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## HUNDRED PERCENT TEXTILES

### third floor

Textiles are everywhere, all the time. They are in clothing and interiors, but also in places where you wouldn't expect to find them. In teabags, artificial turf or artists' canvases, for example. Each piece of fabric has its own story. It has often travelled a long way, from raw materials to creators to users.

The exhibition shows you how textiles are made, from cotton bolls to a finished textiles product. Come and explore the spinning mill, weaving mill, dye works and garment factory. Discover ingenious machines, fascinating tales and colourful books of samples.

Peep over the shoulder of dedicated creators in the textiles workshop. And try out spinning and weaving techniques for yourself! Step inside the wonderful and varied world of textiles, in the past and today, where craftsmanship and industry come together with a hundred percent passion for textiles.

#### Spinning

Spinning means making thread. The raw materials or fibres used may come from plants or animals or they may be synthetic. They are spun out and twisted together until they form a strong, even thread. This thread is wound onto a bobbin so that it can be woven into fabric.

People have been spinning by hand since prehistory, using simple tools. Spinning suddenly became much faster when the spinning wheel arrived from India in the Middle Ages. From the eighteenth century onwards, the Industrial Revolution brought ever more ingenious spinning machines in its wake. Flax, cotton, wool and jute were spun into thread in dusty spinning mills full of workers, on machines several metres long.

In the twentieth century, industry went in search of new techniques to make thread from synthetic raw materials as well. Thorough automation led to a decline in the number of jobs from the 1970s onwards. Production has moved to countries where wages are lower. There are hardly any spinning mills left in Belgium today.

## Weaving

Weaving is an ancient technique used for making textiles. Two groups of threads are required: the warp and the weft. The warp threads are strung vertically over the loom, whether it is a frame loom or floor loom. The weft threads are woven horizontally between the warp threads. In this way a piece of cloth is woven, thread by thread.

The colours, weave, raw material and thread count determine what the fabric looks and feels like. There are innumerable weaving techniques all over the world. Knowledge and craftsmanship are crucial.

Looms have undergone an immense transformation in the last three centuries: from slow handweaving looms to roaring shuttle looms to gigantic, computer-controlled machines. Industrial machines produce cloth at ever-greater speeds, using less and less manpower. New technologies make it possible to produce complex patterns and fabrics.

## Finishing

Washing, bleaching, dyeing or printing. Making a fabric shinier or softer. Chemically treating fabric to stop it from shrinking or fading, to make it dirt or fire-repellent. Finishing includes a whole range of techniques to give textiles special characteristics or change their appearance.

Textiles without colour are almost unimaginable. People have been dyeing and printing cloth for thousands of years. To begin with they used natural dyes, with chemical dyes making their appearance in the nineteenth century. Colour adds meaning to textiles: from political, social or religious symbolism to personal taste and aesthetics to commercial fashion trends.

In recent decades, Belgian textile companies have been focusing strongly on specialised finishing and technical textiles. This involves more and more chemistry. Such textiles have all kinds of extra functions or improved quality. However, the use of chemical substances also entails risks to humans and the environment.

## Textile manufacture

Cutting, sewing and ironing around the clock. In the sewing workshop, different pieces of cloth are put together using a design and patterns to create all kinds of textile products. Whether they are trousers, gloves or bed sheets, every item is carefully finished.

The invention of the sewing machine around 1850 was nothing short of a revolution. The age-old craft of the tailor evolved into a modern industry. Piecework made way for mass production in standard sizes. Improved sewing and cutting machines and the introduction of assembly lines resulted in faster, cheaper production.

However there is still a lot of manual work involved in making clothes. That is why Belgian clothing companies have been increasingly shifting production to low-wage countries since the 1980s. The clothing industry is dominated by large, international retail chains. Fast fashion, environmental pollution and the exploitation of workers are raising questions. Sustainable, fair and circular textiles aim to offer an alternative.

## **Sample room**

Admire the astonishing world of textiles. Research and innovation have resulted in a whole range of raw materials and applications. All of them have their own advantages and disadvantages in terms of use, varying ecological footprints and different recycling options.

Textiles have been produced from natural plant and animal fibres for thousands of years. Man-made, synthetic textile fibres have also existed since the end of the nineteenth century. Some of them come from a natural source such as cellulose made from wood. Others are entirely synthetic, derived from petroleum and natural gas.

Many textile products are made of a combination of different raw materials. Take your cotton jeans, for example, which also contain elastane to give them some stretch. Technical textiles based on synthetic raw materials are becoming an increasing part of our daily lives and industrial processes. They range from agrotextiles used in farming and horticulture to sterile textiles for the healthcare sector. From sanitary towels to teabags. Insulation material to car tyres. You wouldn't believe how many things contain textiles.

## **Knowledge hub**

This is the place to delve into the topics, techniques and objects that can be found at the Museum of Industry. Explore the extensive museum collection on the computer, be absorbed by exciting stories or browse the centre of expertise ETWIE's knowledge database. Find a comfortable place to sit and pore over fascinating books and magazines from the museum library.

Have you got something exciting of your own to tell? Do you remember how a certain machine works, is there a business you have more information about or do you recognise one of the items in the collection? If so, enrich the museum collection by sharing your story, knowledge or experience with us.

By the way – did you know that the museum is a real makers' workshop? This is where knowledge and craftsmanship in heads, hands and hearts is passed on to new generations. Admire the creations and products made in the textiles workshop and print shop.