

Instantaneous Carpet Production Feedback

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The Attalus system monitors and provides information on 100% of the carpet fiber produced.

The speed of carpet fiber production drives the need for instantaneous feedback. It takes only a few hours of production to fill a pallet with packages for downstream use. With the speed and vast quantity of packages produced, it becomes extremely difficult to find and segregate defective packages once they have been moved out of the spinning area. To meet the speed requirements of carpet fiber manufacturing, the instantaneous feedback from real-time on-line fiber monitoring is critical in allowing operators to act as soon as production problems occur.

ATTALUS FIBER SYSTEM

The Attalus Fiber System is an on-line, real-time monitoring system that has been installed in carpet manufacturing facilities both in North America and in Europe. At the core of the Attalus System is the

proven and robust Attalus Sensor. This radio frequency, electromagnetic-based sensor is capable of monitoring fiber characteristics such as bulk, bulk uniformity, node count, node quality, spin finish and the presence of anti-static filaments. It also provides machine process information on-line, in real-time.

CRITICAL PROCESS INFORMATION


Since its first installation in 2000, the Attalus Fiber System has proven that it can provide more information, more accurately and quickly versus traditional in-house laboratories. Traditional laboratory testing samples a statistically insignificant amount of yarn, whereas the Attalus System continuously monitors 100% of the yarn during production. As such, the Attalus System would easily catch something as simple as a variable node count caused by a faulty interlace jet,

whereas this issue can be missed entirely in the laboratory.

Because the Attalus System continuously monitors the yarn, yarn aspects not regularly tested in the laboratory such as the yarn's coefficient of variation (CV) can be monitored. It has been proven that high yarn CV, which can be caused by something such as a clogged cooling drum, can cause carpet streaks. The Attalus System is also being used to detect other process related issues such as bad lamellas, quench air failures, godet wraps, and filament crossovers just to name a few. The immediate feedback provided by the Attalus System allows facilities to detect and segregate off specification yarn. It also increases efficiency by providing the information necessary to fix process problems as soon as they occur.

INSTANTANEOUS FEEDBACK

To provide instantaneous process feedback, operators can set alarms using the Attalus System to identify when the process is going outside of specifications. It is typical for carpet fiber facilities to link the Attalus System to a label printer or an LED system to alert them immediately of any alarms. The label printer can print that the current package has gone out of specification and the LED can light up red when a fault occurs.

In a marketplace governed by tightening specifications and ever increasing competition and raw material prices, the on-line, real-time information supplied by the Attalus Fiber System has become an integral part of a manufacturer's continuous improvement strategy to increase market share and long-term profitability. 

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