Textile History

The textile industry, with its extremely long and rich history, has had a massive impact on the world economy and the very evolution of modern society. Weaving is believed to be one of the oldest surviving crafts in the world today, the actual origins of which are thought to date back to Neolithic times 12,000 years ago. Even before that time, the same principle was used to interlace branches and twigs to form protective fences, shelters and baskets. Once the practicality of interlacing these kinds of materials was understood, further experimentation with other natural materials probably produced the first basic fabrics and cloths.

Early spinning

There seems little doubt that one of the earliest textile fibres available for spinning into yarn and then weaving into cloth was wool from sheep. The two stage spinning process requires that a fleece is opened to form a sliver of fibres which can be drawn out to produce an increasingly fine thread. This is then twisted to form a yarn. Our early ancestors probably twisted a few fibres from a lock of wool to form an extending length of yarn which would be wound into a ball. At a later stage the yarn was wound on to a stick and a simple flywheel added at the lower end to produce a spindle. From this the spinning wheel developed, invented first in India and then reaching Europe some time in the late 14th century.

The first loom

The first "loom" is thought to have been something as simple as the straight branch of a tree running reasonably parallel to the ground. The lengthwise warp threads were hung from this, weighted at their lower ends and the weft threads interlaced to form a very rough cloth. A framework later replaced the tree branch to form a vertical loom, as used by the ancient Greeks, which was then switched to a horizontal orientation. The ancient Egyptians are said to have invented the shuttle for holding the weft and to have attached the warp threads to two sticks in order to part the threads so that the shuttle could pass through.

Mechanisation

For centuries both the spinning and weaving processes were traditionally carried out by hand in the home on a cottage industry basis - weaving by men and spinning by women (hence the term "spinster"). The impetus for a major reorganisation in textile production came in the 1700s as inexpensive, good-quality textiles, imported from India and the Far East, gradually began replacing European goods in international markets. The need was to increase domestic production and lower costs by substituting the laborious hand processes for more efficient machine operations. Many important inventions took place during this period, often having important spin-off effects on other parts of the overall process of manufacture.

In 1733 John Kay of Bury, England, introduced his "flying shuttle" which speeded up the weaving process so much that

output was often doubled. The problem was that the supply of yarn from the spinners was insufficient to keep pace with the increase in production. The first improvement to the early spinning machines came in 1737 when Lewis Paul and John Wyatt invented the roller method of spinning which made the spinning of yarn possible without having to work it with the fingers.

In 1764, a Blackburn weaver and carpenter, James Hargreaves invented the famous spinning jenny which by 1766 had been improved to accommodate up to 100 spindles and so vastly accelerated the spinning operation. This was followed by Sir Richard Arkwright's spinning frame which was powered by water and became known as the water frame. Soon after in 1779 came the spinning mule, invented by the spinner Samuel Crompton from Bolton, combining the features of both the spinning jenny and the water frame. The advances in spinning technology led in turn to a bottleneck in weaving, as yarn was now being produced much faster than it could be woven. The solution was to harness steam power to drive the looms and it was Edward Cartwright, an Anglican clergyman, who worked out how to do this. By the mid 1780s he had produced the first steam powered loom.

Industrial Revolution

The mechanisation of spinning and weaving led to radical changes in the organisation of the textile industry. Much of the new machinery was too large and expensive to be run in a domestic environment and the advent of steam power meant that factories and mills sprang up near the coalfields

in the Northern England counties of Yorkshire and Lancashire - a period which marked the end of the cottage industry and the start of the Industrial Revolution.

The Industrial Revolution brought massive social and economic change to people's lives and to the traditional handworkers was seen as a threat to their very livelihood. They felt anger and resentment at the unemployment they feared - feelings which were exacerbated by a time of deep economic recession following the Napoleonic Wars. The potential for violence turned into physical attacks on the mills and factories between 1811 - 1813 when workers known as Luddites began to smash the machinery they blamed for their troubles. Yet the process of industrialisation went on unabated and there were further developments in the textile industry with the introduction of the jacquard loom for weaving intricate patterns and experimentation with synthetic dye-stuffs. By the mid 19th century Britain was leading the way as the greatest textile manufacturing country in the world.

Hopton Mills

The location of Interface Fabrics' manufacturing plant in a picturesque valley near Mirfeld is steeped in textile history. It was the Wheatley family who arrived in the valley early in the 16th century to begin their trade as clothiers and who built the oldest part of the current premises in 1812 as a totally vertical textile mill. But it was young Henry Wheatley who founded the company Henry Wheatley and Sons in 1790 and who pioneered the manufacture of a superb range of

ladies' apparel fabrics in cashmere and other rare fibres. The business developed within the cycles of the textile industry through the Industrial Revolution until the family sold the business in 1964. John Wheatley Bell and his son David Wheatley Bell are the 6th and 7th generations of the family business; they are still landowners in the valley and are shareholders in the Hopton Estates.

Interface Fabrics - or more accurately Camborne Fabrics as the company was previously known - first became associated with Hopton Mills in 1980. At this time David Wheatley Bell, using his initiative to keep the mill productive, sold his looms to Hopton Weavers Ltd, who then moved to Hopton Mills and became tenants of Henry Wheatley & Sons. Hopton Weavers operated as commission weavers and they began to undertake some of Camborne's weaving, with some of the company's finishing being handled by Henry Wheatley's finishing department which was under-utilised. This relationship continued until August 1984 when the parent company, Allied Textiles, decided that the mill no longer fitted into its corporate plan and Camborne were able to purchase the freehold site and buildings. Camborne's ownership of Hopton Mills was the company's first experience of direct involvement in weaving and cloth finishing.