

Textile Industry: An Overview

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Commentary

The cloth assiduity is primarily concerned with the design, product and distribution of yarn, cloth and apparel. The raw material may be natural, or synthetic using products of the chemical assiduity. Artificial fibres can be made by banishing a polymer, through a spinneret (polymers) into a medium where it hardens. Wet spinning (rayon) uses a jelling medium. In dry spinning (acetate and triacetate), the polymer is contained in a detergent that evaporates in the heated exit chamber. In melt spinning (nylons and polyesters) the extruded polymer is cooled in gas or air and also sets. Some exemplifications of synthetic filaments are; polyester, rayon, acrylic filaments and microfibers. All these fibres will be of great length, frequently kilometres long. Artificial fibres can be reused as long fibres or batched and cut so they can be reused like a natural fibre. Natural fibres are moreover from creatures (lamb, scapegoat, rabbit, silk-worm) mineral (asbestos) or from shops (cotton, flax, sisal). These vegetable fibres can come from the seed (cotton), the stem (known as bast fibres flax, hemp, jute) or the splint (sisal). Without exception, numerous processes are demanded before a clean indeed chief is attained-each with a specific name. With the exception of silk, each of these fibres is short, being only centimeters in length, and each has a rough face that enables it to bond with analogous masses. The woven fabric portion of the cloth assiduity grew out of the artificial revolution in the 18th century as mass product of yarn and cloth came a mainstream assiduity. In 1734 in Bury, Lancashire John Kay constructed the flying shuttle — one of the first of a series of inventions associated with the cotton woven fabric assiduity. The flying shuttle increased the range of cotton cloth and speed of product of a single embroiderer at a

impend. Resistance by workers to the perceived trouble to jobs delayed the wide preface of this technology, indeed though the advanced rate of product generated an increased demand for spun cotton. In 1761, the Duke of Bridgewater's conduit connected Manchester to the coal fields of Worsley and in 1762, Matthew Boulton opened the Soho Foundry engineering works in Handsworth, Birmingham. His cooperation with Scottish mastermind James Watt redounded, in 1775, in the marketable product of the more effective Watt brume machine which used a separate condenser. \ In 1764, James Hargreaves is credited as innovator of the spinning hinny which multiplied the spun thread product capacity of a single worker — originally eightfold and latterly much further. Others credit the invention to Thomas Highs. Artificial uneasiness and a failure to patent the invention until 1770 forced Hargreaves from Blackburn, but his lack of protection of the idea allowed the conception to be exploited by others. As a result, there were over spinning jennets in use by the time of his death. Also in 1764, Thorp Mill, the first water-powered cotton shop in the world was constructed at Royton, Lancashire, and was used for registering cotton. With the spinning and weaving process now mechanized, cotton manufactories cropped up each over the North West of England. The grazing frame constructed in 1589 for silk came feasible when in 1759, Jedediah Strutt introduced an attachment for the frame which produced what came known as the Derby Rib, that produced a knit and purl sew. This allowed socks to be manufactured in silk and latterly in cotton. In 1768, Hammond modified the grazing frame to weave weft- knitted openworks or nets by crossing over the circles, using a mobile tickler bar-this led in 1781 to Thomas Frost's square net. Cotton had been too coarse for lace, but by 1805 Houldsworths of Manchester were producing dependable 300 count cotton thread.

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Received 11 December 2021; **Accepted** 17 December 2021; **Published** 24 December 2021

How to cite this article: Dhouib Cheik. "Textile Industry: An Overview". *J Textile Sci Eng* 11 (2021): 464