

10th Glass Stress Summer School

17 – 18 June, 2010, House of Cybernetics, Tallinn

An intensive two-day course containing lectures, equipment demonstrations, practical stress measurements and informal discussions

Intended Audience Engineers, technologists and scientists from glass industry and glass research laboratories who wish to acquire contemporary photoelastic methods for residual stress measurement in glass products of any shape. The participants may bring to Summer School samples they want to measure stresses in.

Course Outline Basic elasticity, basic photoelasticity, integrated photoelasticity, stress field tomography, scattered light photoelasticity, automatic polariscope AP-07 for residual stress measurement in glass articles of complicated shape, scattered light polariscope SCALP-04 for thickness stress measurement in plates, immersion technique, software for stress calculation using measurement data, practical measurement of residual stress in tempered and annealed drinking glasses, bottles, CRT bulb panels and neck tubes, optical fibre performs, architectural glass panels and automotive glazing, etc.

Course Director Dr. Hillar Aben, Head of the Laboratory of Photoelasticity of the Institute of Cybernetics at Tallinn University of Technology and CEO of GlasStress Ltd. H. Aben has been involved in developing modern photoelastic techniques for glass stress measurement for more than 40 years. He has published on this topic about 150 papers and two books: "Integrated Photoelasticity" (McGraw-Hill, New York, 1979) and "Photoelasticity of Glass" (coauthor C. Guillemet, Springer-Verlag, Berlin, 1993). H. Aben was the organizer and main lecturer of the Advanced School "Residual stresses in Glass and Their Experimental Determination" (Udine, Italy, 1993), of the Tutorial "Integrated Photoelasticity for Axisymmetric Glass Products" (London, 1993), and of the previous Glass Stress Summer Schools in Tallinn from 2000 to 2008. Under his leadership polariscopes, supplied with sophisticated software, are being manufactured in GlasStress Ltd and applied in many glass companies and research laboratories worldwide for residual stress measurement in various glass products.

Faculty DSc Johan Anton is the author of the automatic stress measurement method in axisymmetric glass articles. He has 15 years experience in elaborating intelligent software for glass stress measurement with integrated photoelasticity and with the scattered light method, chief constructor of the polariscopes AP and SCALP. MSc Andrei Errapart has developed software for tomographic residual stress measurement in glass articles of complicated shape and electronics of the polariscope SCALP. He has several years of experience in practical stress measurement in glass.

Course Fee is 600 EUR, for students 300 EUR. Fee includes Course Notes, luncheon, beverage breaks, Summer School Dinner, and guided tour to the ancient City Centre. Cheques should be made payable to: GlasStress Ltd., 21 Akadeemia tee, 12618 Tallinn, Estonia. Pay by Bank Transfer to: GlasStress Ltd., reg. No. 10936760, Bank Account No. 221021983189, S.W.I.F.T. code Swedbank HABA EE2X, 8 Liivalaia, 15040 Tallinn, Estonia, IBAN: EE202200221021983189. Payments must be received before 15 May 2010.

Registration Information Register at our home-page: <http://www.glasstress.com> or send or fax the Registration Form to us as soon as possible.

Social program For accompanying persons a social program will be organized including excursion to the ancient City Centre, visits to art galleries and museums, etc. It is free of charge.

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Preliminary program

Friday, 18 June

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|-------------|--|
| 9.00-10.30 | Room B 101. Introduction to Glass Stress Summer School
<small>Lecture 1: Residual stress in glass, basic photoelasticity, applied photoelasticity</small> |
| 10.30-11.00 | Coffee break |
| 11.00-12.30 | Room B 101. Lecture 2: Integrated photoelasticity |
| 12.30-13.30 | Lunch |
| 13.30-15.00 | Room B 414. Practice 1: Handling of the polariscope AP-07, simple cases of glass stress measurement |
| 15.00-15.30 | Coffee break |
| 15.30-17.00 | Room B 414. Practice 2: Stress measurement in bottles, tubes, drinking glasses and medical ampules. |
| 18.30-20.00 | Excursion to the Old Town |
| 20.00 | Summer School dinner |

Friday, 18 June

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| 9.00-10.00 | Room B 101. Lecture 3: Stress measurement in architectural glass panels and automotive glazing. Polariscope SCALP-04. |
| 10.00-10.30 | Coffee break |
| 10.30-12.00 | Room B 414. Practice 3: Through-the-thickness stress measurement in glass panels with polariscope SCALP-04. |
| 12.00-13.00 | Lunch |
| 13.00-14.00 | Room B 414. Final discussion. Closing the Glass Stress Summer School |



GlasStress
GLASS STRESS MEASUREMENT EQUIPMENT

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<http://www.glasstress.com>



Registration Form for:
10th Glass Stress Summer School
17 – 18 June 2010 • Tallinn

Surname _____

Given Name _____

Job Title _____

Company/Organization _____

Department _____

My main interest is stress measurement in:

Mailing Address

Postal Code City Country

Telephone FAX Number E-mail

Accompanying person

Surname _____

Given Name _____

Signature _____

Please mail or fax this form to:

Dr. H.Aben
GlasStress Ltd.
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