

Feltest Tensometer



Instruction manual

Description

The Feltest Tensometer is an instrument for measuring tension in flexible thin webs generally encountered in paper mills, such as:

DRYER FELTS

DRYER FABRICS

PRESS FELTS

PRESS FABRICS

FORMING FABRICS

SOME PAPER SHEETS

The operation is based on the principle that the amount of deflection of a flexible membrane under load is dependent upon the tensile stresses in the membrane. The load is provided by an internal spring, and the amount of web deflection is measured by a dial indicator, calibrated in thousandths. The deflection is converted to tension in kg/cm or optionally to pounds per linear inch (pli).

The design of the instrument is such that the reading is normally unaffected by the amount of pressure applied by the operator. Further, the unique 'picture frame' bearing surface eliminates the effect of stress in adjacent areas of the web.

FELTEST

equipment

The Feltest Tensometer can be used on webs running in any angular attitude, and it can be applied on either side of a web. The magnitude of readings is also independent of speed or moisture content of the web.

The instrument can be used safely in wet surroundings since the internal mechanisms are protected by seals and rubber bellows.

The range of tension measurable with the instrument is 0.90 to 4.50 kg/cm (5 to 25 pli) with an accuracy of $\pm 10\%$ of the tension reading.

Operation

1. Set the pointer of the dial indicator to the zero mark by pressing the red push button at the top of the instrument.
 2. Hold the instrument by the outer housing assembly. Do not contact the picture frame while taking measurements.
-

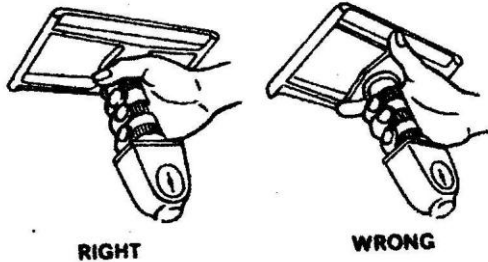


Fig. 1

3. With the longer side of the frame oriented in the machine running direction, press the instrument slowly against the web until the pointer of the indicator stops.

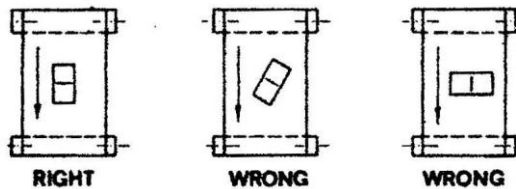


Fig. 2

4. Remove the instrument and read the dial.
5. Reset the pointer of the dial to the zero position and perform the measurement at least once more to check repeatability.

Recommendations

To ensure your own safety and to prevent machine damage, do not apply the instrument in the vicinity of an ingoing nip.

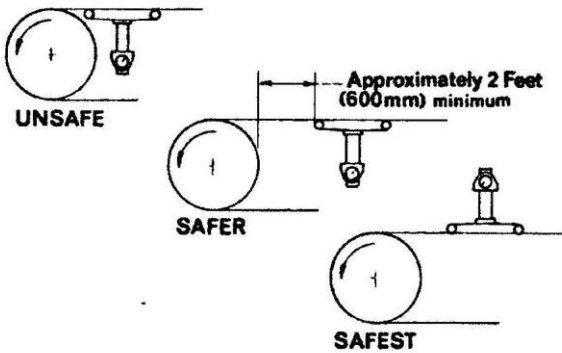


Fig. 3

Where lapped seams are present, avoid seam impact on the instrument by timing the measurement to correspond with web cycles.

When measuring slack spans, avoid wrinkling the web by measuring close to a support roll.

FELTEST

equipment

Apply the TENSOMETER gently

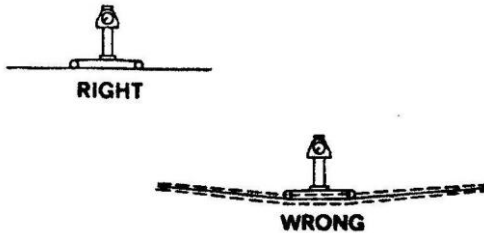


Fig. 5

Do not use the TENSOMETER on top of a roll.

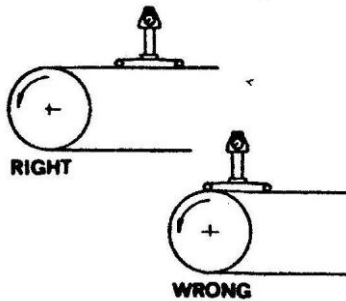


Fig. 6

Safety

Please consult site safety systems before using the Feltest Tensometer. Avoid ingoing nips.

Maintenance

No special maintenance procedures are required. However, the Feltest Tensometer should be externally cleaned and dried after use. If necessary apply a small quantity of silicone grease to the spindle where it enters the rubber bellows seal. This is required to ensure smooth operation.

DO NOT DISASSEMBLE THE INSTRUMENT

Service

For service (exchange/refurbishment) contact the address below:

Feltest Equipment BV

delivery address:

Bijenkorf 55
6961 PA Eerbeek
The Netherlands

postal address:

P.O. Box 205
6960 AE Eerbeek
The Netherlands

T: +31 313 652 215
F: +31 313 654 068
E: service@feltest.com
W: www.feltest.com

FELTEST

equipment
