

Your competitive edge
in pulp and paper

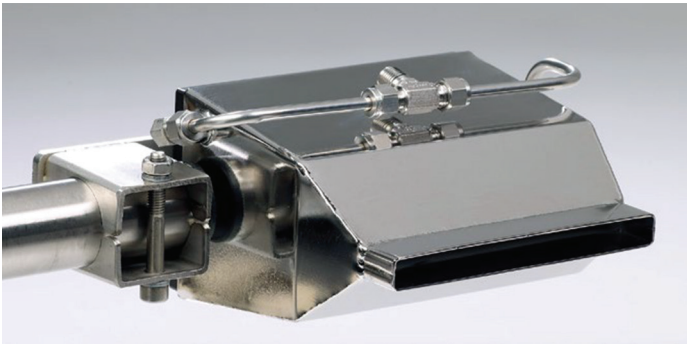
AFRY Machine Vision

AFRY MACHINE VISION SENSORS PUT YOU IN CONTROL

Vision sensors feature interfaces like Profibus, Modbus-TCP or standard I/O for simple connection to the process control system. Using programmable logic controller (PLC) function modules, stand-alone solutions can be implemented independent of existing hardware. Parameters can be read and set from the control cabinet touch screen as well as through the IoT interface.

- Stand-alone or integrated control
- Platform independent
- IoT capabilities





VISIEDGE for wire and press section

Wire or felt guiding failures can be destructive and expensive with unplanned stops and lost production. Vision's VISIEDGE non-contacting edge tracking sensors provide superior performance for both wire and press section fabric guiding controls on all paper, board, tissue and pulp machines. VISIEDGE is an optical camera system providing true direct edge detection insensitive to fabric color or composition and, unlike traditional non-contacting systems, is unaffected by water mist or droplets. VISIEDGE sensors on both the tending and drive side provide accurate total fabric width and shrink information for automatic felt centering to improve felt wear symmetry and ultimately runnability.

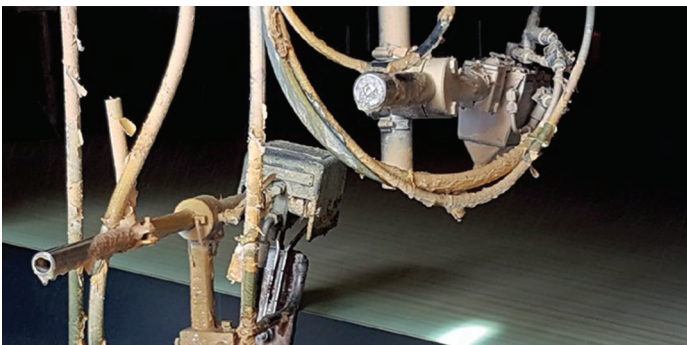
- Longer wire and felt life
- Reduced unscheduled downtime
- Not affected by water mist or droplets



VISI-U for dryer section

The higher temperatures of the dryer section dictate another edge measuring solution and, as the problems of water mist and droplets are virtually absent, an ideal application for ultrasonic edge detection. VISI-U is a recent development from Vision using ultrasonic measurement technology for dryer section fabric control. With integrated temperature control, the sensor is dust, moisture and contamination resistant to survive the harsh dryer hood conditions. The non-contacting measurement eliminates the tracking related abrasion and wear at the fabric edges of contacting palm sensors as well as being less vulnerable to damage during breaks and tail threading.

- Longer dryer fabric life
- Fewer fabric changes
- Temperature compensated



VISI-TW web width measurement

The edges of the paper web measured by VISI-TW camera and laser based sensor heads enable total web width and center point monitoring. Results fed back to the wet end trim controls, where sheet width to the press is established, increase machine productivity by reducing dry end trim waste. Accurate web total width and centerline determination also permits the optimum use of web oscillation, for instance at an offline super calender to increase soft roll life when dealing with basis weight or caliper streaks from the paper machine. A second pair of sensors at the winder is used to remove the oscillation in the final product to minimize trim waste.

- Optimized wet end trim control
- Higher productivity
- Oscillation control



VISIEYE mark and code reader in finishing

VISIEYE has been specifically developed to work with the Ryeco code marker to provide accurate and reliable code reading under all winder applications. VISIEYE can also provide mark verification at the reel to check correct code marker operation and ensure readable marks for subsequent finishing steps. Multiple units can also be used for applications needing both edges measured. The system can be used with all web inspection systems and triggered automatically with any process control equipment. Marked defects warn downstream operators to take preventative actions to avoid downtime and ensure that end users receive only your best product.

- Reads colored and invisible (UV) marks
- Ethernet to control system
- Helps close the loop on defect removal

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AFRY is your partner in digitalization and industrial innovation. We are a guide to business development throughout its lifecycle from consulting to design, implementation to maintenance and the development of entirely new digital business models.

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