



"Your Direct Source for Plant Maintenance, Reliability, Test & Measurement"

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Laser Alignment Pulp and Paper Applications

Avoid expensive downtime with alignment

There are many determining factors for alignment within the paper and pulp industry. The rolls in a papermaking machine must be parallel with each other, as the quality of the finished paper will otherwise be poor. Misalignment can cause breaks in the paper web, resulting in costly downtime.

Machinery breakdowns in the pulp and paper industry cost an enormous amount of money. That's why preventive maintenance is of the utmost importance. [Easy-Laser®](#) minimizes the risks of unscheduled operational downtime and ensures product quality.



Check parallelism between rolls

The parallelism equipment is used to align the rolls. The most common method is as follows: The [D22](#) laser transmitter (on tripod) is aligned in parallel with the machine. The [D46 Angular prism](#) (also on a tripod) then deflects the laser beam parallel with the rolls instead. A D5 detector unit is positioned horizontally at one end of the roll and the measurement value is recorded. The detector unit is then moved to the other end of the roll and the measurement value recorded. This procedure is followed for the rest of the rolls that are to be measured. The display unit shows the rolls' positions, both graphically and digitally, in relation to any roll or the base line.

Checking the level of the rolls

To check the level of the rolls, the D22 laser is levelled according to the built-in vials. Detector D5 is then placed vertically at the ends of the rolls, and the measurement values are recorded at each position. Because the "laser beam" is levelled, the measurement result gives the position of the roll in relation to this.

Flatness measurement of wire end

The D22 laser and the D5 detector unit are used for flatness measurement of the wire end. The detector is placed at the marked points on the surface, the laser beam is aimed at the detector and the values are recorded. The result shows the flatness of the surface in relation to three zero (reference) points that can be changed if desired.

Other examples of alignment requirements

Other examples of alignment requirements are alignment between gearbox and cardan-coupled shafts, shaft alignment between pumps and motors, [sheave/pulley alignment](#) for fans, straightness measurement of rolls, parallelism and flatness of foundations, etc.