

CIS 200

LENZING *i* NSTRUMENTS

ON LINE CRIMP INSPECTION SYSTEM



The number of crimp is an essential parameter of staple fiber for its subsequent processing performance. Nowadays it is counted manually fiber by fiber. If one considers that across the tow there are hundreds of thousands of single fibers and that the variation of the number of crimp over the width of the tow can easily be more than 300 % - it becomes obvious that such a manual method never can come even close to a reliable judgement of the real crimp numbers and their actual variation over the tow.

CIS 200 determines the main (average) crimp number and analyzes the complex crimp distribution over the entire width and length of the tow. The micro crimp and the long crimp are analyzed specifically. That allows an immediate feedback and a perfect, representative control of the entire crimp variation in your staple fiber tow.

100 % of the production history is recorded and can easily be recalled from the professional data base.

That means in case of claims you can provide much more determined investigations in terms of crimp variations.

With **CIS 200** you will save money by reacting immediately to changes in the crimp process and by being able to define accurately which bales have been affected by unacceptably crimped fibers instead of downgrading large production lots.

CIS 200 analyzes crimp variations for their number, variation over the tow and their nature. That signifies immense savings by downgrading only the very few and 100%-identified bales affected by minor crimp quality. It is your tool to define the origin of the crimp variations and to take immediately the corresponding measures. A much better and continuous quality from your customer's point of view is your benefit resulting in high quality image and no claims caused by crimp variations.

STAPLE FIBER TESTING

The Testing Company

Scope:

On-line crimp inspection of the passing tow directly in the production; analyzing the average crimp count (base crimp), crimp distribution, micro crimp, long crimp and edge crimp. It displays the crimp variations in down and cross tow directions.

The **CIS 200** concept allows to fully control an entire fiber production plant with different lines using

- either the corresponding number of optical sensors per line or
- cameras traversing the tow (suitable for larger tows)

which are connected to only one central control unit.

Method:

Infra-red sensitive cameras monitor the passing tow between dryer and cutting machine.

The tow is illuminated by stroboscopic infra-red light. The images are processed directly by a processor inside the camera and the results will be sent by data bus system to the central control cabinet.

Data are displayed and analyzed by means of a powerful data base tool enabling also customized reports, historical data presentation and 2D/3D-graphs.

Camera application option:

- On a traversing unit - moving one camera periodically from one side of the tow to the other.
- On a simple fixed frame - more cameras will monitor the tow simultaneously.
- On a simple frame for off-line laboratory measurements.

Number of optical sensors:

Maximum 128 sensors or 4 traversing units per one control unit.

Crimp count rate:

Up to 5 - 6 measurements/s, fully parallel for each sensor.

Distance to fiber tow:

Approx. 120 mm from sensor to tow surface

Maximum tow velocity:

10 m / s

Scan width:

Approx. 125 mm per sensor.
The specific image area is 2,5 x 3,2 cm.

Accuracy:

Better than 1 % of full scale.

Measuring Range:

4 to 30 counts / cm
(10 to 75 counts / inch optional).

Data presentation:

Easy data accessibility and customized reports through a data base system. 2-D and 3-D graphs. Direct data presentation on device front-end. Data history presentation via optional data base back-end.

Control cabinet:

Ultra fast high-end PC with hard disk, monitor, keyboard, printer.
Special evaluation software with powerful data base.
I/O interfaces for external Start/Stop/Pause/Alarm relays for each fiber line.

Dimensions:

Sensor head:
125 x 310 x 180 mm,
approx. 10 kg.
Control cabinet:
600 x 600 x 1780 mm,
approx. 140 kg.

Power supply:

Control cabinet:
220 V/50 Hz (others on request), 600 VA
Measuring head:
24 V DC / 1.5 A

Options:

Remote display of crimp count.
Ethernet connection to host computer.