

Web Tension Measurement in Newspaper Machine

Replacement of a failing competitor unit

Application: Force Measurement

Industry Sector(s): Paper and Pulp

The Customer

A newspaper manufacturer in Sweden with several problematic systems for web tension measurement.

Customer Inquiry

The customer had several positions in the dry part of the machine where a competitor's web tension units were failing due to vibrations. A replacement unit had to be a perfectly matched retrofit. Only one roller installation was needed for this inquiry.

Solutions and Equipment

Custom-made stainless steel 20 kN FMU-1 with two AST-3Ps, and a 24 W, 24 VDC, 1 A CP-SNT power supply in a stainless steel enclosure.

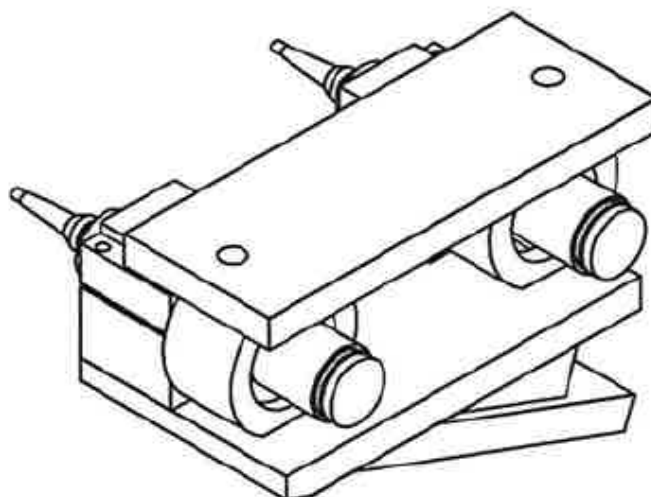


Figure 1: Custom 20 kN FMU-1

The unit had to replace the installed web tension unit and its angled adaptor that was necessary to get good measurement from the competition's unit. With the FMU-1, the angled adaptor is not necessary. Only the load cells are rotated in the direction of the web tension resultant forces. In addition, the

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installed unit was not stiff enough, which caused failures under vibration. FMU's stiffness and strength were designed to avoid this.

The web tension angles that were indicated by the customer, were in reality a lot smaller (as found when the FMU was mounted). Therefore the FMU had to work with very small signals around a few percent of capacity.

Customer Comments

This was an easy installation with no need for reconstruction. The measurement problems due to vibrations were solved by switching to the FMU-1. The rest of the problematic installations will be replaced as well.

“Vibration problems were solved by switching to the FMU-1, and web tension is now accurate”

Click here to open the Web version: <http://www.vishaypg.com/process-weighing/case-study/41003/>

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