

Media Release

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WebDetect-nx reliably protects against machine damage; Voith presents dependable web break detection with innovative multi-light sensor measuring process

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- **Unnecessary machine downtimes avoided**
- **Intelligent signal processing via microchip**
- **Simple operation courtesy of Papermaking 4.0**

Heidenheim, Germany: With WebDetect-nx, Voith has developed a new solution that identifies web breaks in paper production in a more reliable and fail-safe manner. It is based on an innovative measuring process in which a multi-light sensor measures different light sources in the visible and infrared light frequency range and interprets the measurements simultaneously at high speed. This prevents potential impairment of the measuring result to allow reliable detection of faults. This results in fewer false positives and therefore less production downtime as well as a lower risk of machine damage due to undetected breaks.

WebDetect-nx solves the typical problems associated with previous web break detectors based on infrared light and standard sensors. For example, if the contrast between paper web and dryer fabric or basis weight is too low or the moisture content of the paper too high, older methods tend to trigger false positives. This in turn leads to frequent production downtime or even damage to the paper machine.

The new solution from Voith prevents false positives due to a much more precise identification of web breaks. The greater accuracy is based on an innovative measuring principle, in which light beams of varying wavelengths are projected onto the web simultaneously. The spectroscopic process takes account of the special optical characteristics of the paper web and dryer fabric. The system measures the reflectivity and processes the measurement using a microchip. It also compensates for extraneous light effects, filters the signal, accurately calculates trigger thresholds and adjusts them continuously. Thanks to the chip-supported processing, the



measuring signal is more accurate, which leads to fewer breaks and the downtimes associated with them.

"Errors in break detection often cause unnecessary interruptions in paper production and can even lead to machine damage – in either case these downtimes cost paper manufacturers time and money," says Peter Biener, Product Manager at Voith. "WebDetect-nx allows much more accurate and therefore more reliable detection. It also simplifies operation and maintenance of the system thanks to the digital interfaces. As a result, paper manufacturers can achieve higher and more efficient paper production."

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Simple operation courtesy of Papermaking 4.0

WebDetect-nx features interfaces like Profibus, Modbus-TCP or Standard I/O for simple access via the process control system, on which measuring processes can be visualized and the break sensors controlled interactively. Using programmable logic controller (PLC) function modules, the WebDetect-nx from Voith can be easily integrated into the Machine Control System (MCS) and therefore operated fully automatically. The technology is one of Voith's innovations from its Papermaking 4.0 concept that allows papermakers to take a significant step towards the Smart Factory. During startup, customers can also set specific parameters conveniently via the system's user interface. A suitable interface is also available for this process. Only the sensor measuring head requires mechanical adjustment.

WebDetect-nx also features an improved purging air system, which ensures that the sensor optics stay clean longer and rarely need maintenance. Moreover, the diagnostics system automatically notifies the need for maintenance and thus ensures more efficient servicing intervals.

Voith offers WebDetect-nx as a complete package; automation experts from Voith take care of system integration, engineering and documentation of all hardware and software components, and also commission the system.

Voith Paper is a corporate division of Voith and is one of the leading partners and pioneers in the paper industry. Through constant innovations, Voith Paper is optimizing the paper manufacturing process, focusing on developing resource-conserving products to reduce the use of energy,



water and fibers. Furthermore, Voith Paper offers a broad service portfolio for all sections of the paper manufacturing process.

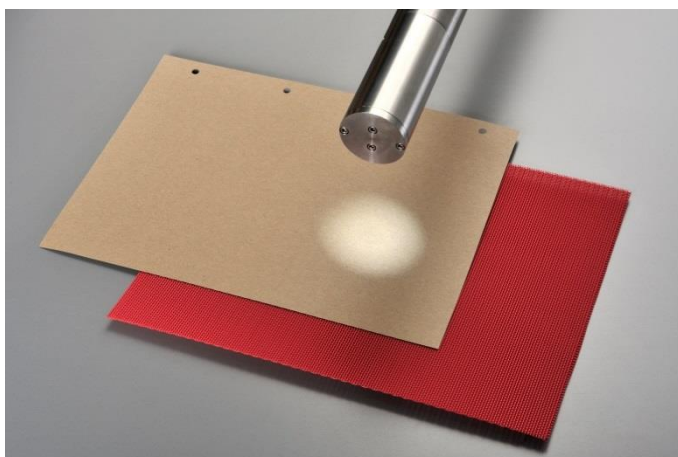
For 150 years, Voith's technologies have been inspiring customers, business partners and employees worldwide. Founded in 1867, Voith today has around 19,000 employees, sales of €4.3 billion and locations in more than 60 countries worldwide and is thus one of the largest family-owned companies in Europe. Being a technology leader, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive.

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Caption 1: With WebDetect-nx, Voith has developed a new solution that identifies web breaks in paper production in a more reliable and fail-safe manner.



Caption 2: The spectroscopic process takes account of the special optical characteristics of the paper web and dryer fabric.

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