



WORKSHOPS 2009

June 11-12



WS 20: New trends in the Infrared Non-contact Temperature Measurement for the glass industries

Presenters: Reno Gärtner & Enrico Drews, Raytek GmbH

Course Summary

Non-contact infrared thermometers are designed for use in glass industries where monitoring and controlling temperature is critical to productivity and product quality. They help to optimize the production process and minimize downtime and waste, thus saving expenses on a large scale. This course will provide further information about this technology and some specific applications (automotive, solar and architectural glass for ex.). The introduction will focus on and go beyond these parameters and how they are related to the glass manufacturing process. The presentation will provide in depth technical background on parameters describing the properties of glass in the infrared spectra and will also talk about optical path limitations and how to overcome the latter. The presentation will close with a short introduction to pattern recognition, applicable to secondary glass manufacturing processes or quality assurance in general.

Bullet Point Summary

- Glass characteristics vs IR properties
- Process imaging systems
- Software tools for analysis
- Technical benefits
- Practical demo
- Discussion forum



Course Timetable - Friday 12.6.2009

- 9.00 Introduction in the IR-Technology
- 10.00 Special parameters related to the glass industry
- 11.00 Coffee/tea
- 11.15 Focus on some specific applications
- 13.15 Lunch

**WORKSHOP LOCATION:
UNIVERSITY OF TAMPERE, PINNI B
KANSLERINRINNE 1**

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. Stry-Hipp, BSW Solar

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