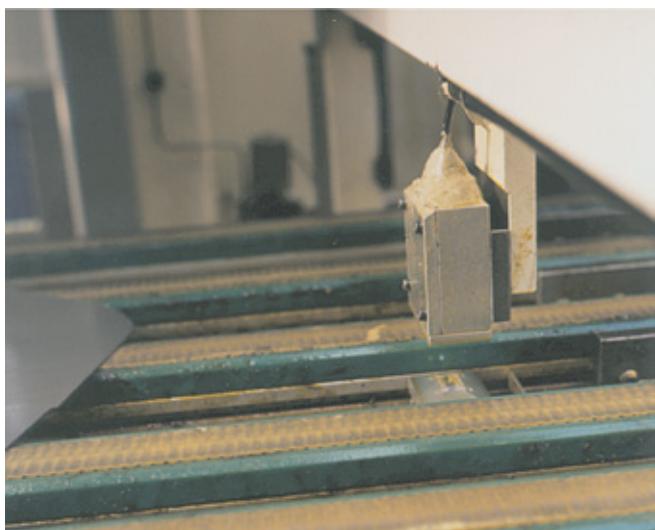


Double-sheet detection before pressing

To prevent damage, laser-based optical displacement sensors are employed in front of the inlet for profiled sheets in presses to enable the detection of double sheets. The sensors are mounted opposite one another, above and below the passing sheets. Irrespective of the actual position of the sheets, the material thickness is obtained by simple coupling of the distance signals from both sensors. For adjustment a master sheet for each type of sheet is inserted into the measuring gap and the resulting signal set to zero. The zero value is monitored within a tolerance. The sensors are operated in special protective housings because of the harsh ambient.

Measurement system requirements

- Measurement range: Sheet thickness 2.5 - 8.5mm
- Accuracy: 0.1 mm
- Resolution: 0.01 (0.1 mm)
- Bandwidth: Quasi-static



Reasons for the system selection

- Non-contacting and wear-free.
- High accuracy even with different sheet materials.
- Large base distance.
- Easy fitting and operation.
- Rugged system implementation.
- Visible laser, Protection Class 2.

Ambient conditions

- Temperature: 10 -40 °C
- Medium: Oil mist not visible

Measurement system setup optoNCDT

2 x ILD 1605-20 Optical displacement measurement system
2 x Protective housing

Principle

