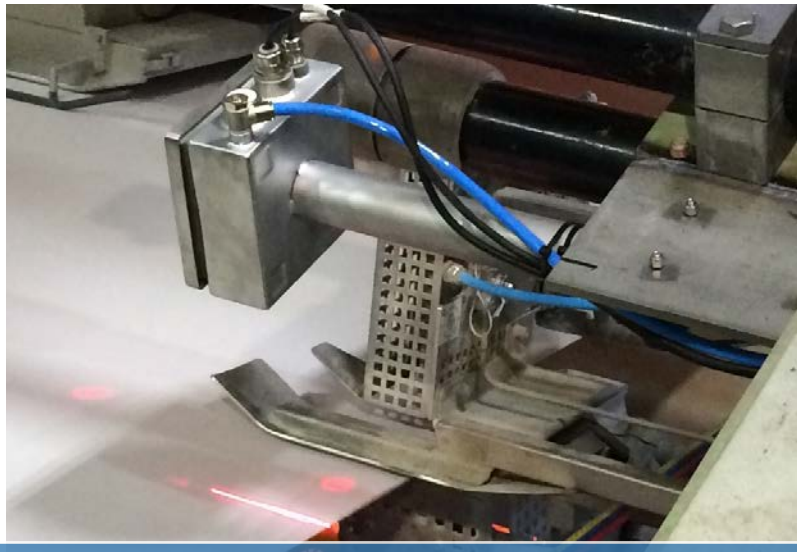
A299

Laser scanners

scanCONTROL



Web-edge detection in the calender of a paper machine

Calenders are used in paper production and should improve the surface smoothness of the final product which is e.g. printed newspaper or brochure paper. If movement of the paper web in the calender is not exactly executed in one line, the heated calender roller is pressed directly onto the coating of the opposite roller, which can damage it. Repairing this special coating or even replacing the whole roller would be very costly, which is why it is mandatory to control the position of the web edge.

This is where laser line sensors from Micro-Epsilon are utilised, transferring the exact position of the web edge directly to the machine control system. Measuring both edges of the web enables the web width to be determined and to transmit this value to the next stage of the trimming process. Compared to camera systems equipped with back lighting, this one-sided, high precision, absolute measurement solution using laser scanners saves significantly more space and doesn't need to be removed and set up again e.g. when changing the rollers.

Requirements for the measurement system

- Large offset distance
- One-sided measurement regardless of distance
- x resolution < 0.1mm

Ambient conditions

- Paper temperature approx. 60°C
- Industrial environment, paper dust

System design

- 2x LLT2910-100
- 2x SC2600/2900-10
- 2x protection housings

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