



PAPER TESTING ASSOCIATION

PULP Testing Equipment



SCHOPPER RIEGLER FREENESS TESTER

Code N 6600

For the determination of the degree of refining (beating) of a pulp suspension in water and expressing it in terms of the Schopper-Riegler (SR) number, and to determine the de-watering time.

Applicable Standards: ISO 5267-1, SCAN C19/M3, BS 6035/1

DESCRIPTION:

The Schopper-Riegler test is designed to provide a measure of the rate at which a dilute suspension of pulp may be dewatered. It has been shown that the drainability is related to the surface conditions, swelling of the fibers, and constitutes a useful index of the amount of mechanical treatment to which the pulp has been subjected.

In principle, this method is applicable to all kinds of pulp in aqueous suspension. However, in practice, the Schopper-Riegler test provides acceptable results only if a sufficiently dense mat of fibers is formed on the wire screen. For this reason, the test is not recommended for some extremely short-fibred pulps, such as those from well-beaten hardwoods, as most of the fibers will pass through the wire screen, resulting in anomalous reduction of the SR number. The most reliable results are obtained within the range of 10 to 90 SR number.

The results of this test do not necessarily correlate with the drainage behaviour of a pulp material on a commercial paper machine.



Schopper Riegler Beakers



Screen & IT Holder



Buttons

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OpTest Equipment Inc.

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TEST DESCRIPTION:

The operator takes 2 g of pulp, dilutes it in one liter and pours it in the fill chamber, which is closed by the conical nipple. The conical nipple is lifted pneumatically after pushing the start button, and the suspension discharges. The fibers are retained while the filtrate drains. The drainage time depends on the composition of the fiber suspension. The filtrate flows into the measuring beaker through the lateral outlet. There the freeness is shown in Sc hopper Riegler degrees ($^{\circ}$ SR).

The Schopper degree ($^{\circ}$ SR) describes the amount of drained suspension and is the degree of the drainage properties of the pulp, which has been diluted in water. One $^{\circ}$ SR corresponds to 10 ml of water. Since water hardness and temperature are significantly influenced the results, it is very important to ensure that the measurement is always performed with the same water hardness and at a temperature of 20 $^{\circ}$ C.

The piston is controlled with a piston supplied with compressed air. In competing devices using a piston it is possible to pinch fingers very strongly during the descent of the piston. In this new device the piston descends by gravity when users press the first button. When the piston is engaged in the cylinder a second button (not active until the piston is not inside the piston) sends compressed air to ensure efficient closing. Our device is CE certificated.

Specifications:

Ease of operation and cleaning.

Robust equipment made of stainless steel.

Adjustable speed of the closing cone (standard 100 mm/s).

Pneumatic activation of the release and closing system.

Reading of the direct grade of the graduated glass

Simple system for recovering paste/pulp.

CE Marking

Weight (equipment only): 38 kg

Dimensions (W x L x H - equipment only / with packaging): 360 x 330 x 850 mm

Air supply: 400 - 600 kPa

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