SAURER.

Interlace Monitoring.

Fibrevision FibreTQS

Fibrevision FibreTQS monitoring enables faults to be eliminated that would result in downgrades in downstream processing. This provides both substantial quality benefits and process cost reduction. Used in many application ranging from POY, FDY, DTY and ACY where monitoring of interlace is important.



FibreTQS system

The FibreTQS system comprises several components:

Optical sensors

- These are normal located in the winding area and are used to identify interlace level, interlace distance and interlace intensity.
- Broken filaments identifies broken filament and slub problems

Electronics

 The sensors connect to distributed electronics and carry out all high-speed data acquisition and signal processing as well as providing a range of I/O functions.

PC software

 A simple intuitive user interface with a mimic display of the machine provides the current status of the machine at a glance.

Plant integration

 Provides facilities for data export and control of multiple FibreTQS machines from a single PC.

FibreTQS grading and reporting

FibreTQS continuously monitors data from the sensors and identifies all quality events. Based on these

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faults the packages are graded based on the limits and grading criteria defined in the merge setpoints and appropriate actions taken eg: output activated to cut the end or illuminate a warning lamp. The key grading limits available in the merge setpoints are:

Mean variation - interlace - minimum nodes/m

 Maximum distance between nodes, maximum CV of distance between nodes.

Slubs and broken filaments

- Grading is based on the number of slub events, and/or the total number of broken filaments per package.
- On the basis of the faults identified, FibreTQS automatically assigns a quality grade to the packages (grade 1, 2, 3, 4 or reject) This quality grade is displayed at the machine PC and can be transmitted automatically to any automatic handling / packing system immediately when the package is doffed.

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Flexible reporting

A range of reports are available to summarise package quality and off quality events; by machine, merge group, winder, or threadline over flexible time periods. Full shift reporting facilities are included. These reports summarise the number and weight of packages in each grade and allow lists of packages in selected grades to be printed. When viewing these reports on screen it is possible to view / print details of:

- Off quality events for any selected package
- Package summary data for each property
- Trend data for each property for the duration of the package

User interface

FibreTQS provides a graphical display of the machine layout that indicates both threadline running status and quality grade by the colour of the package icons.

Clicking on a winder icon displays details of the current readings and clicking on individual threadlines provides:



- Current readings
- Summary data for the package to date
- Details of off quality events
- Real Time View graph
- Analysis tools to aid troubleshooting
- Quality Reports from previous packages
- Access to historical trend data

Typical interlace data



Interlace mean data



Typical interlace data: interlace distance