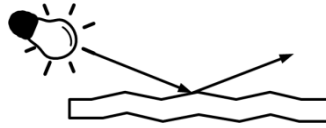


Description



Gloss measurement according to DIN and Tappi standard MRP GLO 2010

Online gloss measurement

Since the year 2000, there has been a DIN standard for determining the gloss of paper in addition to the well-known TAPPI standard. MRP works closely together with Schnettler Technologies, which manufactures and offers the world-famous Lehmann gloss sensors. These sensors are available in Tappi as well as in DIN standards - the installation is carried out as you wish for your papers and cross-checked in the laboratory.

Indicator / Characteristics

The online gloss measurement is characterized by the following features:

- one-sided, contactless measurement on a roller
- can be installed in traverses and fixed position
- online capable
- applicable in industrial environment
- Tappi standards available
- DIN standards available

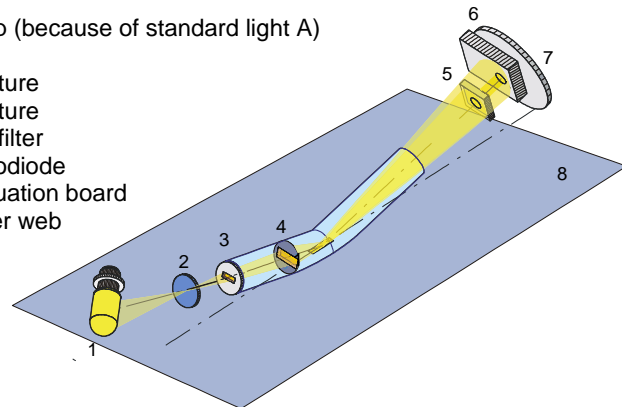
Physical principle

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

The light source used is a standard light A according to the standard. 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 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.

Measurement accuracy

Typ	MRP-GLO TAPPI-75	MRP-GLO DIN-45	MRP-GLO DIN-75
Measuring range	0–100% / GU	0–100% / GU	0–100% / GU
Resolution	0,01 %	0,01 %	0,01 %
accuracy - 2 sigma at 1 sec	±0,5% / GE	±0,5% / GU	±0,5% / GU
Operating temperature	10°C-60°C	10°C-60°C	10°C-60°C