

Textechno
textile testing technology

Cotton
control



COVATEST

Capacitive Evenness Tester for Slivers, Rovings,
and Spun Yarns with optional Hairiness Module

Evenness and Imperfection Testing

Testing of evenness and imperfections is essential for staple fibre spinning mills, since the perceptions of such tests are used to control the quality of the slivers, rovings, and yarns during the complete spinning process. A spectrogram of the mass distribution over the sample length gives valuable information to assess the status of the spinning-, carding-, drawing-, and combing process, and to verify the proper function of the production machines. Finally, the yarn hairiness is an important parameter, e.g. to assess the processability or the final fabric appearance.

COVATEST with Hairiness Module

Textechno's COVATEST is a perfect testing instrument to measure all above-mentioned parameters. Based on the well-proved capacitive measuring principle the mass irregularity along the sample is analyzed, including a mass spectrogram. The COVATEST can be equipped with an optional Hairiness Module, which utilizes a modern optical sensor with LASER illumination.

The tester can be used for both short- and long-staple spun yarn and for worsted spinning yarns. For testing the evenness of tops an additional external sensor is available.

The operation software runs under current Windows versions like WINDOWS® XP or WINDOWS® 7. The operation itself is extremely easy and self-explanatory. All data are stored in a database for repeated evaluation and printing.

Features

General

- Graphical and numerical results perfectly matching all accepted standards
- Easy-to-use software and machine for quick and simple operation
- Modular machine for cost-effective investment
- Fully automatic operation
- Multi-language windows-based software



COVATEST



- Easy data retrieve from open SQL Database (Access)
- Latest electronics and superior mechanical solutions
- Easy and quick self-testing systems for minimized service costs
- Optional Hairiness module, automatic cop changer on request

Measuring frame with

- Sensor unit with 4 measuring slots for the range 2Tex (yarn) – 4 ktex (sliver).
- Optional external sensor for tops : 4 ktex – 80 ktex,
- Drive unit with feeding device, slow-start, and automatic yarn path setting

- Pneumatic yarn suction
- Sensitivity: 4 ranges: $\pm 100\%$, $\pm 50\%$, $\pm 25\%$ and $\pm 12.5\%$ (additional ranges on request)
- Operating modes: Normal, 1/2 Inert and Inert
- Sample feeding speed: 8, 25, 50, 100, 200 or 400m/min.
- Measuring range: 0.20 - 99.99% (U% / CV%)

Spectrograph unit

- Number of channels: 180
- Analysing wavelength: 0,01 – 1528m

Imperfection indicator

- Number of channels: four levels of sensitivity at the same time
- Sensitivity for:
 - Thin places: -60%, -50%, -40%, -30%
 - Thick places : +100%, +70%, +50%, +35%
 - Neps : +400%, +280%, +200%, +140%

Deviation rate (DR%)

- Number of channels: 4 channels
- Reference length: OFF, 1,5m, 5m, 10.00m
- Level: $\pm 5\%$, 10%, 25%, 50%, 75%

Numerical data

- Mean deviation U% and coefficient of variation CV%
- Relative count per measured length
- Number of thin places, thick places, and neps in the yarn provided by four sensitivity levels
- DR% for four set lengths and levels, and DRT% for the total length
- Coefficient of variation CV(L) at set length for lengths 0,5m, 1m, 3m, 10m, 50m, 100m
- Total hairiness H per 1 cm of yarn, standard deviation sh, sh (0,5m, 1m, 3m etc.)

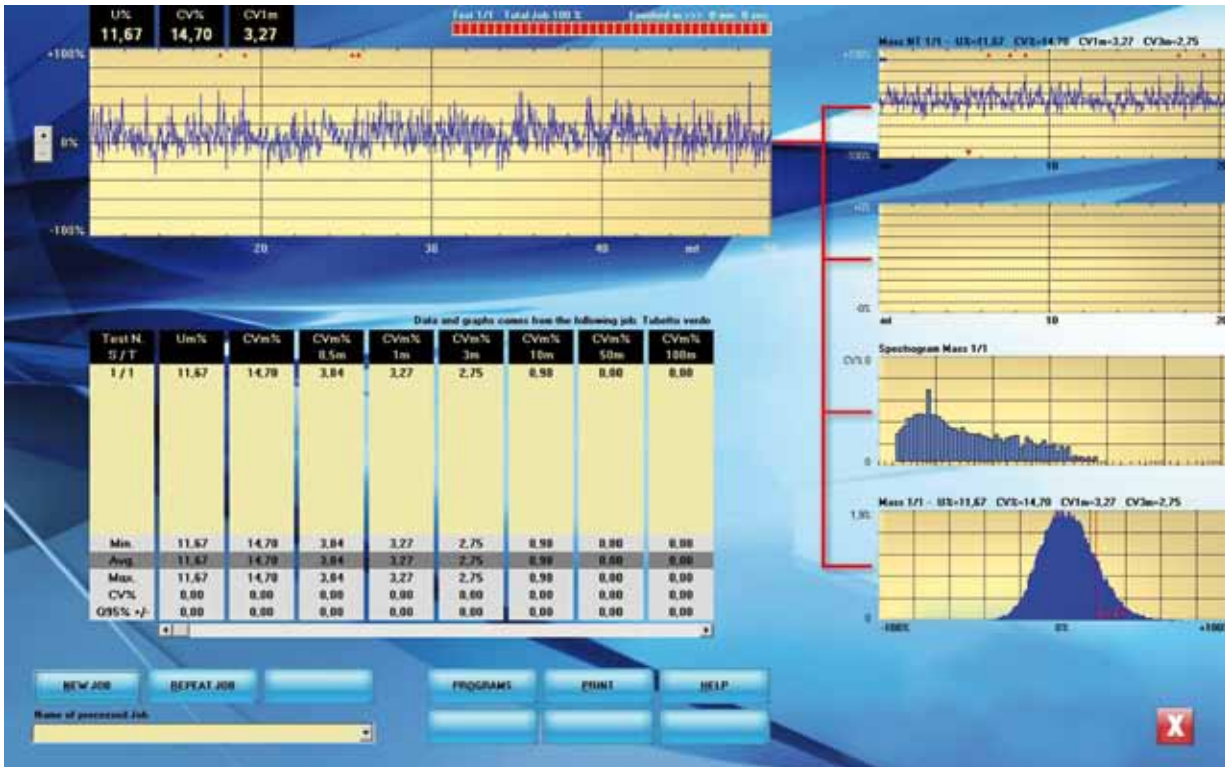
Statistical data

- Average value, max. & min. values
- Standard deviation
- Coefficient of variation of the mean value CVB%
- 95% confidence limits of the mean value (Q (95%))
- IPI values converted per 1,000m

Graphic output

- Diagram of mass variation per unit length
- Spectrograms (also 3D), Histograms and CV(L) curves for mass variation
- Diagram of hairiness variation per unit length
- Spectrograms (also 3D), Histograms, and CV(L) curves for hairiness.

Screen for setting the test / printing conditions



Screen during measurement

Technical data

Power supply and consumption

Power supply: 230V, 50 (60) Hz

Consumption: 500VA

Compressed air supply

Air pressure: 6 bar

Capacity: Approx. 80 Litres/min

Dimension & weight

Height: 650 mm

Width: 314 mm

Depth: 365 mm

Weight: 97 kg

Lacquer finish: RAL 9006 / 5002

The above technical contents can be subject to changes by Textechno.



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