

## Web Tension Measurement in Press Section

**Application:** Force Measurement

**Industry Sector(s):** Paper and Pulp

### The Customer

A producer of paper tissues located in Finland.

### Customer Inquiry

The customer asked for an accurate web tension unit to fit into an existing installation. The application was to measure the tension on pick-up felt in a tissue machine. The environment involved high humidity, splashing water and chemicals, and temperatures up to +60°C.

Web width: 5.7 meter  
 Felt tension: 0 kN/m - 5 kN/m  
 Wrap angle: 145°  
 Tension force:  $F_h = 26$  kN  
 Roll weight: 900 kg

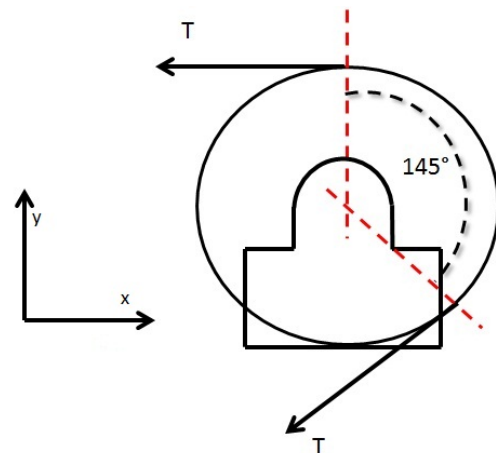


Figure 1: Wrap angle

### Solutions and Equipment

Our solution was to install two FMU 50 kN web tension transducers, one on each side of the felt, and one AST 3PF signal conditioner with a 4 mA to 20 mA output. The FMU is a low-profile web tension unit built of stainless steel mounting with KIS load cells. The low-profile structure was important to avoid making mechanical changes in the press section. The accuracy and the specifications of the FMU were important for the applications as it was in a very humid and high-temperature area.

BLH / Nobel Weighing Systems  
Brands of VPG Process Weighing

## Products used for the system

- FMU 50 kN – Web tension block
- AST 3PF

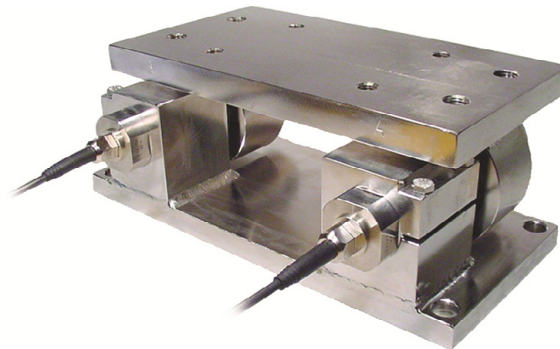


Figure 2: FMU web tension unit

## Customer Comments

After the installation of the system, we have much more control of the condition of the felt, including the wear and stretch of it. Also, after changing the felt, the start-up of the machine is much easier as you have continued control of the felt tension.

***“Nobel’s process understanding was excellent and vital to the outcome of the installation of web tension in the felt press section of our tissue machine”***

Click here to open the Web version: <http://vishaypg.com/process-weighing/case-studies/41000/>

(The Web version offers further hyperlinks to up-to-date product datasheets and other related documents like manuals, brochures, videos, and more)

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