



StrainMatic® M4/50

Quality is measurable

Imaging polarimeter systems for the automatic measurement of residual stresses in glass and plastics

The breaking resistance and processability of glass and plastic products are strongly determined by the contained residual stress which depends on the stages of forming and annealing. Therefore, constant testing of residual stress is a very important part of quality control. The new StrainMatic® Inline series automatizes and objectifies the measurement and evaluation of the stress birefringence. Due to its modular and robust design it can be easily integrated into existing production lines.



Your Benefits

Objective results

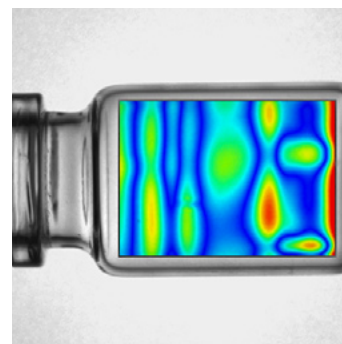
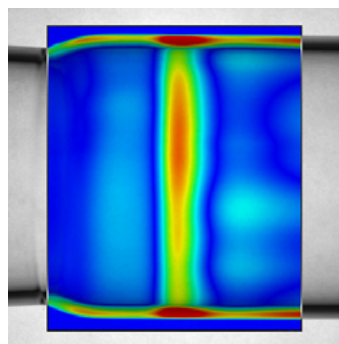
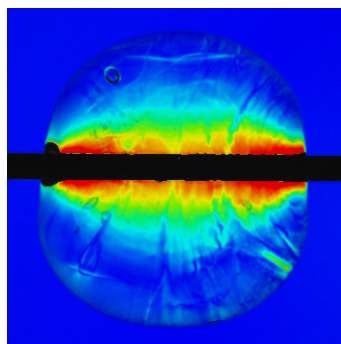
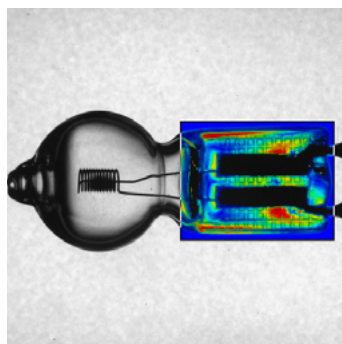
Fast and easy operation

Improvement in quality by on-site measurement

Traceability by automatic filing of all parameters and results

Cost reduction by optimization of the production process





StrainMatic® M4/50

Technical Data

| | |
|--------------------------|---|
| operation | integrated IPC with touch-screen |
| metering chamber | variabel |
| illumination | LED Array, approx. 60 x 50 mm |
| image acquisition | CCD camera (640 x 480 pixels) with telecentric lens (50 mm aperture) |
| image size | approx. 40 x 30 mm (0.06 mm pixel distance, 256 pixel/mm ²) |
| measuring area | variable rectangular, round or elliptical |
| measuring results | polarization angle (°) optical retardation (nm) normalized optical retardation (nm/cm) normalized stress (MPa) |
| measuring range | approx. -290 to +290 nm optical retardation |
| reproducibility | typical $\leq \pm 0.1$ nm (mean deviation) |
| interfaces | Ethernet, USB, VGA, RS232/433/485 |
| power supply | 230 V, 50 Hz or 115 V, 60 Hz |
| dimensions | measuring head: 410 x 350 x 360 mm (H/B/T) light source: 210 x 350 x 360 mm (H/B/T) |
| weight | approx. 120 kg (incl. base frame) |

Application Examples

Optical components (e.g. lenses)

Tubing glass and related products (e.g. vials)

Lighting glass (e.g. wedge-base lamps, fluorescent tubes)

Custom adaptations and special versions are possible on request. No responsibility is taken for the correctness of the information. All information is subject to change without prior notice.

Product website: www.ilis.de/en/strainmatic.html
© 2008 ilis gmbh, all rights reserved. Version 04/2008

ilis gmbh | Konrad-Zuse-Straße 12 | D-91052 Erlangen
Fon +49 (9131) 9 74 77 90 | Fax +49 (9131) 9 74 77 99
info@ilis.de | www.ilis.de

