SAURER.

ATY control.

Fibrevision Fibre TQS

Fibrevision FibreTQS is an advanced quality monitoring system providing total quality control for the ATY Process. A single optical sensor monitors a range of parameters, eliminating the requirement for most routine testing including knit and dye.

FibreTQS sensors
A single optical sensor replaces the standard end break sensors, providing measurement of

Bulk level
Steady state bulk or texture faults are the major cause of down- stream faults in ATY yarn and can normally only be identified by knit and dye tests. FibreTQS measures the quality of the ATY yarn by characterising both the core and loop structure of the yarn. This provides data that allows far tighter control of the texturing process enabling:
- Elimination of off machine QC
- General quality improvement
- Air savings, by operating at lower pressures

Denier variation
A very sensitive measurement of the short term variation in the profile of the yarn identifying.
- General process instability (high CV faults)
- Slubs/thin places (transient high/low denier) that typically result from jet contamination
The transient denier faults are stored as part of the package report together with capture graphs enabling each fault to be viewed.

Denier change
Faults associated with missing plys can be a major source of quality problems in the ATY process. FibreTQS eliminates these with a very sensitive unique technique that allows small changes in denier to be identified, providing quality improvements and eliminating the requirement for multiple end break sensors.
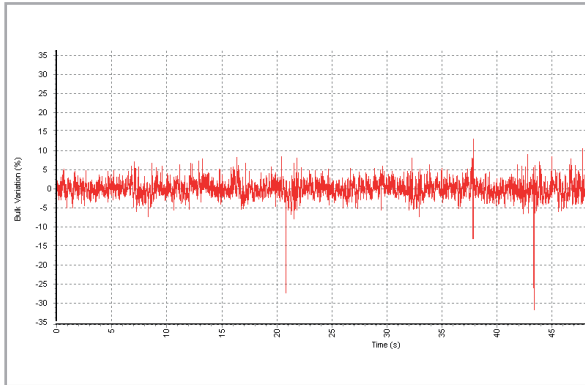
Typical slubs/thin places in real time view
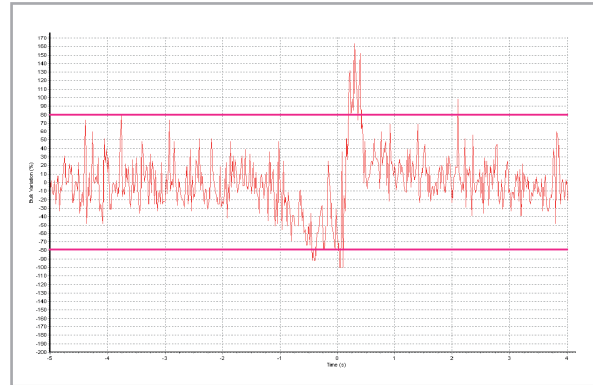
Typical slubs/thin places of fault capture

Quality benefit

FibreTQS not only provides better quality 1st grade yarn, together with a lower percentage of 2nd quality and reject yarn, with a full quality report on every package, but it also provides extensive software tools to allow substantial improvement in the fundamental quality of the process by:

- Rapid identification of repeating faulty threadlines
- Identification of positions drifting towards downgrade limits
- Identification of short term or cyclic faults that would not be seen in off line testing
- Identification of quality trends that allows preventative maintenance to be more effectively planned
- Control of extreme positions reducing overall quality variation

Replaces end break sensors

Standard end break sensor replaced, no extra guides, easy operation.

Lower maintenance costs

Single optical sensor, no moving parts, no calibration required.

Contamination compensation

Cleaning not normally required, sensors automatically compensate for any contamination. In extreme situations maintenance alerts warn if cleaning on any sensor is necessary before accuracy is affected.

Quality indication

LEDs on each sensor indicate the quality of the current package.

Quality data

The data from the sensors is processed in distributed "sections", with both quality fault and summary data being passed to the FibreTQS PC software which stores extensive quality data for each package produced.

This data is provided in user-friendly reports with full package grading and extensive facilities to aid process improvement:

Current data

- Full details for each threadline
- Real time views
- Process Improvement tools including "worst" threadlines
- Details of off quality events
- Fault analysis tools

Package data

- Full quality reports on every package produced
- Mean and variability data for each monitored parameter
- Details of any off quality events
- Capture graphs for transient events

Historical data

Trend data for each monitored parameter is available for each threadline and each merge group to allow assessment of both long and short-term process trends

Plant integration

- Data export for every completed pack
- Multi machine controller available to control/view all machines