

Application

Angular measurement with MDRM/MDFM magnetic sensors.

Industry

Heavy duty vehicles
Machine tools and system construction
Packaging machinery
Medical technology

Application Overview

Angular measurement tasks on moving equipment, such as dancer arms or articulated joints, are often handled using carbon-film potentiometers. The load placed on the wiper contacts by the fast, continuous motion is enormous and the resulting wear is obvious.

Application Challenges

In this application the angular rotation of the dancer arm has to be measured. The dancer arms are used to regulate the tensile strength of cables at the feeder side of the machines. In the past, customers would use contact potentiometers, which were not reliable and broke with time.

Solution(s)

The new magnetic rotary sensors of the MDRM / MDFM family provide a reliable, maintenance-free solution. The sensors, operating on the magneto resistive principle, function completely without maintenance, bearings and wiper contacts. As a result, they guarantee a very long lifetime even in difficult environments involving dust, fibers and moisture. In contrast to mechanical potentiometers, the MDRM / MDFM sensors allow measurement around the 360° circumference of rotation without a dead-band.

Supporting Documentation

•Baumer Sensor Solution Catalog



MDRM monitoring dancer arms for tensile strength regulation

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