

GPB<sup>TM</sup>  
IX

FINAL  
PROGRAMME

New Ideas  
for Production  
Practical Case Studies!

GRAND PANEL  
High Profile Discussion  
of the Industry Today

Workshops  
Learn Practises.  
Register Today!

GLASS PROCESSING DAYS  
JUNE 17-20 • TAMPERE • FINLAND 2005

WORK-  
SHOPS  
June 16-17

The Leading International Architectural and Automotive Glass Conference  
Glass Product Exhibition



## Welcome to the Decision-makers' Summit

This is the 9th time that I have the privilege to extend a welcome to the Glass Processing Days.

While we follow the established format of this traditional event in June 17 – 20, 2005 we would like to place a special emphasis on the practical aspects of applying the findings of advanced glass processing and the use of glass. By building a strong base of case studies into the program we plan to honor the practical hands-on format that has proven to be so useful for those attending. The main mission of the Glass Processing Days, of course, remains the same as before – to increase know-how and advance application of glass through fruitful and transparent interaction between the key players in the market.

This time, with the conference scheduled so close to the longest day of the year on June 21st, we take special advantage of the Nordic light to make the formal and social aspects of the conference as pleasant and efficient as possible. Welcome to what we hope will be yet another highly successful forum for the decision-makers of glass processing. We warmly invite your professional input.

Best regards

Jorma Vitkala  
Chairman

Glass Processing Days Organizing Committee

CONFERENCE &  
GLASS PRODUCT EXHIBITION  
June 17 – 20, 2005

WORKSHOPS  
June 16 – 17, 2005

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Photo by courtesy of Werner Sobek Ingenieure

## 9<sup>th</sup> GPD has a Special Focus on Case Studies

### Case Studies in GPD 2005 includes Process, Product, Building and Business Case Studies

As a novelty GPD 2005 presents many high profile case studies. GPD's idea is to provide our participants with a pragmatic approach to different glass processing possibilities and challenges. Analyzing real cases is the best way to learn and it also gives an opportunity to use the experience of others to develop your own businesses, processes, product or construction.

These companies have confirmed their participation to present their own case studies:

- DMS Glass Pty from Australia
- BGT Bischoff Glastechnik from Germany
- Fuji Hardware Co from Japan
- AGI Glass (Pty) Ltd. from South Africa
- Lumiglass from United Arab Emirates
- Sefar Inc. from Switzerland & Saint-Gobain Glass Deutschland GmbH from Germany
- Viracon from USA

These case studies will cover subjects from processing and product information to interesting business and product cases from different market situations worldwide.

## Opening Program

16.00 **Opening program**

16.30 **Opening Addressee: Shifting Markets Appealing for Innovative Glass Products**  
Mr. Arthur Ulens, CEO,  
Glaverbel



17.00 **Competitive Success Through Supply Chain Management in the Glass Industry**  
Prof. Ann Vereecke,  
Professor in Global Manufacturing and Supply Chain Management,  
Vlerick Leuven Gent Management School



17.45 Coffee

18.15 **The Evolution of the Global Architectural Glass Market: 1990 to 2010.**  
Mr. Nick Limb, Ducker Research Company, Inc.



## Plenary Speakers:



Sunday June 19<sup>th</sup> 2005:  
**Innovative Applications of Glass in Structures**  
Jens Schneider,  
Schlaich Bergermann & Partners



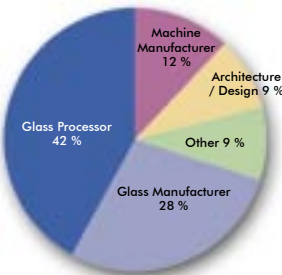
Monday June 20<sup>th</sup> 2005:  
**Challenges and Solutions in Architectural Glass Technology - Recent SOM Work**  
Mr. Keith Boswell,  
Skidmore, Owings & Merrill

## GPD 2003 The World's Largest Glass Conference

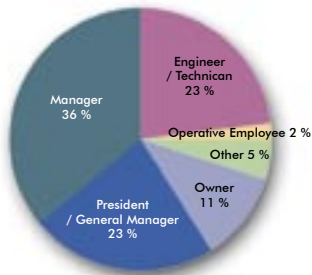
Over 870 participants from 60 countries, 200 presentations, 18 short courses, Glass Exhibition.

**Who should attend:** Glass processors and manufacturers, material and machinery suppliers, glaziers, architects, construction specialists, university representatives, window and IG-unit manufacturers, consultants, and representatives from the automotive industry and research institutions.

Audience divided by company activity



Audience divided into organizational levels



## Architectural – Glass Processing

### Safety Glass Processing Case Studies

Chairmen: Mauri Leponen, Tamglass Ltd. Oy & Francis Serruys, Saint-Gobain Glass Exprover

9.00	<b>Edge Quality and Glass Processing</b> Andrea Corti, Z.Bavelloni S.p.A.
9.30	<b>Strength of Float Glass Plates with Drilled Holes</b> Michael Emonds, Aachener Chemische Werke
10.00	<b>Quality Control</b> Peter Anderson & Garret Henson, Viracon
10.30	Coffee break
11.00	<b>Automatic Tempering Process and Low-E</b> Tarmo Pesonen & Toivo Janhunen, Tamglass Ltd. Oy
11.30	<b>The Critical Relationship Between Glass Surface Quality and the Tempering Rollers</b> Ren Bartoe, Vesuvius
12.00	Lunch Break
13.30	<b>Thermally Toughened Glass Properties and EN 12600 Mechanical Compartment</b> Guy van Marcke de Lummen, Glaverbel sa
14.00	<b>The Stability of Fractured Toughened Glass</b> Graham Dodd, Arup Materials Consulting
14.30	<b>Tempered Bent Glass Quality</b> Thomas Noe, Glasstech
15.00	Coffee break
15.30	<b>Processing Factors for High Speed and Large Glass Sizes</b> Eero Jalkanen, Tamglass Ltd. Oy
16.00	<b>Fine Conductor Printing onto Glass</b> Roland Drach, SEFAR Inc. Printing Division & Frank Rubbert, Saint-Gobain Glass Deutschland GmbH
16.30	<b>Grand Panel</b>

## Architectural – Use of Glass

### Energy Performance in Buildings

Chairmen: Werner Wagner, Sika Engineering Silicones Srl & Andrea Compagno, Andrea Compagno Fassaden Planung und Beratung

<b>Block I: The Basics of Energy Management</b>	
9.00	<b>Energy Performing Facades: State of the art</b> Andrea Compagno, Andrea Compagno Fassaden Planung und Beratung
9.45	<b>Field Testing of Dynamic Facade Controls in Highly Glazed Buildings for Energy Efficiency and Comfort</b> Stephen Selkowitz, Lawrence Berkeley National Laboratory
10.30	Coffee break
<b>Block II: Solar Protection</b>	
11.00	<b>Solar Protection Devices Combined with Glazing</b> Franz Feldmeier, University of Applied Sciences, Rosenheim, Germany
11.20	<b>Energy Efficiency of Switchable Glazing in Office Buildings</b> Arne Roos, Uppsala University
11.40	<b>Experiences of Piloting Window Energy Rating System in Finland</b> Kari Hemmilä, VTT Building and Transport
12.10	Lunch Break
<b>Block III: Energy Control by Glazing</b>	
13.30	<b>The Performance of Low-E Hard Coated Glazing in Cold and Warm Climates</b> Stephen Dain, University of New South Wales
14.00	<b>Energy Management – Post Glazing Solutions – High Tech Films</b> Steve Harrhy, Pentagon Protection Plc
14.30	<b>Energy Saving in Structural Glazing Facades</b> Werner Wagner, Sika Engineering Silicones Srl
15.00	Coffee break
<b>Block IV: Standards of Energy Management in Buildings</b>	
15.30	<b>Transparent Energy? Intelligent Dutch Energy Performance Regulation Allows for Highly Transparent Architecture</b> Johan Koudijs, DGMR
16.00	<b>Energy Performance of Facades and Buildings – IEA as Support for the European Directive?</b> Werner Platzer, Fraunhofer ISE Freiburg

Formal exchange of ideas is sometimes just that – formal. Many times the boldest visions are born from unusual discussions among knowledgeable participants. *These are the people you find at the GPD!*

## Automotive

### Advanced Automotive Glazing Development

Chairmen: Donald W. Ableson, General Motors Corporation & Vincent I. Henry, Henry Technology Solutions, L.L.C & Michael Robinson, Fiat Auto S.p.A.

9.00	Keynote speaker: <b>Automotive Glazing leads Future Vehicle Styling Trends</b> Donald W. Ableson, General Motors Corporation
9.30	<b>Automotive Glass Parts: Requirements for the Glass Industry</b> Bernard Jean Savaète, BJS.Différences
10.00	<b>Above Us Only Sky</b> Ashley Torr, Pilkington Automotive
10.30	Coffee break
11.00	<b>Cielo and Panoramic Windshield Manufacturing Challenges</b> Alan Woodward, Pilkington Automotive
11.30	<b>Thermal Comfort Evaluation for Automotive Glass</b> Hisashi Ogawa, Nippon Sheet Glass Co. Ltd.
11.50	<b>Multi-Layer Technology for Sound and Solar Protection</b> Jiro Miyai, Sekisui Chemical Co. Ltd.
12.10	Lunch Break

### Advanced Automotive Glazing Development (continues)

Chairmen: Makoto "Rocky" Iwase, Asahi Glass Co. Ltd. & Karl-Josef Ollfisch, Saint-Gobain SD

13.30	<b>The Need of Innovation for Solar Control Technologies</b> Giovanni Manfrè, MG Consult S.r.l.
14.00	<b>Cutting Glass with Laser in a Free-Form Shape</b> Michael Degel, Jenoptik Automatisierungstechnik GmbH
14.30	<b>Head up Display – From High Tech Jet Fighters to Your Car Windscreen</b> Michel van Russelt, Solutia
15.00	Coffee break
15.30	<b>PCVD and PVD Coating Techniques for Plastics and Glass in Automotive Applications</b> Jutta Trube, Leybold Optics GmbH
16.00	<b>Every Good Automotive Glass Production Machine Deserves a Reliable Camera Control Gate</b> Kimmo Simomaa, CCD Photonics Ltd.
16.30	<b>Grand Panel</b>



For the first time in GPD, sessions with AIA/CES logo provide CES credits to registered architects. [www.aia.org/conted](http://www.aia.org/conted)

## Committee Members

### Architectural Program Committee Members:

- Mr. Stefano Bavelloni, Z.Bavelloni S.p.A.
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- Mr. Graham Dodd, Ove Arup & Partners Façade Engineering
- Mr. Axel H. Giesecke, Dow Corning
- Dr. Russell Hill, Vacuum Coating Technology
- Dr. Helmut Hohenstein, Institut für Unternehmensforschung und Unternehmensführung, Universität Halle
- Dr. Leon Jacob, Jacob & Associates Pty Ltd.
- Mr. Mauri Leponen, Tamglass Ltd. Oy
- Mr. Stephen Lipscombe, Logic Chain Marketing Communications
- Mr. Johan Mortelmans, KSE — Trosifol Division
- Mr. Steve Nadel, Vacuum Coating Technology
- Mr. Tapio Nissinen, Glastech Oy
- Mr. Frank Rubbert, Saint-Gobain Glass Deutschland GmbH
- Mr. Pentti Salin, Tamglass Ltd. Oy
- Dr. Gérard Savineau, Solutia Europe SA/NV
- Mr. Francis Serruys, Saint-Gobain Glass
- Mr. Tahvo Sutela, Pilkington
- Mr. Lasse Vahtera, The Finnish Association of Architects
- Mr. Jorma Vitkala, GPD Chairman
- Dr. Werner Wagner, Sika Engineering Silicones Srl
- Mr. John Brian Waldron
- Dr. Norbert Wruk, Pilkington Deutschland AG

### Automotive Program Committee Members:

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- Mr. Vincent I. Henry, Henry Technology Solutions, L.L.C
- Mr. Makoto "Rocky" Iwase, Asahi Glass Co. Ltd.
- Dr. Douglas Keir, DuPont (U.K.) Limited
- Mr. Karl-Josef Ollfisch, Saint-Gobain Sekurit
- Dr. Klaus Preusser, MPA NRW
- Mr. Michael Robinson, Fiat Auto S.p.A.
- Mr. Michel Van Russelt, Solutia Europe SA/NV
- Mr. Tommi Salenius, Tamglass Ltd. Oy
- Mr. Gerhard Tünker, Ferro Corporation
- Mr. Grégoire van de Velde, Automotive Strategy
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- Dr. Alan Woodward, Pilkington Automotive

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- Mr. Stephen Selkowitz, Ernest Orlando Lawrence Berkeley National Laboratory
- Mr. Tuomo Sirkiä, SAFA
- Dr. Koichi Suzuki, SurfTec Transnational Co., Ltd.
- Dr. Antonio Tucci, Stazione Sperimentale del Vetro
- Mr. James R. Varner, School of Ceramic Engineering and Materials Science, NYC College of Ceramics, Alfred University

## Architectural – Glass Processing

### Advantages Through Insulating Glasses

Chairmen: Helmut Hohenstein,  
Institute for Operation Research and Business Management &  
Tapio Nissinen, Glasstech Oy &  
Manfred Pröbster, Henkel Teroson GmbH

9.00	<b>Introduction: Hohenstein, Nissinen, Pröbster</b>
9.10	<b>Glass in Building – Challenges for Energy Efficiency and Comfort</b> Helmut Hohenstein, Institute for Operation Research and Business Management
9.35	<b>Computer Aided Prediction of Drying Out Performances of Insulating Glass Units</b> Hans Höfer, Grace GmbH & Co. KG
10.00	<b>Russian Vacuum IGU – Myth or Reality</b> Alex Spiridonov, Russian Energy Efficient Window Manufacturers Association (APROK)
10.30	Coffee Break
11.00	<b>The Impact of the Quality of the Insulating Glass (IG) Unit Assemblage on Moisture Penetration</b> Rolandas Samajauskas, Institute of Architecture and Construction of KTU
11.20	<b>Stainless Steel Air Spacers – The Warm Edge Advantage</b> Dennis Raske, Allmetall
11.40	<b>Just in Time Online Automation of Butyl Extrusion Breaking New Boundaries in Insulating Glass Quality</b> Gerhard Reichert, Edgetech IG Inc.
12.00	Lunch break

### PLENARY SPEAKER: Innovative Applications of Glass in Structures

Jens Schneider, Schlaich Bergermann & Partners

14.00	<b>Highly Efficient New Air Spacer System for Improved I.G. Production and Quality</b> Karl Ricks, Erbslöh Aluminium GmbH
14.20	<b>Gas Filled IGU: Measurements according to EN 1279-3 on Units and Sealants</b> Ennio Mognato, Stazione Sperimentale Del Vetro
14.40	<b>Calculating the Theoretical Life Expectancy of an Insulating Glass Unit</b> Werner Lichtenberger, TruSeal
15.00	Coffee Break
15.30	<b>How Compatibility Tests Lead to the Introduction of Compatible Adhesives and Sealant Systems</b> Randolf Karrer, Henkel Teroson GmbH
15.55	<b>Determination of the Optical Characteristics of Glazing: Measurements and Calculations</b> Robert Davies, Pilkington Plc
16.20	<b>System Integration of Frame and Glass</b> Stephen Field, Intra Product Development Canada /Bystronic
16.45	<b>Panel Discussion - IG-Units</b>

## Architectural – Glass Processing

### New Product Developments and Applications

Chairmen: Norbert Wruk, Pilkington Deutschland AG &  
Frank Rubbert, Saint-Gobain Glass Deutschland GmbH &  
Alain Jardinet, Glaverbel Group

#### Block I: Adhesives and Sealants for Glazing

9.00	<b>Adhesives Fixing in Glass Construction</b> Bernhard Weller, Technische Universität Dresden
9.30	<b>Compatibility – The Rocky Path to Making Sure Things Do Not Go Wrong!</b> Harald Kahles, Kömmerling Chemische Werke
10.00	<b>New Bonding Technologies for Windows to Bring Benefits Throughout the Entire...</b> Jean-Paul Hautekeer, Dow Corning
10.30	Coffee break
<b>Block II: New Approaches to the Mechanical Performance of Glazings</b>	
11.00	<b>Glass Foil – An Innovative Glazing Product</b> Jens Schneider, Schlaich Bergermann und Partner
11.20	<b>Stabilization of Building Envelopes with the...</b> Frank Wellershoff, RWTH Aachen University – Institute of Steel Construction
11.40	<b>In Plane Loaded Glass Panes in Facades</b> Edwin Huveners, Eindhoven University of Technology
12.00	<b>The Design, Assembly &amp; Performance of Glass Columns</b> Mauro Overend, School of the Built Environment – University of Nottingham
12.20	Lunch break

#### Block III: Enhanced Glazing Performance by Coating and Interlayer Technologies

14.00	<b>Nanotech Coatings and UV Inhibitor Adhesives for Solar Window Films</b> Jan Williem Holst, ORPRO Co. LLC
14.20	<b>Development of Electrochromic Devices on Glass for Smart Windows Other Applications</b> Panayiotis Yianoulis, University of Patras
14.40	<b>A New Standardized Method to Characterize Acoustic Properties of Laminated Glass</b> Marc Rehfeld, Saint-Gobain Glass CDI
15.00	Coffee break
15.30	<b>Benefit of Using Antireflective Glazing in Solar and Architectural Applications</b> Thomas Hofmann, FLABEG Solarglas GmbH & Co. KG
16.00	<b>Glass Facade Elements with Internal Fluid Flow</b> Werner Platzer, Fraunhofer ISE Freiburg
16.30	<b>The "Coating" Revolution: Changes in the Market of Temperable Coatings - A Vision of Today and the Future</b> Denis Ramboux, Glaverbel

# Architectural – Use of Glass

## Safety Glass in Buildings

Chairmen: Leon Jacob, Jacob & Associates Pty Ltd. & Keith Boswell, Skidmore, Owings & Merrill

### Block I: General

- 9.00 **Keynote speaker: Safety Glass Performance in Buildings – Current Test Methods and Selection Criteria**  
Leon Jacob, Jacob & Associates Pty Ltd.
- 9.30 **Invited speaker: Nickel Sulphide Inclusions and Sustainable Glass Structures**  
Abhi Ray, University of Technology, Sydney
- 10.00 **Shadow Boxes**  
Keith Boswell, Skidmore Owings & Merrill

10.30 Coffee break

### Block II: Structural Analysis of Glass for Use in Buildings

- 11.00 **Structural Analysis for Point Fixing of Glass Under in-plane Loads**  
Iris Maniatis, Technische Universität München
- 11.20 **Structural Bearings in Holes in Glass**  
Brian Eckersley, Eckersley O'Callaghan Structural Design
- 11.40 **Friction – Grip Bolted Connections for Structural Glass Elements: Practical Solutions Using Experimental and Numerical Coupled Approach**  
Karine Morcant, Centre Scientifique et Technique du Batiment

12.00 Lunch Break

### PLENARY SPEAKER: Innovative Applications of Glass in Structures

Jens Schneider, Schlaich Bergermann & Partners

### Block III: Glass Design Criteria and Techniques – Incl. the Keynote Address

- 14.00 **Plate Buckling of Glass Panels**  
Andreas Luible, Schmidlin Ltd. Facade Technology
- 14.30 **The Dangers of Using a Probabilistic approach for Glass Design**  
Ignatius Calderone, Ove Arup Pty Ltd.
- 14.50 **Design Rules for Glass Panes Fixed by Embedded Point Fixings**  
Tobias Herrmann, University of the German Armed Forces München

### Block IV: Bomb Resistance using Glass – Design and Selection Criteria

- 15.10 **International Standard for Arena Testing of Blast Resistant Glazing**  
Robert Stephens, UK Home Office, Police Scientific Development Branch
- 15.30 Coffee break
- 16.00 **Laminated Glass for Blast Mitigation: Role of Interlayer Properties**  
Stephen Bennison, E.I. DuPont Nemours & Co. Inc.
- 16.20 **Testing of Bomb Resistant Glazing Systems**  
Caroline Kranzer, Fraunhofer Institute for High-Speed Dynamics
- 16.40 **Total Glass and Glazing Safety, Security and Protection**  
Graham Bannerman, Pentagon Filmtek Limited

# Automotive

## Development of Automotive Glass Technology

Chairmen: Doug Keir, DuPont UK Ltd. & Alan Woodward, Pilkington Automotive & Michel van Russelt, Solutia

- 9.00 **Keynote speaker: High Performance Automotive Glass – The Need for New Advanced Technology**  
Tommi Salenius, Tamglass Ltd. Oy

- 9.30 **Cutting Glass by Solid-State Lasers**  
Carsten Büsching, Lazer Zentrum Hannover

- 10.00 **Automotive Glass Decorating Products: History, Current and Future Developments and Requirements**  
Nick Westra, Johnson Matthey Glass

10.30 Coffee break

- 11.00 **New Horizons in Glass Heating**  
Vlad Sklyar, Gyrotron Technology Inc.

- 11.30 **Numerical Modelling of Shaping and Strengthening of Glass Sheets for Automotive and Buildings**  
Li Zhang, Glass Service Improve

- 12.00 **Improve Your Rearlite Grid Inspection System**  
Vern Lappe, Ircon Inc.

12.30 Lunch Break

### Modern Design in Glazing – Glass Bonding in Automotive

Peter Born, Henkel Technologies/Henkel Teroson

- 14.30 **In Line Inspection of Windscreen**  
Marc Rosenbaum, Micro-Epsilon France

## Environmental Awareness

Chairmen: Tommi Salenius, Tamglass Ltd. Oy & Klaus Preusser, MPA NRW

- 15.00 **End-of-Life Vehicle Directive**  
Peter Kairies, Pilkington Automotive

15.30 Coffee break

- 16.00 **State of Art Separation Technology for the Processing of Recycled Glass**  
Peter Mayer, S+S Metallsuchgerate & Recyclingtechnik

- 16.30 **The Dismounting Glass on ELV Needs a Low Cost Technology: Debonding**  
Giovanni Manfrè, MG Consult srl

- 17.00 **Panel Discussion - The Future of Automotive Glazing**

**Architectural – Glass Processing**

**Laminated Glass – Process and Trends**

Chairmen: Gerard Savineau, Solutia Europe S.A./N.V. & Hans Morfelmans, KSE — Trosifol Division AG

<b>Block I: Impact Resistance and Postbreakage Behaviour</b>	
9.00	<b>Impact on Laminated Glass - Postbreakage Behaviour Assessment</b> Emmanuel Nourry, Saint-Gobain Glass France
9.30	<b>Measuring the Delaminating Energy in Laminated Safety Glass</b> Uwe Keller, KSE — Trosifol Division AG
10.00	<b>A Special Fixation with Which the Broken Laminated Glass is Prevented from Falling Down</b> Jürgen Neugebauer, University Technology
10.30	Coffee break
<b>Block II: Toughened Laminated Glass Process</b>	
11.00	<b>Poly blends with Lanthanum Hexaboride for Use in Laminated Solar Control Glazing</b> Keith Fisher, Solutia
11.30	<b>Toughened Laminates - How to Prevent an Architects Dream Becoming a Manufacturers Nightmare? A Process Case Study</b> John Gilleeney, AGI Glass (Pty) Ltd.
12.00	Lunch break

**PLENARY SPEAKER: Challenges and Solutions in Architectural Glass Technology - Recent SOM Work**  
Keith Boswell, Skidmore, Owings & Merrill

<b>Block III: New Interlayers Development (including Solar Control)</b>	
14.00	<b>Enhanced Edge Stability with Structural Glass Laminates</b> Phillip Davies, DuPont (Australia) Ltd.
14.30	<b>Strength and Deformation Behaviour of Laminated Glass</b> Tammy Amos, E.I. Dupont de Nemours
15.00	Coffee break
<b>Block IV: Design of Laminated Glass and Standards</b>	
15.30	<b>Experimental Study on Different Interlayer Materials for Laminated Glass</b> Bernhard Weller, Technische Universität Dresden
16.00	<b>Specialist Applications for Cast in Place Laminating</b> Harald Kahles, Kömmerling Chemische Werke
16.30	<b>New Architectural Standards for Laminated Safety Glass in Practice</b> Holger Stenzel, KSE — Trosifol Division AG

**Architectural – Glass Processing**

**GPD Coating Day**

Chairmen: Russ Hill, VACUUM COATING Technologies, Inc. & Steve Nadel, VACUUM COATING Technologies, Inc. & Enrico Ceriani, Glaverbel Group

9.00	<b>Keynote Speaker: Processing of Large Area Soda Lime Glass Using Linear Ion Beams</b> V. S. Veerasamy, Guardian Industries
9.30	<b>Prospects for Reactive Deposition of Custom Index Optical Films by Pulsed Sputtering</b> David Christie, Advanced Energy Industries, Inc.
10.00	<b>Closed-Drift Linear Ion Sources for Large Area Architectural Glass Coating Applications</b> Denis M. Shaw, Advanced Energy Industries, Inc.
10.30	Coffee break
11.00	<b>Improvement of Low-E Coatings by Modification of Seed Layer Surfaces</b> Gerd Kleideiter, Applied Films GmbH
11.20	<b>Coatings for Decorative Glass Surfaces Based on Chemical Nanotechnology</b> Michael Overs, Nanogate Coating Systems GmbH
11.40	<b>A New Generation of Temperable Coatings</b> Matthias List, VACUUM COATING Technologies GmbH
12.00	<b>The New Eco-Glass by Sputtering Using the Seed Layer Technique</b> Toshiaki Anzaki, Nippon Sheet Glass Co. Ltd.
12.20	Lunch break



## Market and Trends

### Local vs. Global Market – Different Products

Chairmen: Stephen Lipscombe, Logic Chain Marketing Communications & Pentti Salin, Tamglass Ltd. Oy

9.00	<b>Trends of Marketing Opportunities Through Professional Development</b> Thomas Lowther, ALA/CES & Mark Johnson, Whirlpool Corporation
9.20	<b>Influence of Standards and Regulations to Market and Trends</b> John B. Waldron
9.40	<b>Trends and Choices in Glass Selection</b> Graham Dodd, Arup Materials Consulting
10.00	<b>Trends in North American Residential Window Market</b> John Swanson, Window & Door/National Glass Association
10.30	Coffee break
11.00	<b>Glass Market of Russia</b> Lev Shakhnes, Russian Energy Efficient Window Manufacturers Association
11.20	<b>Flexibility on Glass Decoration – Digital Printing for Ceramic Frit</b> Christian Schweikert, Thieme GmbH & Co. KG
11.40	<b>Automated Processing of Decorative Applications for the IG Industry</b> Harald M. Apfelfthaler, R&R Sondermaschinen GmbH
12.00	<b>Development Tendencies in the Window...</b> Ulrich Sieberath, IFT Rosenheim
12.20	Lunch break
13.30	<b>PLENARY SPEAKER: Challenges and Solutions in Architectural Glass Technology - Recent SOM Work</b> Keith Boswell, Skidmore, Owings & Merrill

## Architectural – Use of Glass

### Building Projects Case Studies

Chairmen: Axel Giesecke, Dow Corning & Gerd Bischoff, BGT Bischoff Glastechnik AG

9.00	<b>Block I: Main Airport Center Frankfurt, Germany: From a Vision to a Real Technical Design Introduction to Block I</b>
9.10	<b>Design &amp; Planning Details</b> Petar Reich, Architektur/Technik/Fassade
10.00	<b>Design Realization, Production Information</b> Zoran Stevanovich, Bug AluTechnic GmbH
10.25	<b>Q&amp;A for Block I / Wrap Up</b>
10.30	Coffee Break
11.00	<b>Block I: Main Airport Center Frankfurt, Germany: Glass Processors Details and Challenges</b>
11.00	<b>Introduction to Block II</b>
11.10	<b>Complex Challenges and Logistic Requirements for a Specialist Glass Processor at Reference Projects Like the MAC</b> Ariane Bischoff, BGT Bischoff Glastechnik AG
11.35	<b>Design Details and Requirements for High Performance Structural Glazing Adhesives and Sealants</b> Axel H. Giesecke, Dow Corning
12.00	<b>Latest and Most Up-to-date Coating Technology for High Performance Glass Products</b> Dirk Seidel, Guardian
12.25	<b>Q&amp;A for Block II / Wrap Up</b>
12.30	Lunch Break

## Architectural – Glass Processing

### Process Design Case Studies

Chairman: Mauri Leponen, Tamglass Ltd. Oy

14.00	<b>The Realisation of Complex Projects Supported by Customized IT Solutions</b> Ariane Bischoff, BGT Bischoff Glastechnik AG
14.30	<b>Growth by Diversification</b> Gerard McCluskey, DMS Glass
15.00	Coffee Break
15.30	<b>Factory and Process Design – From Idea to Practice</b> Harri Perämaa, Lumiglass
16.10	<b>Just-in-time Glass Processing in Japan</b> Kunio Hirasawa, Fujii Hardware Co. Ltd.
16.30	<b>On-Line Laser Cutting of the Float Ribbon</b> Wolfgang Friedl, Grenzobach Maschinenbau GmbH
14.00	<b>Not Just Glass Fins – MIT Brain and Cognitive Science</b> Neil McClelland, Arup
14.30	<b>Glass and Geometry</b> Niccolo Baldassini, RFR
15.00	Coffee Break
15.30	<b>Extraordinary Shapes with Ordinary Costs</b> Mauri Saksala, Tamglass Ltd. Oy
16.00	<b>Structural Design of the Museum Cone</b> Yoshinori Nito, Engineers network Co.
16.30	<b>Structural Glass Engineering – A Review of Project Specific Testing</b> Benjamin Beer, whitbybird Engineers

## Poster Exhibition

The Glass Processing Days Conference received an impressive amount of high quality abstracts. The GPD Program Committee had a very demanding task in selecting the oral presentations from the excellent abstracts. Therefore, some of these abstracts were chosen to be presented in a poster section. This more personal presentation mode allows communication between the presenter and the delegate.

## Architectural – Processing

### Safety Glass Processing Case Studies

**Measurement of Complete Residual Stress Fields in Tempered Glass Plates**  
Hillar Aben, GlasStress Ltd.

**Surface Compression, Fragmentation and Mechanical Strengths of Heat Treated Glass for Building Application**  
Matteo Schiavonato, Stazione Sperimentale Del Vetro

**Test Pen for the Heat-Soak Treatment**  
Ferdinand Trier, Munich University of Applied Sciences

### Advantages Through Insulating Glasses

**A Study on Outgassing of Evacuated Glazing Under Optical Illumination**  
Nelson Ng, University of Sydney

**WARM EDGE – Making the Right Choice**  
Johnny Holm, Rolltech A/S

**Large Area Electrochromic Safety Glass**  
Matthias Rottmann, GESIMAT GmbH

**Optical Quality Control of Insulated Glass**  
Kai Vogel, Vipotron GmbH

**Highly Efficient New Air Spacer System for Improved I.G. Production and Quality**  
Karl Ricks, Erbslöh Aluminium GmbH

### New Product Developments and Applications

**High Performance Solar Control Material**  
Tomomi Ujite, Kureha Chemical Industry Co., Ltd.

**Strengthening Technique of High Strain Point Glass by Femtosecond Laser Irradiation**  
Mizuki Nishi, Central Glass Co., Ltd.

**Digital Design Methodology for Glass Design and Manufacture**  
Ross Head, Swansea Institute

**Framing Systems for Facades of Non-Standard Geometry**  
Karel Vollers, Delft University of Technology

**Photometric and Imaging Characterisation for Evaluating the Visual Performances of Translucent Glass Panels**  
Giuseppe Rossi, IENGF

**The Use of Colloidal Silica Solutions in the Perspective Technologies of Fire-Resistant Glass and Multi-Layer Decorative Panels**  
Alex Brykov, St. Petersburg Technological Institute

**Atmospheric Plasma Jet for Glass Processing**  
Mario Moniz, Air Products & Chemicals Inc.

**Results of Durability Testing of Antireflecting Glazing**  
Michael Köhl, Fraunhofer ISE

In GPD 2005 the Poster Exhibition is arranged in the same space as our Glass Product Exhibition as well as all coffees and lunches. This guarantees the best possible visibility also for the poster presenters. During coffees and lunches and also by the end of every conference day the poster presenters are given 5-7 minutes per presenter to present their posters in the Exhibition Avenue.

**Durability of Float Glass and Glassceramics with Zero Thermal Expansion Coefficient**  
Yurii Rodichev,  
Institute for Problems of Strength of NAS of Ukraine

**Glued Connections for New Steel-glass-structures**  
Frank Wellershoff, RWTH Aachen University –  
Institute of Steel Construction

**Method of Investigation of the Fracture Toughness of Junctions for Elements Made from Float Glass and Glassceramics Zerodur**  
Yurii Rodichev,  
Institute for Problems of Strength of NAS of Ukraine

**New Method to Strengthen Glass Edges by CO<sub>2</sub> Laser Irradiation**  
Yoshinori Akamatsu, Central Glass Co. Ltd.

**Digital Printing on Large Area Glass Sheets**  
Ferdinand Trier, Munich University of Applied Sciences

### Laminated Glass – Process and Trends

**Evaluation of the Acoustic Attenuation of Radiation-Cured Uvekol™ Cast Resins in Glass Laminates: An Experimental Design Approach**  
Patrice Roose, Surface Specialities S.A./N.V.

### GPD Coating Day

**Coater Production Management System and Handling Solutions**  
Egbert Wenninger, Grenzenbach Maschinenbau GmbH

**Comparing the Energy Performance of Different Glass Coatings**  
Rein de Vries, Arkema

**Innovative Magnetron Sputter Solutions for Large Area Glass Coating Applications**  
Wilmert De Bosscher, Bekaert Advanced Coatings

### Process Design Case Studies

**Steady Glass Flow – Optimum Output**  
Klaus Mühlhans, ALBAT + WIRSAM Software AG

**4layer: An Idea to Bridge the Gap Between Machine Control Units and the Production Planning System**  
Rolf Pfiffner, Bystronic Maschinen AG

**Process Oriented Glass Cutting – Vertical Solution "Verticut with Feeder"**  
Hans Gfeller, Bystronic Maschinen AG

**Process Air Conditioning in the Glass Industry and the Glass Processing Industry**  
Klaus Kallée, Wiessner GmbH

# Architectural – Use of Glass

## Energy Performance in Buildings

### Performance Assessment for Solar Shading Devices – State of the Art

Michael Köhl, Fraunhofer ISE

### Evaluation of the Environmental Profile of Advanced Electrochromic Glazing

Panayiotis Yianoulis, University of Patras

### Past and Future of Double-skin Facades

Giulia Andreotti, Giulia Andreotti Architetto

### Silicones in Structural Glazing: Performance, Versatility, Protection, Lifestyle and Sustainability

Centre Européen des Silicones (CES)

### Silicones: Meeting the Demands of a Modern Society

Centre Européen des Silicones (CES)

## Safety Glass in Buildings

### Design for Glazing Protection Against Terrorist Attacks

Sergio De Gaetano, whitbybird Engineers

### Designing for Glass in Buildings

Naimeh Khorasani, LTH

### Some Steps in the Methods of the IGU Characteristics Calculation Evolution

Stanislav Chesnokov, Moscow Engineering Physics Institute

### Flexibel, Consistent and Safe Design of Structural Glass Elements

Matthias Haldimann, EPFL ENAC IS ICOM

### Point-supported Bottom- And/or Rear-trussed Glass Panels

Dirk Schulte, DORMA-Glas GmbH

### Selection of Glazing Materials for Blast Protection

Ryan Sukhram, Arup Security Consulting

### New Technical Regulation System in Russia

Alexander Chesnokov, OAO Glass Institute

### Analysis of the Flat Glass Strength Properties

Nadezhda Kondratieva, Testing Center of SGASU

### New Generations of Point Fixings – Architecture and Safety Aspects

Geralt Siebert, University of the German Federal Armed Forces Munich

### Structural Behaviour of Plane Glass Surface Structures Under Compression Stress

Oliver Englhardt, Technical University Vienna

### Effect of Residual Stresses on the Buckling Behaviour of Glass Beams

Jan Belis, Ghent University LMO

### The Use of Glass Panels in Noise Barriers

Bernhard Weller, Technische Universität Dresden

### The Selection of Glazing Materials for Blast Protection

Ryan Sukhram, Arup Security Consulting

### Glass Type Factors Used in Safety Glass Selection – A Critical Review

Leon Jacob, Jacob & Associates Pty Ltd.

### Easy Design of overhead Glazing by Using Design Tables

Barbara Siebert, Ingenieurbüro Dr. Siebert

## Building Projects Case Studies

### The Joints

Freek Bos, Delft University of Technology

### The Future

Frederik Veer, Delft University of Technology

### Design and Testing of Glass Purlins for a 100 m<sup>2</sup> transparent pavilion

Jan Belis, Ghent University LMO

### The Evaluation

Freek Bos, Delft University of Technology

### Designing and Planning the Worlds Biggest Glass Experimental Structure

Freek Bos, Delft University of Technology

### Case Study of the Apple Computer Glass Structures 2001–2004

James O'Callaghan, Eckersley O'Callaghan Structural Design

### Ultrasonic Technique for Sheet Glass Structure Investigation

Vladimir A. Zubkov, Testing Centre of SGASU

### Design Developments in One of the World's Largest Glass Walls

Richard Green, Green Facades Pty Ltd.

### All-Glass Structures with External Glass Frames

Philip Wilson, Malishev Wilson Engineers

### The Glass Dome

Lucio Blandini, ILEK University of Stuttgart

### The Column

Elke van Nieuwenhuijzen, Delft University of Technology

### 10 Years of ZAPPI Research

Frederik Veer, Delft University of Technology

### Stainless Steel Reinforced Glass Cantilever Beams

Christian Louter, Delft University of Technology

### A New Roof for the XIIIth Century "Loggia de Vicari"

(Arquà Petrarca - PD - Italy) Suspended from Structural Glass Trusses: A Case Study

Michel Palumbo, Vetrostrutturale

### The Possibilities of Glassbond Adhesives

Frederik Veer, Delft University of Technology

### The 'Glance' Project: Cast Glass and Safety Lamination in Architectural Applications

Andre Chaszar, O-Design Research and Consulting

### The Strength and Failure of Glass in Bending

Frederic Veer, Delft University of Technology

### Glazed Atrium for Shiodome Sumitomo Building, Tokyo

Shigeru Hikone, Arup Japan

## Local vs. Global Market - Different Products

### The Primeval Power of Structural Glass Sculptures Creates Facades Unknown Before

Meeli Vällö-Köiva, FIE Meeli Vällö-Köiva

### Second Danish Low-E Campaign

Carl Axel Lorentzen, Pilkington Danmark A/S

## Development of Automotive Glass Technology

### Lay-Up & Assembly System for Laminated Automotive Safety Glass

Lutz Gerold, Maschinenbau Gerold GmbH & Co. KG

### Manufacturing of Colored Borosilicate Flat Glass

Mohammed Zenhoum, Faculty of Applied Arts

### Non-Contact Flexible Dimensional Measurement of Automotive Glass

Leigh Sargent, DMS International



**Workshops will take place both before and during the conference. They will provide participants with the opportunity to acquire more in-depth knowledge of various topics. These 4-8-hour courses will each focus on one specific subject. Participants will obtain detailed information on various subjects, answers to their questions and updates on the latest developments.**

There will be a specific application for workshops, and the organizer of the workshops has the right to select participants. The deadline for registration is 31 May, 2005. The number of participants will be limited to 15 persons for the practical workshops and 20-50 persons for the theoretical workshops. Please note that in the event of an insufficient number of participants by the deadline, the workshop may be cancelled by the workshop organizer. If you wish to participate in one or more of the workshops, please indicate so on the Glass Processing Days application form.

### **Workshops – an Unique Opportunity!**

- Benefit from the expertise of the speakers – many of them have over 30 years of experience
- Unique access to important know-how with a minimum of extra time and effort



### **Price for one Workshop:**

**Price 1, Before 31 March, 2005:** EUR 100

**Price 1, From 31 March to 31 May, 2005:** EUR 150

**Price 2, before 31 March, 2005:** EUR 200

**Price 2, from 31 March to 31 May, 2005:** EUR 250

If participating in the Workshops only, the price is + EUR 80 (all prices include 22% VAT)



Some Workshops are accredited for AIA/CES credits.

## WORKSHOPS – SUBJECTS

### Complete Residual Stress Measurement in Architectural and Automotive Glass

Dr. Hillar Aben, MSc. Johan Anton - GlasStress Ltd.  
• Photoelasticity for stress measurement in glass  
• Stress measurement in glass panels  
• Participants practice stress measurement in various glass panels  
on Thursday 16 June • Price 1

### Mechanical Performance of Glass

John Colvin - John Colvin Glass Consultant  
• The Nature of Glass  
• Processing of Glass and its Effects on Glass Strength  
• Fracture Characteristics / Failure Mechanism  
• Review of prEN 13474  
on Thursday 16 June • Price 2

### Coated Glass - Applications and Markets

Dr. Russell J. Hill & Mr. Steven J. Nadel  
VACUUM COATING Technologies Inc.  
• Fundamentals  
• Coated Glass Products  
• Future Directions  
• Markets and Trends  
on Thursday 16 June • Price 1

### Structural Properties of Laminated Glass

Dr. Stephen Bennisson, E.I.DuPont de Nemours & Co. Inc.  
• Interlayer properties.  
• Key concepts in the mechanical properties of glass.  
• Stress analysis of laminate beams and plates.  
• Analysis methods: pre-glass breakage.  
• Established and developing standards and codes of practice.  
• Post glass breakage properties of laminated glass.  
• Analysis methods: post glass breakage.  
• Fixing methods  
• Dynamic properties  
on Thursday 16 June • Price 1

### Edges and Holes in Glass: Effect of Their Quality on Temperability and Long Term Reliability

Dr. Michael Emonds, Dr. Suresh Gulati and Mr. Arto Kaonpää  
Aachener Chemische Werke, Corning Incorporated and Tamglass Ltd. Oy  
• Introduction (Michael Emonds)  
• Test Methods for Quantifying Surface Quality (Suresh Gulati)  
• Test Results for Edge Strength (Arto Kaonpää)  
• Test Results for Hole Region (Suresh Gulati)  
on Thursday 16 and Saturday 18 June • Price 1

### Improvements in Glass Decoration by Process Analysis

Mr. Raimond Starmans, Mr. Nick Westra,  
Mr. Roland Drach and Ms. Céline Dugua  
Johnson Matthey Glass & Sefar AG Printing Division & Fimor SA

Topic: Improvements in glass decoration by process analysis with 2 case studies:

**1st Case: Problem of the opacity and resolution characteristics (Full surface, text, halftone and logos)**

**2nd Case: With conductive pastes (breaking heated lines, less or more build up of silver paste which will influence the resistance values)**

on Thursday 16 June  
• Theory (Glass Enamels, Sreens and Squeegee)  
• Process Audit (Tools)  
on Friday 17 June  
• Presentation of the case studies (Architectural and Automotive)  
• The possible verification  
• Presentation of the collected data  
• Final check of the whole workflow  
Two Day Workshop, on Thursday 16 and Friday 17 June  
Price 2

Detailed programme: [www.gpd.fi](http://www.gpd.fi)

### Pre-Processing

Dr. SteZ. Bavelloni S.p.A.  
on Friday 17 and Monday 20 June • Price 1

### Mechanical Properties of Float Glass

Dr. Suresh T. Gulati - Corning Incorporated  
• Introduction  
• Mechanical Properties  
• Design Principles  
• Strengthening of Glass  
on Friday 17 and Monday 20 June • Price 1

### Advanced Solar Control with Integrated Techniques – Processing Challenges and Solutions

Saint-Gobain Glass, Solutia, Tamglass Ltd. Oy & Ferro Corporation  
on Friday 17 June • Price 2

### Thermal Stress Breakages in Building Glass

John Colvin - John Colvin Glass Consultant  
• Mechanism for Thermal Stress  
• Factors Affecting Temperature Difference  
• Overview of the Proposed European Standard  
on Friday 17 June • Price 2

### Fundamentals of Stress Analysis and Design Techniques for Architectural Glass used in Buildings

Jacob & Associates Pty Ltd.  
on Friday 17 and Saturday 18 June • Price 2

### Toughened Laminated Safety Glass – Unlimited Design and Installation Versatility

Mr. Antti Holappa and Mr. Marc Verleyen  
Tamglass Ltd. Oy & Solutia  
• Role of Tempered Laminated Glass in Modern Building  
• Function and Applications of Tempered LAG  
• Manufacturing Process of High Quality Tempered LAG  
• Examples of Tempered LAG Installations  
on Friday 17 and Monday 20 June • Price 1

### Improving Your Safety Glass Processing – New Innovative Toughening Plant Process Control

Tamglass Ltd. Oy  
on Friday 17 and Sunday 19 June • Price 1

### CE Marking of Glass Products – Theory and Practice: How to Interpret the hENs and Apply Them to Your Production

CEPVP  
on Friday 17 and Saturday 18 June • Price 1

### Marketing Glass Workshop to the Design Profession Through Continuing Professional Education

Mr. Thomas Lowther and Mr. Mark Johnson  
AlA/CES & Whirlpool Corporation  
on Saturday 18 June • Free of Charge

### Handling and Tempering of Heat Treatable Low-E Glass and Test Run

Mr. Francis Serruys and Mr. Marko Pantti  
Saint-Gobain Glass Expover & Tamglass Ltd. Oy  
on Thursday 16 June • Price 2



### **A Short Sailing Tour for Those in a Hurry**

Tuesday June 21st, 9.00 – 17.00 • Price: EUR 220 / person.  
Min. group size 10 persons.

Tour includes:

- whole day sailing with an experienced skipper in a new big sailing boat
- coffee and snacks
- salmon soup with bread
- all taxes
- Drinks as per agreement, invoicing as per consumption

For more information visit [www.midnightsunsailing.fi](http://www.midnightsunsailing.fi)

### **A Longer Sailing – “How to Lose Your Heart to the Archipelago”**

Tuesday June 21st, 9.00 – June 22nd morning  
• Price: EUR 390 per person. Min. group size 10 pers.

Tour includes:

- whole day sailing with an experienced skipper in a new big sailing boat
- coffee and snacks onboard
- smoked fish tasting on a fisherman’s island
- salmon soup and bread
- sauna evening at Saunarantti
- special sauna dinner
- overnight at hotel Airisto Strand in a double room, including breakfast
- all taxes
- drinks as per agreement, invoicing as per consumption

For more information visit [www.midnightsunsailing.fi](http://www.midnightsunsailing.fi)

### **Tampere – a city set between two sparkling blue lakes**

Saturday 18 June at 11.00–13.00 • Price: EUR 25/person

The city tour of Tampere shows you the best of the city. You will hear the story of its birth, and you will learn how it developed into the vibrant city it is today. You will get a glimpse of its everyday life in the outdoor market. You’ll go to the top of the Observation Tower on Pyynekki Ridge to enjoy some stunning views of the surrounding lakes, and the picturesque old wooden houses of the idyllic Pispala district will leave an unforgettable memory. The tour is crowned by a visit to Tampere Cathedral, a National Romantic masterpiece which, with its fascinating frescos and the stories associated with them, will tell you more about the history of the Finnish people than any written work. This two-hour guided tour of Tampere is a must for anyone who visits the city. You’re in for a pleasant surprise – you can bet on it! Departure and arrival at Tampere Hall.



## Archipelago by a Motor Boat

Tuesday 21st, 9.00 – 20.30 • Price: EUR 260 / person.  
Min. group size 10 persons.

Tour Includes:

- charter motor boat from Turku guest harbour via fisherman's island to Fagerholm coast guard station and back to Turku
- tasting of smoked fish on the fisherman's island
- smoke sauna and archipelago barrels at Fagerholma
- a sumptuous archipelago dinner (different fish prepared in many ways, smoked lamb, roast beef, sallads etc.)
- drinks as per agreement, invoicing as per consumption

For more information visit  
[www.midnightsunsailing.fi](http://www.midnightsunsailing.fi)



For more information  
on all tours and  
all tour bookings, visit  
[www.gpd.fi](http://www.gpd.fi)

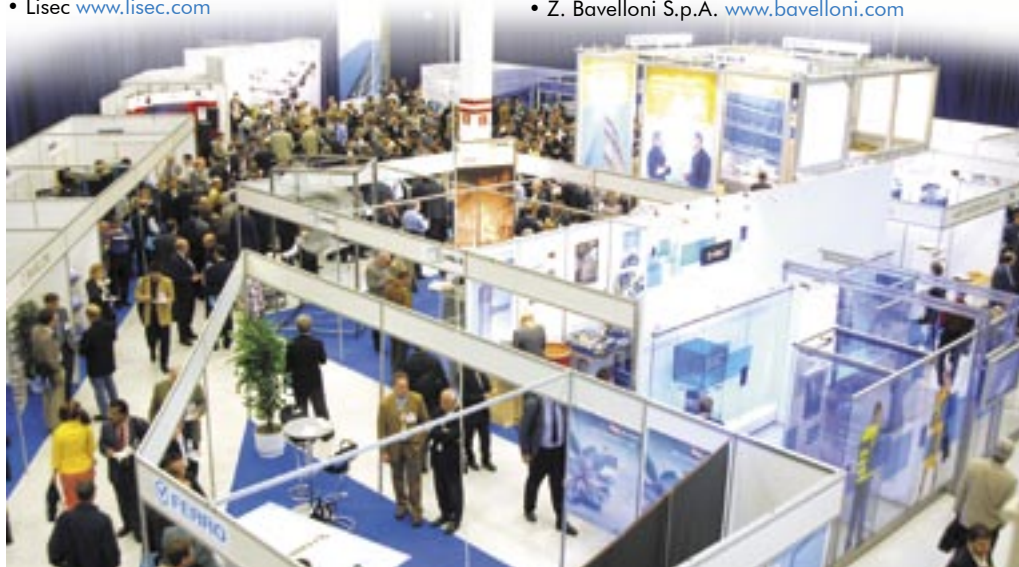


## MEET THE GLASS INDUSTRY'S KEY PLAYERS

For the first time the exhibition is located, along with the poster exhibition, in a separate venue built just next to Tampere Hall. This is a unique chance to be in the middle of events for all coffees and lunches will be served in the same space. Also our unforgettable Get Together Party gathers all participants into this exhibition venue. The exhibition is open during the entire conference and in the evening until 6 p.m.

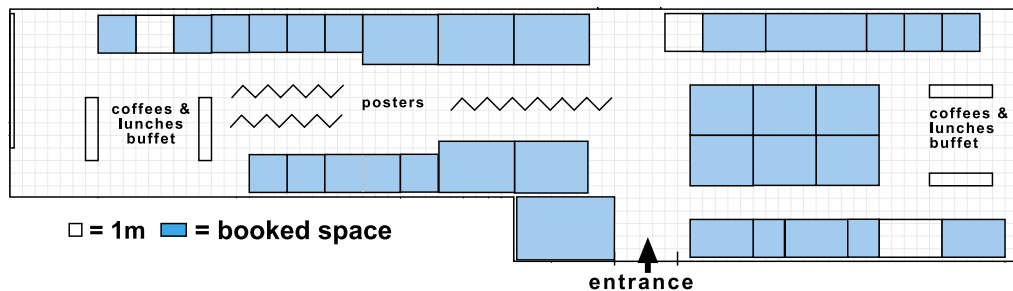
### Exhibitors by January 28, 2005

- Angstrom Sciences [www.angstromsciences.com](http://www.angstromsciences.com)
- Atlas Copco [www.atlascopco.fi](http://www.atlascopco.fi)
- DMS International [www.dmsint.com](http://www.dmsint.com)
- DowCorning [www.dowcorning.com](http://www.dowcorning.com)
- Festo [www.festo.com](http://www.festo.com)
- GlasStress Ltd. [www.glasstress.com](http://www.glasstress.com)
- Gyrotron Tehcnology Inc. [www.gyrotrontech.com](http://www.gyrotrontech.com)
- Hegla Fahrzeug- und Maschinenbau GmbH [www.hegla.de](http://www.hegla.de)
- Heraeus [www.heraeus.com](http://www.heraeus.com)
- KSE - Trosifol Division [www.trosifol.com](http://www.trosifol.com)
- Image Automation Ltd. [www.imageautomation.com](http://www.imageautomation.com)
- Interpane [www.interpane.net](http://www.interpane.net)
- Isra Vision Systems [www.isravision.com](http://www.isravision.com)
- Johnson Matthey Glass [www.glass.matthey.com](http://www.glass.matthey.com)
- Lisecc [www.lisecc.com](http://www.lisecc.com)
- Rohmer & Stimpfig [www.rohmer-stimpfig.de](http://www.rohmer-stimpfig.de)
- Sefar Inc. [www.sefar.com](http://www.sefar.com)
- Sekisui [www.sekisui.co.jp](http://www.sekisui.co.jp)
- Siemens [www.siemens.fi](http://www.siemens.fi)
- Sika [www.sika.com](http://www.sika.com)
- Soleras [www.soleras.com](http://www.soleras.com)
- Solutia Europe S.A. [www.solutia.com](http://www.solutia.com)
- Glass Market Consultancy B.V. [www.gmc-nl.com](http://www.gmc-nl.com)
- Vacuum Coating Technologies [www.vact.com](http://www.vact.com)
- VonArdenne [www.vaat.biz](http://www.vaat.biz)
- W.Haldenwanger [www.haldenwanger.de](http://www.haldenwanger.de)
- Tamglass Ltd. Oy [www.tamglass.com](http://www.tamglass.com)
- Z. Bavelloni S.p.A. [www.bavelloni.com](http://www.bavelloni.com)





## ULTIMATE GLASS KNOW-HOW!



**Special Architectural Glass Solutions in the Limelight.**

### Sponsoring Opportunity:

If your organization is interested in the sponsoring opportunities of the GPD conference, please contact us.

## Upcoming Fairs and Conferences

### Trade Fairs & Exhibitions

**China Glass 2005**  
**Shanghai, P. R. China**  
 April 13–16, 2005  
 E-mail: cersoc@public.bta.net.cn  
 Internet: www.ceramsoc.com



**Vitrum 2005**  
**Milano, Italy**  
 October 5–8, 2005  
 E-mail: vitrum@vitrum-milano.it  
 Internet: www.vitrum-milano.it

**GP&T**  
**Birmingham, UK**  
 May 17–19, 2005  
 Internet: www.gptexhibition.com

**Glassman Europe 2005**  
**Prague, Czech Republic**  
 May 14–25, 2005  
 frazercampbell@uk.dmgworldmedia.com  
 Internet: www.glassmaneeurope.com

**Glass Build America**  
**Atlanta, GA, USA**  
 September 13–15, 2005  
 Attendee: attend@glassbuildamerica.com  
 Exhibitor: exhibitor@glassbuildamerica.com  
 Internet: www.glassbuildamerica.com

**Glasstech Asia 2005**  
**Bangkok, Thailand**  
 November 30 – December 2, 2005  
 E-mail: info@cems.com.sg  
 Internet: www.glasstechasia.com

**Glass South America 2006**  
**Sao Paulo, Brazil**  
 May 4–6, 2006  
 E-mail: glass@vnu.com.br  
 Internet: www.glassexpo.com.br

**Glasstec 2006**  
**Düsseldorf, Germany**  
 E-mail: info@messe-duesseldorf.de  
 Internet: www.glasstec-online.com



### Related Conferences

**ISG/ICG 2005**  
**Shanghai, China**  
 April 10–14, 2005  
 E-mail: meetinginfo@isgicg.com  
 Internet: www.isgicg.com

**GPD China 2005**  
**Shanghai, China**  
 April 16–17, 2005  
 Internet: www.gpd.fi

**5th Glass Stress Summer School**  
**Tallinn, Estonia**  
 June 1–3, 2005  
 Internet: www.glasstress.com

**8th Conferences of European Society of Glass Science and Technology (ESG)**  
**Sunderland, UK**  
 September 10–14, 2006  
 E-mail: sara@glass.demon.co.uk  
 Internet: www.sqt.org

## Social Networking Opportunities

### Opening Ceremony

Friday June 17, 16.00 – 19.00

All participants and accompanying persons are welcome to the Opening Ceremony of the 9th Glass Processing Days Conference.

### Get Together Evening Program

Friday June 17, 19.15 – 22.00

All delegates and registered accompanying persons are invited to take part in the Get Together. This event is an excellent opportunity to meet old friends and colleagues, as well as make new acquaintances over a generous buffet.

Complimentary. Please confirm your participation on the application form. Dress code: Casual attire (Please note that this event partly takes place outdoors)

### City Reception

Sunday June 19, 17.30 - 20.00

The City of Tampere and GPD have the pleasure to invite all participants and accompanying guests to a city reception.

Complimentary. Please confirm your participation on the application form. Dress code: Business attire

### Official GPD Conference Dinner

Saturday June 18, 20.00 - 23.30

The GPD organizer welcomes you to enjoy high-quality modern Finnish cuisine. As expected, unique dishes and drinks are served over a generous buffet in an impressive setting.

Complimentary. Please confirm your participation on the application form. Dress code: Business attire



### Farewell Evening Program

Monday June 20, 20.00 – until sunrise

As you have come to expect the Farewell Evening program is always something unforgettable. Enjoy the company of fellow delegates, dinner and entertainment. On the last evening of the conference it is time to have some fun and relax in a spectacular Finnish summer setting amid beautiful nature. This event is very informal and it includes some special delights and memorable entertainment.

Complimentary. Please confirm your participation on the application form. Dress code: Informal (we recommend comfortable shoes and warmer clothing). We will spend the evening outdoors surrounded by the beautiful Finnish scenery.

Transportation to all social programs will be arranged.

## Registration Information

Please complete the on-line registration form in [www.gpd.fi](http://www.gpd.fi). Your registration is valid when the registration fee and service fee have been paid.

### Registration and Service Fee for Delegates

if paid by/on 31 March 2005

EUR 762 + VAT 22% EUR 168 = EUR 930

if paid by/on 30 April 2005

EUR 844 + VAT 22% EUR 186 = EUR 1030

if paid on 1 May 2005 or later

EUR 926 + VAT 22% EUR 204 = EUR 1130

+ Service fee EUR 23,77 + VAT 22% =€EUR 29

### Registration Fee for Accompanying Persons

EUR 123 + VAT 22% EUR 27 = EUR 150

Payment must be received no later than the closing of banking hours on said date.

### Registration fee for delegates includes:

- Admission to all sessions
- Conference bag and material
- Proceedings Book
- Lunches on Conference days
- Tea/Coffee on Conference days
- Entrance to the exhibition
- All evening events with dinners and dinner drinks
- Transportation to conference and evening events

### Registration fee for accompanying persons includes:

- Conference badge
- Entrance to the exhibition and Opening Ceremonies
- All evening events with dinners and dinner drinks
- Transportation to conference and evening events

The registration fee does not cover insurance or accommodation. Travel insurance is recommended by the organizers.

### Terms of payment

All fees should be paid in advance by using EUROS. Cheques will NOT be accepted.

### Invoice

All fees will be invoiced. The invoice will be sent to you either by e-mail (pdf) or post. You can choose the method of invoicing on the registration form.

### Method of payment

Two methods of payment are possible:

#### 1. Bank transfer made payable to

Account holder: Tamglass Ltd. Oy  
 Bank: Nordea Bank Finland Plc, Helsinki branch, Finland  
 Account number: 233318-9146  
 IBAN: IBAN FI23 2333 1800 0091 46  
 SWIFT Code: NDEAFIHH

Make sure to give participant's name in the bank transfer details. All payments must be "free of any charges for the payee", i.e. all bank charges have to be borne by the sender.

#### 2. Credit card: VISA, Master Card or Eurocard are accepted.

We will send you a credit card form to be filled in with the invoice if you have indicated on the registration form that you want to pay by credit card.

### Letter of Confirmation/Receipt

A written confirmation and a receipt of your paid fees will be sent to you after we have received your payment in full.

## Cancellation terms

All fees will be refunded in the event of cancellations made before 31 March 2005, except for the EUR 100 cancellation fee. A refund of 50 % will apply for the cancellations made before May 27, 2005. No refunds are offered after that date. Only written cancellations are accepted! The organizer reserves the right to make changes to the programme, tours, accommodation and limit the participation if necessary. The organizers cannot be held responsible for last-minute changes to the programme, tours or accommodation. Please note that for organizational reasons, refunds will be made after the conference.

## Accommodation

Special, reduced rates for GPD guests rates are valid until May 20, 2005. Please, book your accommodation early! We cannot guarantee rooms for late bookings.

The organizer has made block reservations at all major hotels in Tampere. All participants should make their reservation from this block by using the conference application form. The Secretariat will confirm your hotel reservation. Reservations will be handled on a first-come, first-served basis. Please indicate the name of the person sharing the double room with you. In the confirmation letter, you will be notified of the name and address of your hotel. All hotel rooms in categories A, B and C include a bath or shower. Prices quoted are per room, per night, including breakfast and 8% VAT. Payment is made directly to the hotel upon check out.

Please, note that you must give your credit card number to confirm your hotel reservation. In case you do not show up or do not cancel your room reservation early enough, the hotel has the right to charge the first night's accommodation fee from your card without a prior notice. All cancellations must be done in writing to the Conference Secretariat.

The Conference hotel rates are valid only for reservations made using the Conference application form. Please visit our web site for detailed hotel information [www.gpd.fi](http://www.gpd.fi).

### Category A

Single room EUR 115–135 Double room EUR 125–145

### Category B

Single room EUR 95–115 Double room EUR 115–125

### Category C

Single room EUR 85–95 Double room EUR 95–105

Prices of suites EUR 160 – 400

Prices are valid until May 20, 2005.

### Categories:

- A. First class accommodation with a variety of quality services
- B. Comfortable accommodation with quality services. Good standard of comfort and facilities.
- C. Basic accommodation and services available.

## Conference Secretariat

If you have any questions regarding registrations, payments and accommodation reservations, please contact the Conference Secretariat:

GPD 2005 Conference Secretariat  
Tampere Conference Service Ltd.  
Hämeenkatu 13 B  
FI-33100 Tampere, FINLAND  
Tel. +358-3-366 4400  
Fax +358-3-222 6440  
E-mail: [gpd2005@tampereconference.fi](mailto:gpd2005@tampereconference.fi)  
[www.tampereconference.fi](http://www.tampereconference.fi)

## Liability

The Conference Organization and the Conference Secretariat (Tampere Conference Service Ltd.) acts as an agent only in securing hotels, transport and travel services and shall in no event be liable for acts or omissions in the event of injury, damage, loss, accident, delay and irregularity of any kind what so ever during arrangements organized through contractors or the employees of such contractors in carrying out services. Hotel and transportation services are subject to the terms and conditions under which they are offered to the public in general.

The Conference Organization reserves the right to make changes where deemed necessary, without prior notice to parties concerned. All disputes are subject to Finnish law.

## Visas, Invitations and Insurance

Finland requires a visa from persons travelling from some countries. The conference organizer is prepared to send official invitations to the delegates to be attached with the visa application. The handling time of the application may take up to two months. Please note that a health insurance (30000 euros) must be valid and cover hospital and medical expenses. Proof of this must be presented at passport control upon arrival to Finland.

For further information on Ministry for Foreign Affairs of Finland, please visit <http://formin.finland.fi/doc/eng/services> or [www.gpd.fi](http://www.gpd.fi)

All participants are requested to make their own arrangements concerning insurance.

## Conference Venues

Registration, Opening Ceremony, Main Conference, Get Together, Posters and Exhibition:  
Tampere Hall (Address: Yliopistonkatu 55, Tampere), [www.tampere-talo.fi](http://www.tampere-talo.fi)  
Workshops: Tampere: TAKK, (Address: Valtatie 15).

The conference venues are conveniently located within walking distance of the city center and the conference hotels. Transportation will be arranged.

## Conference language

The official language of the conference is English. Some of the GPD sessions will be interpreted into Spanish and Russian. Interpretation equipment will be placed in one of the lecture rooms only and would cover some architectural sessions (Safety Glass Processing, New Product Development and Applications, building Projects Case Studies). An additional charge of EUR 100 per participant applies to the Russian interpretation services. The Spanish interpretation services are sponsored by Cristaleria Soler Hermanos, S.A. and due to this are free of charge to participants. Interpretation services will not be available at the Opening Ceremony or Plenary Sessions. Requests for interpretation must be made before March 31, 2005.



## Climate

In Finland the weather is mostly warm and pleasant in the middle of June. The daily temperature ranges from 15–30°C. Evenings and nights may be cooler, but are still bright in the land of the Midnight Sun.

## Dress Code

Dress code will be informal for all conference sessions and most evening functions. Comfortable shoes are recommended for the Farewell Evening Program! Note: The conference and the social program will be photographed and pictures may be used for upcoming GPD conference marketing.

## Tampere is a Clean, Modern and Safe Nordic City

Glass Processing Days is held in the city of Tampere, the largest inland city of the Scandinavian countries with a population of appr. 200 000. Tampere is an excellent example of a clean, modern and safe nordic city. It was founded in 1779 on the banks of two great lakes - Näsijärvi and Pyhäjärvi - linked together through Tammerkoski Rapids, which is one of the official national scenic areas in Finland.

Tampere is a city of education and research on both national and international scale. There are two major universities, a university hospital and numerous institutions of education as well as organizations operating in high-tech industries. Tampere is the centre of the second largest urban region in Finland having an active cultural life.

More information on Tampere and Finland:

[www.tampere.fi](http://www.tampere.fi)

<http://virtual.finland.fi>

### Tampere Tourist Office

The Tampere tourist office will help you with any questions you have concerning travelling and activities in Tampere. They serve you in several languages: English, German, French and Russian.

For enquiries you can contact them by e-mail:

[touristbureau@tampere.fi](mailto:touristbureau@tampere.fi)

More information on Tampere Tourist Office:

[www.tampere.fi/matkailu](http://www.tampere.fi/matkailu)

### Hotels in Tampere

GPD committee has made hotel reservations in all the major hotels in Tampere and will arrange them for you according to your preferences. Room prices range from EUR 70–130 per person per night. More information on the accomodation will be given in conjunction with the registration.

### Tampere Hall

The conference will take place in Tampere Hall, which is the largest congress and concert centre in Scandinavia. It is located within walking distance of the city centre and all major hotels.

For more information on Tampere Hall, please visit:

[www.tampere-talo.fi](http://www.tampere-talo.fi)



## How to get to Tampere

Tampere has its own international airport with direct flights from

- London (Ryanair)
- Frankfurt (Ryanair)
- Riga (Ryanair)
- Stockholm (Blue1)
- Copenhagen (Blue1)

All major airlines fly to Helsinki from where frequent connections to Tampere by plane, bus or train. It is advisable to book domestic flights in Finland well in advance.

It only takes about two hours to reach Tampere by road or by train. There is a bus connection from Helsinki Airport to Tampere but also both the Railway Station and Bus Station are located in the Helsinki City centre and there are departures every hour.

For more information on direct flights to Tampere, visit [www.ryanair.com](http://www.ryanair.com) • [www.blue1.fi](http://www.blue1.fi) • [www.finnair.fi](http://www.finnair.fi).

For more information on the flights to Helsinki, visit [www.ilmailulaitos.fi](http://www.ilmailulaitos.fi).

For more information on the bus connections, visit [www.matkahuolto.fi](http://www.matkahuolto.fi).

For more information on train connections, visit [www.vr.fi](http://www.vr.fi).

Examples of flight fares to Tampere, Finland. (Prices are tentative, reduced Apex prices, requiring Saturday overnight stay.)

London EUR 100–350  
Paris EUR 250–350  
Munich EUR 200–400  
New York EUR 600–1000

Berlin EUR 200–300  
Milan EUR 300–400  
Bangkok EUR 900–1500  
Chicago EUR 700–1200

## Press Supporting GPD 2005

Asian Glass [www.asianceramics.com](http://www.asianceramics.com)  
 GFF [www.hofmann-verlag.de](http://www.hofmann-verlag.de)  
 Glas+Rahmen [www.handwerk-net.de](http://www.handwerk-net.de)  
 Glass & Business  
 Glass Age [www.glassage.com](http://www.glassage.com)  
 Glass International  
[www.dmgworldmedia.com](http://www.dmgworldmedia.com)  
 Glass Magazine [www.glass.org](http://www.glass.org)  
 Glass Technology International  
[www.glassonline.com](http://www.glassonline.com)  
 GlasVerarbeitung [www.glassnet.de](http://www.glassnet.de)  
 Intelligent Glass Solutions  
 International Glass Review  
[www.euromoneyplc.com](http://www.euromoneyplc.com)  
 Revista del Vidrio Plano  
[www.vidrioperfil.com](http://www.vidrioperfil.com)  
 Rivista del Vetro [www.reedbusiness.it](http://www.reedbusiness.it)  
 The GI@zine [www.theglazine.com](http://www.theglazine.com)  
 The World of Glass [www.worldofglass.gr](http://www.worldofglass.gr)  
 USGlass [www.glass.com](http://www.glass.com)  
 Verre et Menuiseries Actualités  
[www.bertelsmanninfopro.fr](http://www.bertelsmanninfopro.fr)



Verre Plat [www.verre-plat.com](http://www.verre-plat.com)  
 Vitrea [www.ciberperfil.com](http://www.ciberperfil.com)

### Safety Glass Factory Tours on Thursday, Friday, Monday and Tuesday

1. Automatic Flat Tempering Furnace - in production
2. World's biggest super Low-E tempering furnace 3,3m x 7,2m - under test
3. New Pre-Processing Line - in production
4. New IG-line
5. New upgrade options - Improve Quality and Production
6. New Cutting Line - in production
7. Complete Safety Glass Factory for architectural and appliance safety glass
8. Complete Automotive Glass Factory including tempering and bending systems and furnaces

## ORGANIZED AND SUPPORTED BY



### Tamglass Ltd. Oy

Vehmaistenkatu 5 (P.O. Box 25) • 33731 Tampere, Finland  
Tel. +358 3 372 3111 • Fax +358 3 372 3190  
Internet: www.tamglass.com

## OTHER INDUSTRIAL SUPPORTERS



**PILKINGTON**  
www.pilkington.com

**SIEMENS**  
www.siemens.fi



**TeliaSonera**  
www.teliasonera.fi



## The conference is supported by the following trade fairs and associations:



Automotive Glazing Europe



The Finnish Association of Architects



European Glaziers Association



EuroWindow



Associazione Italiana Fornitori Macchine ed Accessori per la Lavorazione del Vetro



Glass and Glazing Federation



**NGA**  
National Glass Association



**glasstec**



Finnish Constructional Steelwork Association



**SAE International**

## How to get to Tampere

### Direct daily flights to Tampere from:

- Frankfurt (Ryanair)
- Riga (Ryanair)
- London (Ryanair)
- Copenhagen (Blue1)
- Stockholm (Blue1)
- Helsinki (Finnair)



See more information on these flights from  
[www.ryanair.com](http://www.ryanair.com) • [www.blue1.fi](http://www.blue1.fi) • [www.finnair.fi](http://www.finnair.fi)

All major airlines fly to Helsinki from where frequent connections to Tampere by plane, bus or train. It is advisable to book domestic flights well in advance. Please ask your travel agent for Apex-tickets. Examples of flight fares to Tampere, Finland. (Prices are tentative, reduced Apex prices, requiring Saturday overnight stay.)

London EUR 100-350

Paris EUR 250-350

Munich EUR 200-400

New York EUR 600-1000

Berlin EUR 200-300

Milan EUR 300-400

Bangkok EUR 900-1500

Chicago EUR 700-1200

For more information on the flights and transportation in Finland, visit [www.gpd.fi](http://www.gpd.fi)

## Registration to Conference and Workshops at [www.gpd.fi](http://www.gpd.fi)

Questions regarding registration, payment and accommodation  
**Tampere Conference Service**

Tel. +358 3 366 4400 Fax +358 3 222 6440

E-mail: [gpd2005@tampereconference.fi](mailto:gpd2005@tampereconference.fi)

### GPD Contact information: Ms. Tiina Penttilä

Glass Processing Days

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Tel. +358 3 372 3225 Fax. +358 3 372 3180

Mob. +358 40 521 4592 [tiina.penttila@tamglass.com](mailto:tiina.penttila@tamglass.com)