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PaperSchmidt- Paper Roll Hardness



Designed specifically for the paper industry to cut costs and increase winding machine efficiency

The need for roll testing

Out of round rolls and other defects such as corrugations caused by non-uniform roll hardness profiles are a major cause of lost production for both producers and converters alike. A reliable measurement of the roll hardness profile is of critical importance in deciding whether a roll is good or bad. Production staff needs to be able to test quickly and reliably and to interpret the results as efficiently as possible.

Application

PaperSchmidt is the first rebound hammer designed specifically for roll hardness testing. A new measuring principle and a high compliance plunger provide roll-profiling accuracy and repeatability that was unachievable before now. In addition to this it has an extended lifetime to cope with the heavy demands of the paper industry and dedicated tools, such as pre-defined tolerances that make assessing a profile a simple matter.

Benefits to the customer

Accurate Profiling: Sensitivity and repeatability to a degree unmatched by conventional roll testers. Dedicated firmware allows instant analysis of the data on the instrument's display.

Durability: The PaperSchmidt has a vastly improved service lifetime compared with traditional instruments.

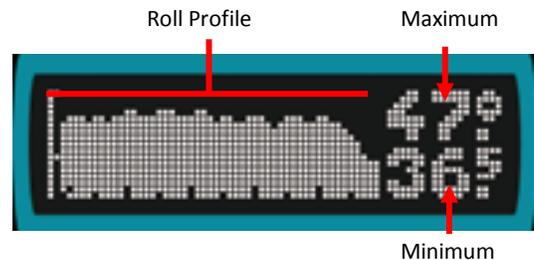
Ease of use: Intuitive operator interface (displaying hardness, profiles, limits, roll IDs, etc.). Automatic reloading

and automatic data storage allows the fastest possible test performance.

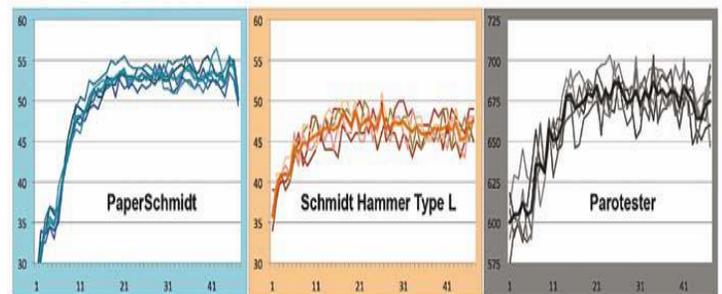
Data export and analysis: The Paperlink software provides simple tools to make a clear assessment of the results.

Exceptional Roll Profile Accuracy

The PaperSchmidt's unique design combines the simplicity of the rebound hammer method with accuracy that was previously only achievable with much more expensive instruments. As illustrated in the picture below, the PaperSchmidt provides a lot of useful information about the roll profile. Additional statistics are also possible.



The following graphics show comparison tests made with the PaperSchmidt, a classical Schmidt hammer and the Parotester. Repeatability has also traditionally been an issue in the paper industry. Again the PaperSchmidt excels in this. A roll with a soft edge was tested using the three different roll profile test devices based on rebound. The step interval was 2 cm, subsequent scans were spaced 4 cm. Five passes were done with each instrument. Each test series was done on a "fresh" section. The results of the single passes and the average are plotted. The PaperSchmidt clearly excels in sensitivity, specificity and repeatability.





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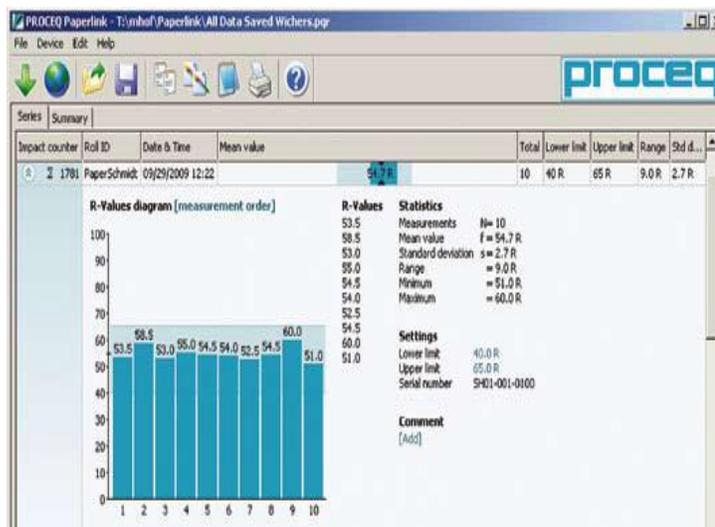
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Paperlink - Data Analysis Made Simple

The Windows based software Paperlink, developed by Proceq SA, makes it possible to download, present and edit data measured by the PaperSchmidt in a fast and easy way using a PC. This allows the user to quickly check the roll profile against user defined tolerances. It also allows the user to define roll identifier names for batch testing and download these onto the hammer. All data can be exported to third party applications.

System requirements:

- Windows XP, Windows Vista, USB-Connector
- An internet connection is necessary for software and firmware updates when available.



The PaperSchmidt consists of:

- The PaperSchmidt
- battery charger with USB-cable
- CD with Paperlink software
- carrying strap
- documentation
- carrying bag

Service and Warranty Information

Proceq is committed to providing complete support for the roll hardness testing instruments by means of our global service and support facilities. Furthermore, each instrument is backed by the standard Proceq 2-year warranty and extended warranty options.

Technical Information PaperSchmidt

Mechanical Data	
Impact energy	0.735 Nm
Hammer Mass	135g
Spring Constant	0.262 N/mm
Spring Extension	75mm
Dimensions of Housing	55x 54x 245mm (330m to tip of plunger)
Dimensions of Tip	94 x 15mm dia
Weight	648g
Memory Data	
No of Series Names	50 Series names (up to 12 characters)
Memory Capacity	Dependent on Series length (eg 428 series with 10 values per series)
Electrical Data	
Display	17 x 71 pixel graphic
Power Consumption	~13mA measuring, ~4mA set up and review, ~0.02mA idle
Accumulator Duty	>5000 impacts between charges
Charger Connection	USB Type B (5V, 100mA)
Accumulator Capacity	~150mAh
Environmental Conditions	
Operating Temperature	0 to 50 deg C
Storage Temperature	-10 to 70 deg C
Standards applied	
TAPPI T 834 om-07 (2007)	

About PCTE

PCTE have over 30 years experience in the measurement and testing of concrete. With experience in research, consulting and construction they are able to assist you in reviewing the issues and developing solutions. PCTE can provide more than just the equipment. They can provide leading technical support for your business.

Other Equipment

The Olson Instrument range also includes the NDE360, CTG, Freedom Data PC and DAS as well as the resonance tester.

The full Proceq range of equipment is available for insitu non destructive concrete measurement, including Schmidt Hammers, Covermeters, Half Potentials, Resistivity, Ultrasonics and Permeability.

We also supply Intelli-Rock maturity, temp and humidity logging systems, corrosion rate monitoring equipment, Ground Penetrating Radar.