

Thickness measurement system for partially transparent insulation panels

In the field of the manufacture of plastic panels, thickness profile measurements must be carried out due to the necessary quality assurance. For this purpose two laseroptical displacement sensors are mounted on a traversing device, one underneath and one above the panel which passes along a defined path. The preprogrammed measuring points are sampled consecutively. Irrespective of the exact height position of the panels, the accurate material thickness is obtained by simple coupling of the synchronously measured distance values from both sensors. The output of the desired measurement log is realized with the aid of a PC system in the fully automatic sequence of the profile measurement table.

Technical details

- Measuring range: 0.5 - 5 mm
- Accuracy: $\pm 30 \mu\text{m}$
- Resolution: $10 \mu\text{m}$ ($1 \mu\text{m}$)
- Bandwidth: 10 / sec

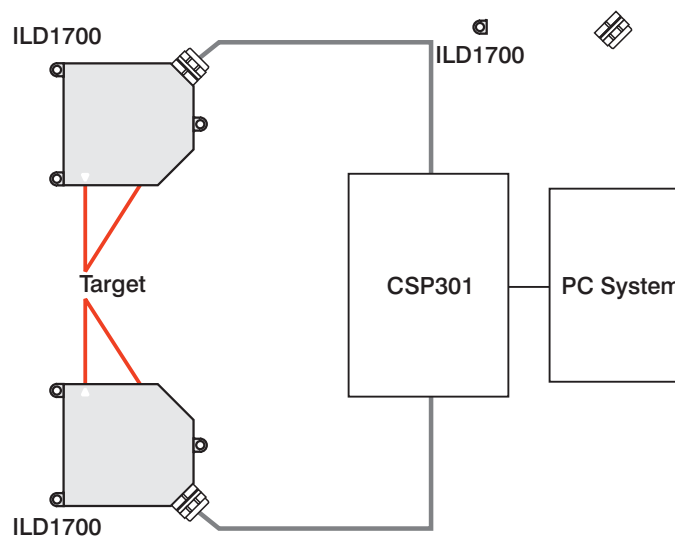
Ambient conditions

- Temperature: 20-40 °C
- Medium: air
- Interference fields: none

System set-up

- 2 x ILD1700-10
- 1 x CSP301
- 2 x PC1700, sensor cable 10 m
- Can be trailed.

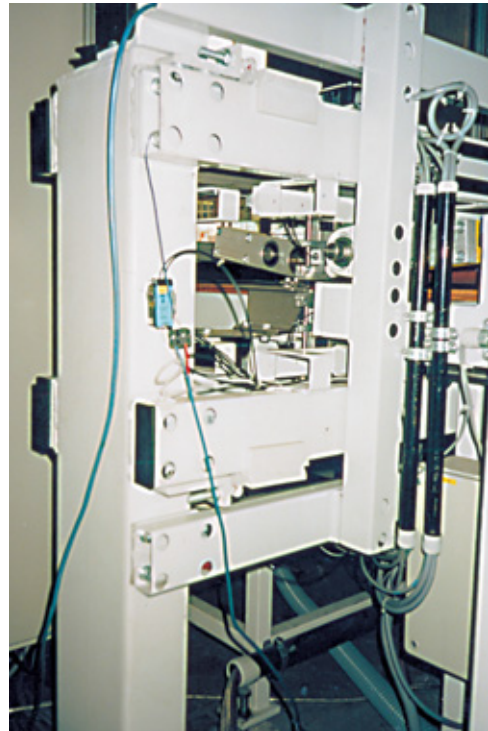
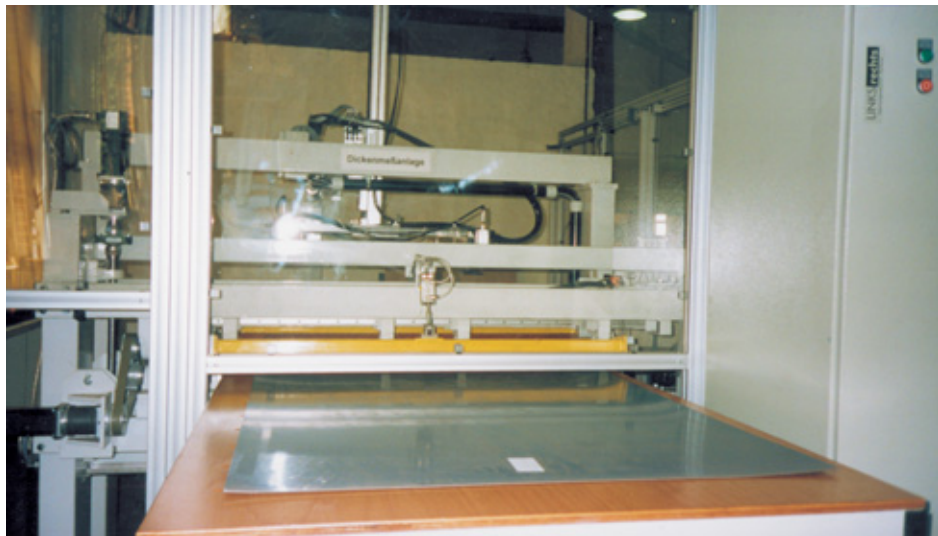
Principle



Application

Reasons for the system selection

- Non-contacting and therefore wear-free
- Easy fitting and operation
- High accuracy
- Rugged, economical system implementation
- Class 2 (II) laser requires no laser protection officer



MICRO-EPSILON

Koenigbacher Str. 15
94496 Ortenburg / Germany

Tel.: 0 85 42/1 68-0
Fax: 0 85 42/1 68 90

info@micro-epsilon.com
www.micro-epsilon.com

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