QUALITY CONTROL IN TEXTILE MANUFACTURING

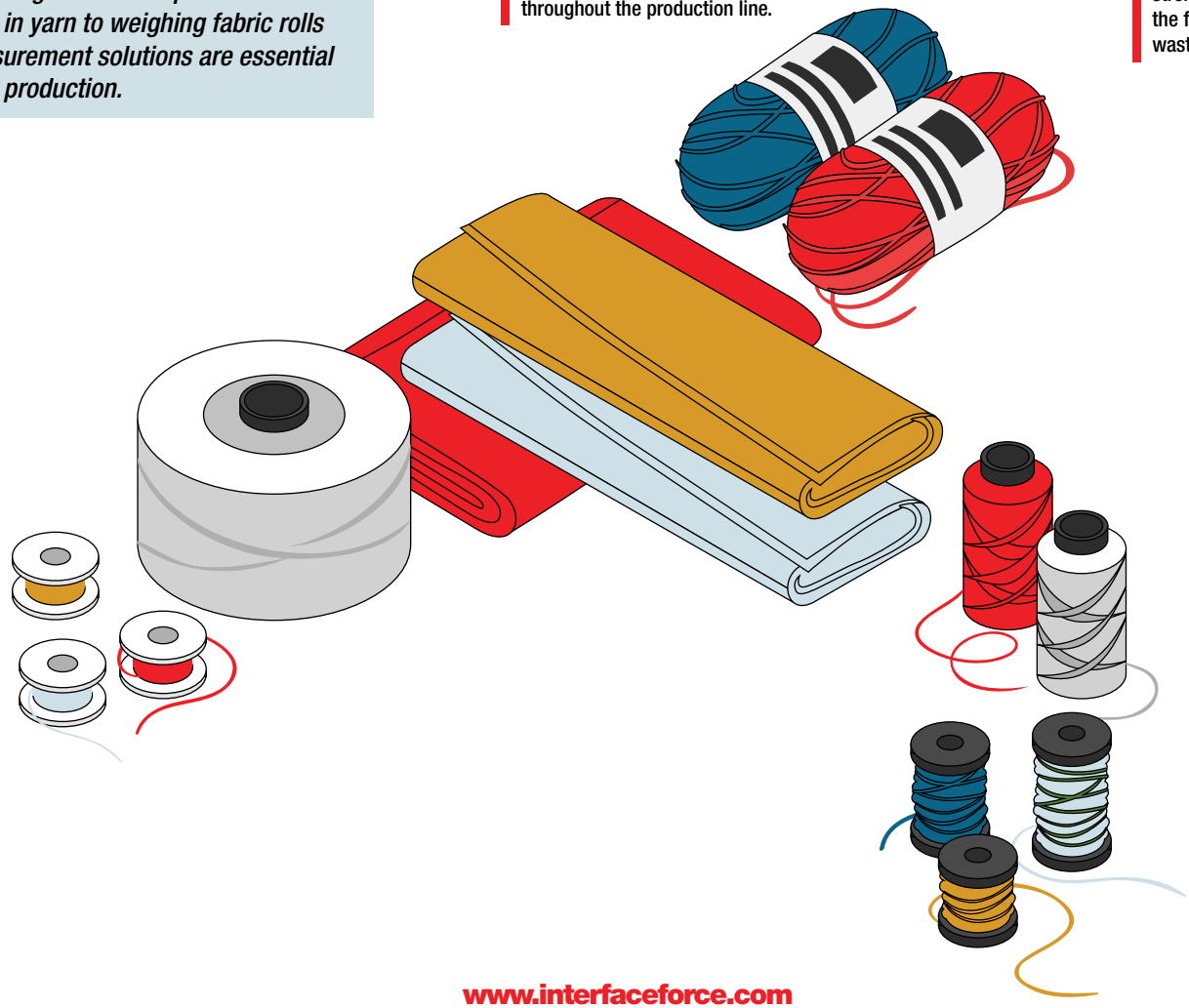
Interface
FORCE MEASUREMENT SOLUTIONS

Load cells enable textile manufacturers to automate cutting processes, enhance efficiency in sewing equipment, and prevent overloading in material handling systems. With Interface's advanced load cell technology, textile manufacturers can achieve higher productivity, superior product quality, and improved operational performance, driving innovation and competitiveness in the industry. Interface load cells and instrumentation are used in several machines at various stages of textile production. From maintaining consistent tension in yarn to weighing fabric rolls and yarn packages, force measurement solutions are essential for quality control and efficient production.

Interface products are commonplace in manufacturing and production. Force measurement is integral to advanced manufacturing systems, production lines, packaging, and product testing. Interface sensors are utilized in testing and monitoring various machines, from presses to lifting equipment, to ensure accuracy and repeatability throughout the production line.

Studies show that utilizing load cells in yarn tension control can reduce fabric defects by up to 30%, leading to significant cost savings and improved product quality. Tension load cells measure the precise force exerted on the yarn during processes like winding, weaving, and knitting. This ensures consistent diameter, strength, and texture throughout the fabric, preventing flaws and wasted material.

The global textile market was valued at 13B USD in 2023 and is anticipated to grow at a compound annual growth rate (CAGR) of 7.6% in revenue from 2024 to 2030.



Force measurement is frequently used to monitor textile equipment performance. Interface load pins, load washers and mini load cells can be installed directly into textile machines and retrofitting machines to monitor specific forces in real time. In textile manufacturing, force sensors are valuable for identifying machine misalignments. Our load cells, combined with instrumentation, can help monitor textile machines, avoiding unneces sary repairs and disruption in production.

There has been an increasing trend in the use of smart textiles in the market that use optical fibers, metals, and various conductive polymers to interact with the environment. These helps detect and react to various physical stimuli such as mechanical, thermal, or chemical & electric sources.

Sources:
Textiles Market & Trends. Grandview Research. 2023.