

Yarn Tension Monitoring Interface™ Mini

Industry: Manufacturing

Summary

Customer Challenge

In textile manufacturing, consistent tension levels of yarn is needed during production. Yarn undergoes many different manufacturing processes such as spinning, weaving, knitting, and winding, and quality control is crucial to produce high quality textile products. A tension monitoring system is needed.

Interface Solution

Interface's SML Low Height Load Cells can monitor the force of the individual yarn strings on the track wheel. SML's are attached to a clevis, which is then attached to a track wheel that holds the yarn in the machine. When yarn tension is loose, misaligned, or misplaced, the SML detects the lack of force and an alarm notifies the customer when connected to the BX8-AS BlueDAQ Series Data Acquisition System. Results can be monitored when connected to a PC or laptop with supplied BlueDAQ software.

Results

Interface's miniature load cells and clevises successfully monitored the tension of the individual yarn strings, and notified the customer of any lack of tension or misalignments.

Materials

- Multiple SML Low Height Load Cells
- Multiple Clevises
- One BX8-AS BlueDAQ Series Data Acquisition System per eight SML's
- Supplied BlueDAQ software
- Customer PC

How It Works

1. Multiple SML Low Height Load Cells are attached to clevises, and installed into the yarn machine. A track roller is attached onto the clevis, where the yarn string safely stays on. When a yarn string loses tension or is misplaced, the SML's will detect the lack of force.
2. The BX8-AS BlueDAQ Series Data Acquisition collects the force readings where it can be displayed and monitored when connected to the customer's computer with supplied BlueDAQ software. Eight SML's can be paired with one BX8.

