



During filament yarn production, unintended abrasion due to various parameters such as yarn twist, yarn titer (dtex, den) and wax levels may cause production downtime. An exact quantification of the abrasive yarn characteristics gives information both of the unintended abrasion as well as of the positive, abrasion-reducing properties of spin finish oil.

This task is performed by Lenzing Instruments abrasion tester **AT 500**, which delivers qualitative and accurate information about the abrasive properties along the yarn within just a few minutes. The unique and efficient measurement method requires only a small amount of yarn for a thorough analysis. Abrasion is measured by letting the running yarn pass through a metal plate. The resulting abrasion of the plate gives feedback about the abrasion characteristics of the yarn.

The abrasion tester **AT 500** is suitable for many purposes:

- analyzing the influence of the concentration and composition of finishes, dyes delustering, agents, polymer additives
- isolating the effects of individual substances in spin finish oil
- examining the effects of the sectional form of fibers and their titers
- production control
- investigating the causes of abrasive properties of fibers and yarns
- preventive identification of yarns, which cause abrasion, prior to further processing
- quick, clear analysis of the potential for abrasion
- determining the anticipated needle service lives

Developed and manufactured by Honigmann, Wuppertal, Germany for Lenzing Instruments GmbH & Co. KG

The Testing Company



Scope:

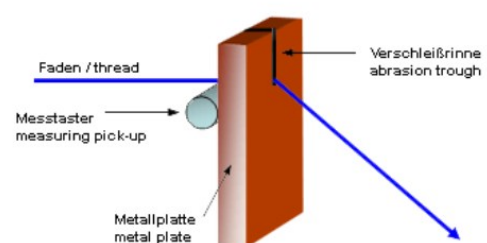
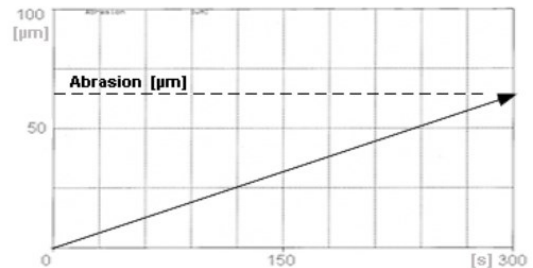
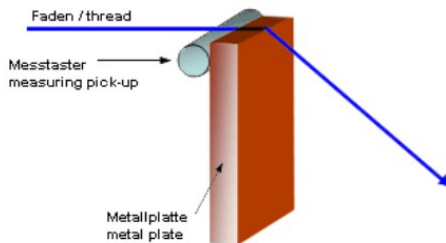
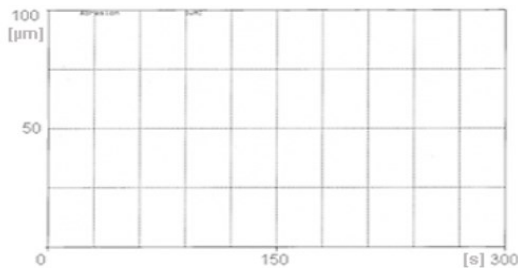
Laboratory testing instrument for automatic, accurate and flexible determination of the abrasion characteristics of filament yarn.

Method:

In combination with a yarn take-off unit, the tested yarn is run through a metal plate of outstanding hardness during a defined time period. A measuring sensor registers the abrasion of the plate, out of which the abrasion properties of the yarn are defined.

Results:

The Windows® based software program offers online measurement data acquisition and evaluation as well as automatic documentation and output of the results. During the measurement, not only the final results are stored but all the peripheral parameters as well, such as the tensile force, abrasion, take-off speed, measurement period, date, operator identification, temperature, relative humidity etc.



The measured data are captured at a sampling rate of 200 measurements per second, at a resolution of 16 bits.

Shown in parallel, during the measurement, are the set-point values and

- the actual value for the tensile force
- the abrasion value calculated online
- information on the momentary software operation status

All the measured values are stored as the original values, without data compression, together with the associated measurement parameters, the comments and the statistical values.

This makes it possible to retrieve these data once again, whenever it may be required, and to carry out further assessments - in accordance with the state of the art valid at any given date. In addition, this enables simple reconstruction of the measurements at any time.

Technical data and pictures are subject to change.

THE TEXTECHNO GROUP

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