the strength of glass is made by tempering and basics of this process will be given by acknowledged experts of the industry. Manufacturing technologies of paraboloid and heliostatic mirrors used concentrated PV and CSP will be covered. We will also take a look at solar glass business and the outlook of the future trends.

Bullet Point Summary

- Visit to glass factory with processing demo
- Solar glass manufacturing technology
- Preprocessing
- Tempering basics
- Bending
- Lamination
- Critical points in profitability
- Glass factory production control

glaston
seeing it through

Course timetable - Thursday 11.6.2009

- 8.30 Glass Processing demo, visit to glass factory
- 10.50 Coffee/tea
- 11.00 Solar glass processing technology
- 12.00 Lunch
- 13.00 Pre-processing
- 13.30 Bending
- 14.00 Coffee/tea
- 14.10 Lamination
- 14.40 Glass factory investment / production risks
- 15.10 End of Workshop

WORKSHOP LOCATION:
GLASTON FACTORY
VEHMAISTENKATU 5, TAMPERE

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. Hiekkanen & 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. Ninyo & 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. Hiekkanen, 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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