Press release

# Yarn strength measurement – and protection against quality claims

Uster Technologies launches the new USTER® *TENSOJET 5*

**Yarn producers today know that both quality and performance are essential if they are to meet the continually-rising demands of their customers in the weaving and knitting mills. Yarns must have the look, feel and functionality to satisfy these requirements. With the launch of the USTER® *TENSOJET 5*, the concept of tensile testing is extended to provide a total package: precise measurement of a yarn's strength, combined with reliable protection against quality claims based on accurate forecasts of performance in later processes.**

A priority for any yarn is the ability to withstand downstream processes – without causing stoppages or affecting production efficiency. Whatever the fabric application, it is high-speed weaving and knitting which exert the greatest stress and strain forces on the yarn. So its strength and elongation properties must be suitable for the fabric-making process, as well as for the ultimate end-use.

Minimum strength and elongation properties are needed to prevent a yarn breaking or being damaged in downstream operations, as well as avoiding blemishes on end-products in weaving. So accurate tensile-strength values are important, particularly for warp yarns, which are placed under tremendous stress.

USTER is committed to meeting the industry's need for increasingly effective and accurate tensile testing. For decades, USTER® laboratory instruments have set the global standards for strength and elongation measurement of staple, as well as filament, yarns. In 2018, a new generation has been launched. The USTER® *TENSORAPID 5,* the 'go-to' tensile tester providing precise data, was introduced in March. Now, the most powerful and comprehensive tensile tester ever is introduced: the USTER® *TENSOJET 5* can operate at speeds of 400 m/min and integrates with the Total Testing Center to deliver a new range of overall benefits to both quality assurance and profitability for yarn manufacturers.

## WEAVABILITY and profitability

The high speed of 400 m/min actually simulates the dynamic stress on the yarn during weaving, and this makes the USTER® *TENSOJET 5* a unique tensile measuring system. It is the standard for prediction of WEAVABILITY by giving an accurate forecast of yarn behavior in subsequent processing, especially on high-performance weaving machinery. Fewer weak places in the yarn mean higher efficiency on downstream machines. The prediction of WEAVABILITY increases economic efficiency, as well as weaving quality and profit margins.

The USTER® *TENSOJET 5* performs 30,000 tests per hour, producing accurate data through this extensive and rapid measurement. Utilizing this great volume of data is what makes it possible for the system to predict weak places in the yarn. This important forecasting function would otherwise be difficult or impossible to achieve – and is way beyond the capability of other conventional testers. Graphic tools such as scatter plots show all significant information at a glance. Seamless correlation with USTER® *STATISTICS* benchmarks makes USTER's WEAVABILITY System an essential instrument to minimize claims and to drive producers towards higher profitability.

Press release

**Total Testing Center: the claim-free system**

Ultimate process control comes with the connection to USTER® *TESTER 6*. The integration of results with USTER® *TESTER 6* allows users to profit from intelligent alarms through the Total Testing Center. Smart reports integrate results from both evenness and tensile tests, providing an overview of the quality being produced. Data analysis through connected laboratory instruments allows fast decision-making by the mill, to guarantee customer satisfaction with the yarns being delivered. The Total Testing Center thus aims to provide a 'claim-free' system for yarn producers.

Only through the Total Testing Center is it possible to obtain clear visualizations of weaving performance. This is provided in the form of objective grades, predicted by a combination of strength testing parameters from USTER® *TENSOJET 5* and yarn quality parameters from USTER® *QUANTUM 3* yarn clearers – then collated and interpreted by the Total Testing Center. The weaving performance information is ranked on a scale from one to five Qs (grades) to allow spinners to identify batches with a high risk of yarn breaks during weaving – and to avoid complaints to a large extent.

The total package of major advantages means USTER® *TENSOJET 5* is acknowledged not only as the industry's ultimate tensile tester, but also as a key element in a the growth of a spinning mill's profitability.