



FMS AG – Your Company of Choice for Web Tension Control

Winding/unwinding, slitting, coating, printing and many other production processes require a stable material tension as well as exact positioning of the web.

The automation of production lines and especially following the introduction of servo-drives, web tension control with load cells became widespread and prevailed over the traditional control methods. Nowadays, tension measuring load cells are part of the standard equipment in running web production lines.

30 years after the first motionless force measurement device had been patented the Swiss company FMS AG is a synonym for tension control.

FMS, which was founded in 1993 after a buy out from FAG, manufactures highly accurate, genuine force measuring bearings and has over the years enhanced this technology to meet the demands of present production lines. Today, the products are an essential element to improve productivity and raise the quality standards in the paper and foil processing industry.

The product range is being continuously increased thanks to a wealth of innovative ideas. As a result, all force measuring sensors are made of stainless steel. This improvement was introduced in 1997 without increasing the selling price. New manufacturing methods allow the specification of the load cells in the accuracy class of 0.3% and their overload protection is 20 times the rated nominal force. These values result in very high measuring accuracy and virtually indestructible products. They are considered to be the performance benchmark in the industry.

For applications where a very wide tension range is required (e.g. in coating machines) a double range force measuring bearing was developed. The LMGZ.D series achieves a resolution of more than 1:200 at a very high signal quality. Special modifications allow the product to work in an extended temperature range (-10 ... +150°C). Alone this key data puts the LMGZ.D in the top position among the load cell community.

Hundreds of successfully completed projects with extremely durable products have established the high reputation of FMS. Customer satisfaction among machine builders and end users is of the highest level.



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Your next step – design of the measuring roller:

The roller design determines the type of force sensor to be chosen. The wrap angle is calculated depending on the web characteristics and its route in the machine frame. Small wrap angles often suffice to achieve good measuring results. This is an important prerequisite especially in cases where the material does not allow running larger wrap angles. The above mentioned parameters and the material characteristics are the bases for the force calculation.

The force measuring sensor can easily be applied with the design software from FMS. The well known “FMS Calculator” can be downloaded from the FMS web site free of charge. The choice of the corresponding measuring amplifier completes your measuring roller design.

There are of course many more tips and hints to optimise your design. A competent team of application engineers is at your disposal – at any time in your region.

For further information please visit our web side. www.fms-technology.com

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