SWISS PRECISION

DIMETIX
LASER DISTANCE SENSORS

DIMETIX APPLICATION EXAMPLE

AE-0505

AUTOMATED DIAMETER & WITDH MEASUREMENT

Industry : Paper

Application type : Dimension measurement / Monitoring

Brief description

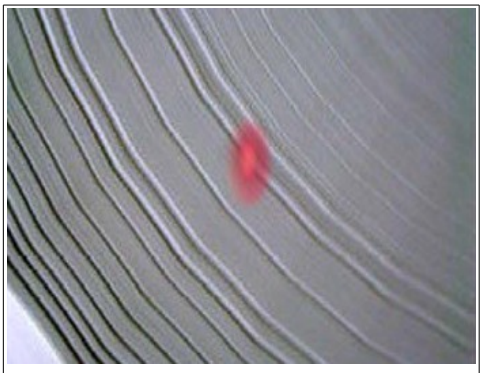
Pic 1: Paperrolls

Dimetix laser distance sensors are the ideal proven choice for roll diameter and width monitoring applications in paper and textile mills. The sensors have the range and accuracy to measure a variety of roll sizes as production moves through the mill without adjustment and without contact. The lasers are maintenance free and provide a reliable, repeatable, and cost effective alternative to string potentiometers, transducers, ultrasonic sensors, and manual tape measure readings.

In the application shown here, a pair of Dimetix laser distance sensors are mounted opposing each other to measure width. This measurement is referred to as "differential" because both distance measurements are added together to determine the roll width based on a known separation distance. The Dimetix laser sensor mounted overhead measure diameter based on a known position and calibration offset. In this case, the rolls rest in a shallow V roller assembly to maintain position.

Customers advantages

- Improve production quality and reduce scrap by monitoring production live
- Non-contact visible eye-safe laser measurement
- Laser sensors can be placed far apart to permit space for material transport and foot traffic
- Plenty of measurement range means that lasers do not have to be adjusted for various roll sizes
- Measurements can be acquired by a PLC or PC
- Maintenance free application– no moving parts to wear or string cables to break
- Economical, rugged , and compact package



Pic 2: Laser Spot on Paperroll

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