

FibreTQS Monitoring Spandex

FibreTQS is an advanced monitoring system for the Spandex / Elastomer process uses a single optical sensor to monitor a range of parameters that identifies all key process faults. The key parameters monitored and benefits of FibreTQS for the Spandex process are

FibreTQS Sensors

A single Optical, sensor provides measurement of:

Denier Variation A very sensitive measurement of the short term variation in the profile of the yarn identifying

- General process instability (high CV faults)
- Weld Spots and Slubs

Broken Filaments Immediately Identifies broken filament and Slub problems

Quality Benefits

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

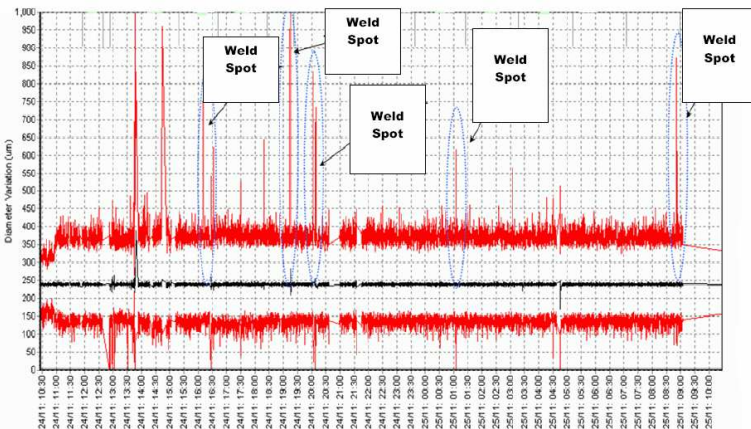
Historical Data Trend data for each monitored parameter is available for each threadline and each merge group to allow assessment of both long and short-term process trends.

Quality Alerts Identifies repeating fault positions
Identifies positions drifting towards control limits

Plant Integration Data Export for every completed pack
Multi Machine Controller available to Control / View all machines

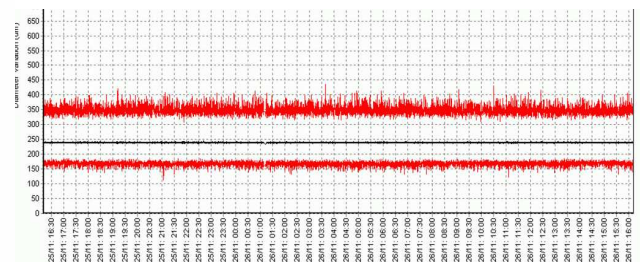
Typical Process Data

Typical denier variation data from stable and unstable is shown in the trend data graphs below. The Black line represents the mean data values whilst the red lines represent the minimum and maximum values.



Unstable Process Data

Black Line Shows mean values and Red lines min / max Values



Typical Stable Process Data