Knowing paper better!

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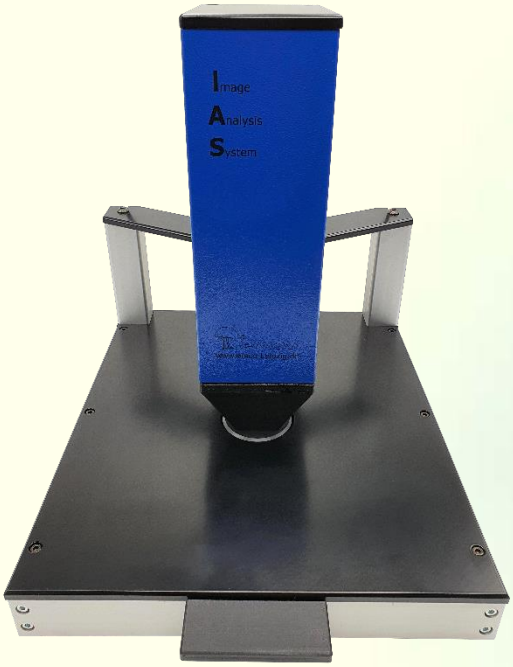
emco IAS
Calender Blackening Tester

Equipment for measuring the optical inhomogeneity of SC papers



Calender Blackening is the optical turbulent appearance of high-smoothed papers which has a negative influence on the paper quality.

The **Calender Blackening index** is a measure of the optical paper inhomogeneity in the form of transparent parts in the paper caused by calendering.

Due to high local densities, especially in areas with increased basis weight as fiber crossing points, light-scattering interfaces in the paper sheet are reduced in calenders or supercalenders. The fiber collapses. In incident light, these transparent areas appear dark. The light is transmitted and partially reflected. This effect of "greying" of calendered paper has given the term blackening its origin. An objective assessment and quantification of the results of calendering can be achieved with the IAS module “blackening".

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Technology connects

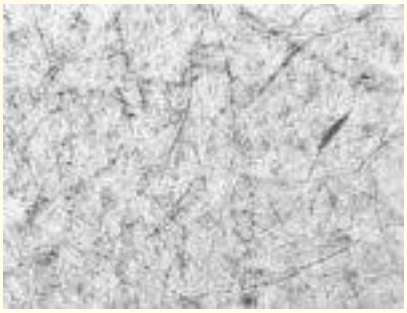
IAS-SS

Design and functionality

Images are captured in incident light. The paper specimen is placed on a black background so that non-uniformities in transparent areas come out more clearly. The high-contrast image is captured by a CCD camera, digitized and then analyzed. The devices are calibrated and give reproducible results. The device check can be carried out at any time independent using the standard.

Application

Quality control in papermaking and paper converting industry



SC paper in incident light
4 mm x 5 mm

SC paper in incident light
0.25 mm x 0.28 mm

Technical data

Measuring field:	10 mm x 10 mm
Illumination:	reflected light

Scope of supply

Device with camera and illumination unit, power supply unit with mains plug, calibration standard and certificate
Pan drive with software and drivers, software protection USB dongle,
PC ware on request

System requirements

CPU	Intel® Core™ i5-2520M, CPU @ 2.50 GHz, Cores: 4
RAM	4 GB
Operating system (OS)	Microsoft® Windows® 10 32/64 bit (required for USB 3.0)

Dimension

Net:	480 x 360 x 440 mm³ / 11.0 kg
Gross:	800 x 600 x 700 mm³ / 20.0 kg

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