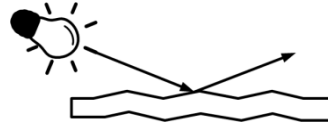


MRP - Messen Regeln Prüfen Automatisierungstechnik

Description



MRP-ST LAB GLO 2015 - Gloss measurement according to DIN and Tappi standards for MRP-Schnettler automatic test line

Laboratory Gloss measurement

At MRP-Schnettler the laboratory gloss measurement is carried out with the MRP-ST LAB GLO 2025 gloss meter. The sensor corresponds to the online sensor. Since the year 2000 there is a DIN standard for the determination of the gloss on paper in addition to the well-known TAPPI standard. MRP works closely together with Schnettler Technologies, which manufactures and distributes the world-famous Lehmann gloss sensors. These sensors are available in Tappi as well as in DIN standards - according to your wishes the sensors can be installed in the MRP-Schnettler test line.

Indicator / Characteristics

The gloss measurement in the automatic test line is characterized by the following features:

- one-sided, contactless measurement on a suction table
- Tappi standards available
- DIN standards available

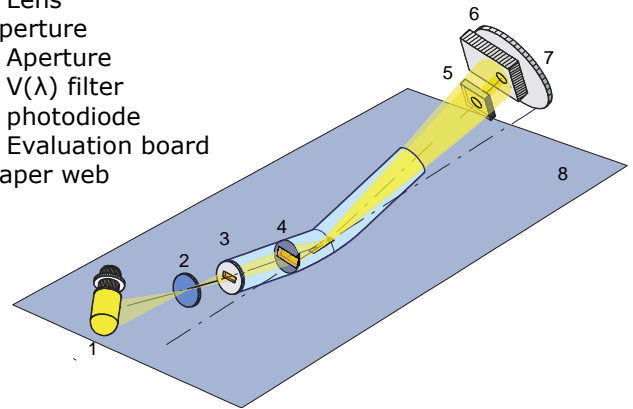
Physical principle

In gloss measurement, a light beam is directed at a defined angle (75° or 45° depending on the standard) from one side onto the paper web. The intensity of the directly reflected light beam is measured at the same angle.

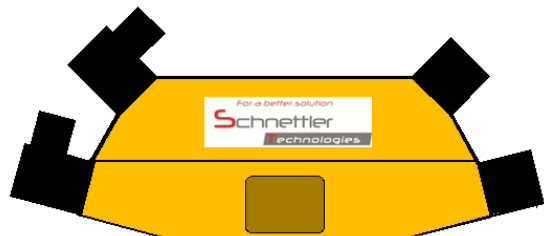
The light source used for the norm is a standard light A. Different apertures in connection with the angle of incidence provide different optical spot sizes according to the standards. A V(λ) filter ensures the spectral sensitivity according to the standards, analogous to the human eye.

The following arrangement shows the principle of such an arrangement with the following components:

- 1 Incandescent lamp (because of standard light A)
- 2 Lens
- 3 aperture
- 4 Aperture
- 5 V(λ) filter
- 6 photodiode
- 7 Evaluation board
- 8 Paper web



2 or 3-angle sensors with two or three geometrical arrangements.



The multi-range sensors are characterized by the possibility of meeting several standards.

Available standards

- Tappi 75° (T480 / ISO8254-1)
- DIN 45° (ISO 8254-2 / DIN 54502))
- DIN 75° (ISO 8254-2 / DIN 54502)

Alternative measuring geometries for alternative materials and surfaces are also available.

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Measurement accuracy

Type	MRP-ST LAB GLO TAPPI-75	MRP-ST LAB GLO DIN-45	MRP-ST LAB GLO DIN-75
Measuring range	0-100% / GE	0-100% / GE	0-100% / GE
Resolution	0,01 %	0,01 %	0,01 %
accuracy - 2 sigma at 1 sec	±0.5% / GE	±0.5% / GE	±0.5% / GE
Operating temperature	10°C-60°C	10°C-60°C	10°C-60°C

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