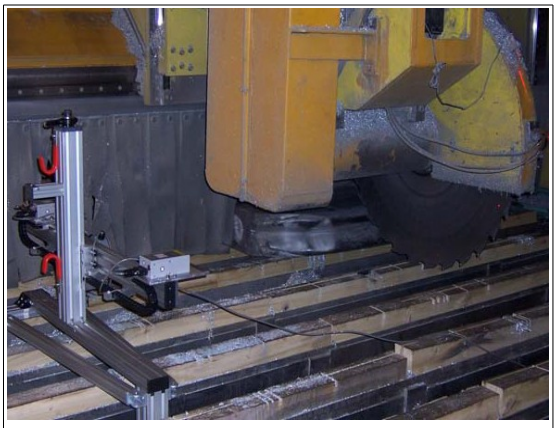
SAW BLADE ALIGNEMENT

Industry: Wood and metal machines

Application type: Position measurement

Brief description



Pic 1: Gantry saw with Dimetix Laser

In this application two laser distance sensors were mounted on each end of an extrusion to measure the difference in distance to the saw blade. A micro controller recorded the distances and provided a quick and easy display of the front to back alignment for review as desired. The system includes misalignment tolerances to trigger an out of tolerance condition for the operator.

These principles could easily be applied to any alignment application. By using at least three sensors, target straightness could also be monitored. The range of the available Dimetix laser distance sensors enables measurement from a few inches up to 500 meters.

On the micro controller screen shown in the second picture, two distances are displayed on the top line of the interface. The alignment dimension is shown below. The check mark indicates that the measurement is within tolerance.

Pic 2: Controller unit

Customers advantages

- Production quality improved and scrap reduced
- Non-contact, eye-safe laser measurement
- Measurements can be acquired by a PLC or PC
- Maintenance free — no breakable moving parts
- Economical, rugged, and compact package

Products used

FLS-C series

The FLS-C distance measuring device measures absolute distances up to 500 meters on reflective foil without contact. Due to most innovative laser technology the FLS-C has a unique accuracy of ±1.0 mm. A further advantage of the FLS-C is the quick determination of the positions of moving objects.

The FLS-C is an optical distance measuring device. It measures, maintenance-free, distances up to 65m on natural surfaces. It determines positions of objects that are difficult to access or may have very high surface temperatures. Just as easily, it accurately measures distances in hazardous environments.

The FLS-C is designed to be suitable for both, heavy industrial and outdoor applications. It is constructed of a solid metal case and provides class IP65 environmental protection. **It represents a cost efficient solution even at extreme environment temperatures as low as -40° C**. Furthermore, various features make it flexible for multiple applications in numerous industries such as automotive, paper, metal and textile.

Specification

- Measuring range 0.05 up to 500m
- Accuracy ±1.0 mm
- Repeatability ± 0.3 mm
- Extended operating temperature
- Solid metal case IP65
- Supply voltage

For new projects we recommend our **D-Series**. Further information can be found here.

For more information please contact us on application@dimetix.com