OnV FeltView
Press Felt Optimization System
OnV FeltView

... continuously monitoring felt condition

OnV FeltView improves the quality and performance of your press section long term

Press felt analysis system
OnV FeltView is a system for continuous online measurement of felt moisture and permeability for the clothing in the press.

It is a one-sided measurement system with the highest positioning accuracy. The pneumatic contact pressure of the measuring head ensures optimal accuracy and reproducibility of the measurements.

Benefits
- Reliable, continuous and reproducible measurement of various felt characteristics
- Clear visualization of press and felt characteristics
- Quick diagnosis of moisture streaks and felt damage
- Effective instrument for optimizing the press
- Optimized felt conditioning leads to reduced energy consumption in the press and dryer section and to less felt wear
- Fewer breaks, prevention of sheet stealing
- No dependence on felt suppliers for measurements
- Prevention of safety risks with manual measurements by the personnel, especially on fast-running machines
- Improved operator decisions when changing the press settings
- Integrated OnView information system facilitates high-performance data analyses of historical and current felt data
**Moisture measurement**

The moisture sensor is based on microwave technology. It determines the felt moisture on the basis of the change in the dielectric constant. This change is brought about by the quantity of water present in the felt.

The contact surface of the sensor consists of wear-free ceramic.

The sensor is suitable for all types of press felts with a moisture content of 200 – 1,800 g/m².

**Permeability measurement**

In order to determine the permeability, the pressure difference between a water jet penetrating the felt and a reference pressure is measured.

The machine speed has no influence on the measurement process.

The contact surface of the sensor likewise consists of wear-free ceramic.

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**Description**

OnV FeltView supports the paper maker during routine operation and in optimizing the press section settings.

The measurements supply profile and trend information about felt moisture and permeability of the individual felts. They support improvement of felt performance and paper quality.

The industry-wide communication standard OPC guarantees the system can be connected to any PCS, QCS or other IT systems.

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Scanner
- Maximum felt width: 12 m
- Scanner & end carriage material: stainless steel
- Measuring head installation angle: +/- 180°
- Maximum ambient temperature: 120° C
- Scanner drive motor: 3-phase alternating current

Water weight sensor
- Measurement range: 200 – 1,800 g/m²
- Measurement point size: 75 mm
- Measurement rate: 20 readings/sec
- Microwave measurement frequency: 433 MHz
- Maximum ambient temperature: 50° C
- Protection category: IP 68
- Measurement reproducibility: 1.3 g/m² (2-sigma)
- Measurement accuracy: 20 g/m² (2-sigma)

Permeability sensor
- Measurement range: 0 – 100%, convertible to ml/min
- Water pressure: 4 – 20 bar, depending on the available water pressure
- Water flow rate through the nozzle: 1.5 l/min
- Water consumption: 30 l/h
- Maximum water temperature: 50° C
- Measurement rate: 1,000 Hz
More safety with OnV FeltView

Operational and plant safety play a big role at the paper machine. The space within the press section of the paper machine is for the most part slippery, wet and inaccessible.

There is thus a real danger of falling for the operator, since he has no free hand and it is difficult for him to maintain balance while doing overhead work.

With OnV FeltView, measurements with hand-held units are no longer necessary. This means an increase in safety for the operating personnel.

Felt requirements at tissue facilities

The change in permeability over the service life of the felts used is also an important characteristic for the cleaning and replacement of felts in the manufacture of tissue. The felts used in tissue production are finer and thus denser than for other paper grades. Therefore they cannot be so easily penetrated by water.

This has an impact on the measurement of permeability: if the measured pressure is too high, important changes on the felt surface would not be visible. In addition, a nozzle diameter that is too small produces a very fine water jet that does not cover enough felt surface to ensure sufficient drainage with low pressure. Due to these special requirements, OnV FeltView for tissue felts was optimized: the water pressure for permeability measurement is now 4 bar (instead of 23 bar) and the nozzle diameter was made larger, to 1.6 mm instead of 0.6 mm.