DIMETIX APPLICATION EXAMPLE AE-0509

LASER CONTROLLED CUT OFF SOLUTION

Industry: Wood / metal machines

Application type: Position measurement

Brief description

Pic 1: Behringer Saw

Traditional contact measurement methods are vulnerable to mechanical failure of parts, strings, and cables that wear, break, or stretch, and they also have the potential to damage the surface being measured. Increasing operational demands, maintenance requirements, and the growing importance of efficiency, however, are factors in metals production. Range, accuracy and durability are the factors setting laser sensors apart from other measurement technologies. Laser distance sensors can provide an economical approach to improving quality, as well as an affordable technological advantage for increasing efficiency, reducing waste, and eliminating production outages related to mechanical failure.

One of our partners recently played a leading role on a team of integration partners to design and implement a laser-controlled cut-off system as part of an expansion project for a new steel production facility. The new facility is open ended and subject to the harsh operating conditions typical in steel production. In addition to the massive Behringer saw at the heart of the steel bar cut-off solution.

Pic 2: Built-in Dimetix Laser Sensor

The system includes the following components: 1 Dimetix FLS-C laser distance sensor, a variable linear motor drive and a monitor interface with integrated PLC control. All these findings and your lines and connections have been linked in various housings together. The project also included the design and manufacture of an adjustable, heavy steel mounting bracket to withstand the harsh operating conditions

Customers advantages

- Easy alignment thanks to the visible laser beam
- Rugged aluminum housing suitable for harsh industry environment
- Maintenance free
- Accuracy +/- 1mm

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