Natural Materials

For the Textile Industry

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For Word

This article will give you more info on *fashion clothing & accessories* made from textiles woven from natural raw materials such as *cotton, silk, wool, several weaving techniques, leather & suede.*

I'm personally a big fan of materials to what you all do not participate, design, create, build and make and then mainly because of the love for ' natural ' raw materials & materials because we all of course are originally and synthetic can best have a resolving power but it gives me a bit of a chemical feel what my natural instinct.

In a subsequent article itself further about **natural raw materials** for **jewelry** such as *gold, silver, diamond, Crystal, pearls & minerals* and also for **living, architecture & buildings** such as *wood, stainless steel, glass* and so on and go even deeper in to certain categories and product groups such as denim jeans.

Sometimes you almost can't avoid not to *synthetic materials* such as for an *umbrella or rain suit* then cotton of course smoking makes little sense.

Even though there are sounds that *polyester* would be *more environmentally friendly* in terms of production as for the time being, I have my doubts about cotton.

Think of course textiles & materials for most people has something special and indescribable, that you should feel to understand.

Not to mention that it is *thousands of years old*, of course, already exists and is used.

Tried the right basic information for you together.

Natural materials and its weaving techniques

The following species are discussed:

- Cotton
- Flax
- Linen
- Hemp
- Cashmere
- Alpaca wool
- Wool
- Silk
- Learn

Weaving techniques:

- Velvet
- Satin
- Denim

There will be fixed much more but the most **well-known and important** for you *ranked*.

For me **sustainable & environmental awareness** is very important.

Our **focus** of our *own products* is thereby mostly also on *natural raw materials & materials* that you can find in our *online store* that is why we want to provide you the *right background information* .

Fur is not an option for us because the origin **not to repeat** and clearly **not animal friendly**.

Would like to start on the **textile industry,** then the **natural raw materials** and last different **weaving techniques.**

Textile in General

Colorful textiles in Pakistan

Selfactor Spinning

Textile Market Doetinchem

A spinner with spindle and wool (1873), by William Bouguereau

Textile is literally "all that is woven". The word is derived from the Latin word "texere" that weaving means. The textile products such as that used in a manufactory were woven, called manufactories.

In the modern parlance is much more widely used textile: textile is a material, which is made up of filaments (endless threads) or fiber (short pieces of wire). Textile is practically always malleable and can be one-, two-or three-dimensional.

Content

Manufacture

The cohesion in the textile material is created by the raw materials to spin, twisting (or stranding or hitting), weaving, knitting, knots, braids or by felt (a kind of hairy membrane) by.

After spinning is a one-dimensional textile: the yarn. Also plyed, cabled or beaten textiles (twine, cordage or rope) we call one-dimensional because the thickness compared with the length is very small. Knitted, woven, braided and knotted textiles is based on yarn and is usually two-dimensional and three-dimensional in exceptional cases (or knit spacer fabrics, snakes, and bags). Braided textile is a-(String), double (band) or three-dimensional (for braiding). In the film formation is in contrast to the other techniques no yarn. Also with loose fibers can be formed a textile material (felt). Membranes are two-dimensional.

Of textiles are among other clothes (including corporate and protective clothing), household textiles, home textiles, technical textiles, geo textiles, rubber reinforcement and plastic reinforcement. Further textile in all sorts of hobby ´ s and in art.

History

The production of woven fabrics is one of the oldest human activities. The oldest known textiles date back to about 5000 BC To textiles to make is a source of fiber the first requirement. From this it can be created, mainly by turning yarn. The yarn is processed by knitting or weaving cloth, with which one creates. The tool that was originally used for weaving is the loom. With so-called wet processes is finished cloth to dust. The fabric can be dyed, printed or decorated by embroidering with coloured yarn.

The development of spinning and weaving of cotton is from 3400 BC in Egypt started. Also the silk culture has a long history, starting from 2600 BC in China silk spun and woven fabrics. There are sources that assume that the textile and weaving art already much older (20000 BC), from one of the most important finds of the last decades, the Iceman Ötzi, shows at least that he at that time (3100 BC.) still no woven textiles.

Raw materials

The raw material from which textiles made his filaments or fibers. When naming the raw materials, however, always speaks of fiber and not of filaments.

The textile raw materials one can organize into the following groups:

natural raw materials

- fibers of *vegetable origin*
- fibers of *animal origin*

artificial raw materials

- fibers with a *natural origin*
- fibers with a *synthetic origin*

The main vegetable fiber is still **cotton**, followed by **linen**. **Hemp**, nettles and **bamboo** are now also used in **clothing**. Other fibers are *Manila, sisal, coconut etc*. The *most important* animal fiber is **wool** and then *silk, angora, camel and various other hair types*.

In the 21st century **textile recycling** is on the rise. The technical lifetime of clothing is rarely achieved when clothing is disposed of by the owner. Because of the high environmental pressure from, among others, cotton and wool, it is necessary to textiles.

Techniques

The ways to make can be divided in industrial and textile as a hobby practiced methods.

Industrial technology:

- Making yarn
- fiber yarn spinning
- filament yarn spinning
- Making cloth
- membrane formation
- weaving
- knitting

- braids
- knots
- Tufting

Techniques, which are:

- Making yarn
- spinning wheel
- spindle
- Making cloth
- hooks
- needle bind
- swimming
- knots
- macramé
- lace making

Before textile comes on the market undergoes one or more finishing processes. These are highly dependent on the application. **Some possibilities are:**

- paints
- printing
- treatment to improve properties
- embroidery
- folds or puckering
- smocking

Applications

Textiles are not only used for clothing, but also in many other applications such as:

- protective clothing such as *gloves against cuts, safety clothing, bullet-proof vests.*
- household applications, such as in, *cleaning rags, Floor cloths, dish towels, sheets, blankets, towels, table cloths, handkerchiefs.*
- soft furnishings such as *drapes, curtains, carpet, floor coverings, Sun screens.*
- technical textiles such as *tarpaulins, tents, parachutes, screens, seat belts, ropes.*
- Geotextile such as *dike protection, erosion protection, reinforcement of the subsoil under roads.*
- rubber reinforcement as in *bicycle and car tires, conveyor belts, hoses, rubber boats.*
- plastic reinforcement such as *reinforcement of polyester for boats and car ´s and armouring of car ´s.*

In addition, **textile art** is part of the **Visual Arts.**

Textile trade in Netherlands and Belgium

Already in the 13th century Bruges in the Netherlands was the center of the cloth and textile trade.

All trade in textiles is merged with the term MITT (Mode-, industry-, carpet and textile industry). Work in Netherlands in the year 2014 about 16000 people at something more than 3300 company locations (both wholesale and retail).

For consumers, the trade in textile place in specialized fabric stores, but also on markets. One of the oldest textile markets in Netherlands is the Patch market in Utrecht. This market dates back to the 16th century.

Fashion in the history, as can be seen (from top) Egyptians, ancient Greeks, Romans, Byzantines, Franks, and 13th by the 15th century Europeans.

Textile industry

Traditional textile industry in Guatemala.

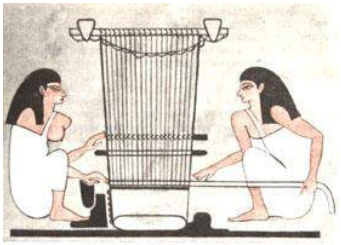
The textile industry is an industry in which machine or with cottage industry **textile** is produced. It is based on the process of converting fibers in yarn, fabric, and then **textiles**. *Clothing or other artifacts* can then be made.

In the **cotton textile industry** is the *main natural fiber*. There is a wide range of *technology* available for the *spinning and fabric-forming phase up to the complex processes* for finishing and staining for a wide range of products. However, there is also a large industry that uses *manual labor* to achieve similar results.

Content

History

Ancient times



Ткачество на фресках Бени-Хасана

The Old Egypt.

Hand weaving, 1568.

Hand weaving, 1750.

In the **Roman times** was the European population dressed with *wool, linen and leather*. The use of **flax fiber** in the production of cloth in Northern Europe dates back to Neolithic times. The **cotton** of India was a curiosity, and **silk** imported via the silk road of China was an **extravagant luxury**.

Textile was a product of *cottage industries*. This was originally committed to provide own need, which one can think of maintaining the vegetable garden or sewing clothes. However, it could also be that one with a particular production exceeded the own need and the surplus with the neighbors exchanged for other goods.

Middle ages

Already in the late *middle ages* existed at home working in the cloth industry, in the region of Ypres to Oudenaarde but also around. Bed sheet was already known to the Celts and after the conquest of Gaul was also popular with the *Romans*. From the late Middle Ages, the substance popular among large parts of the population, especially since he wear-resistant and dirt-and water-repellent. This caused cloth clothing they had long-lasting and low maintenance.

The cloth industry had a tendency to concentrate in certain areas, such as *Northern France, Flanders and Holland*. Between 1150 and 1400 was made the main production location in several Flemish cities grew, but after 1400 the cloth industry of lead out to the most important in Europe. In Lead production was for the first time industrialized. The production process was made no longer in its entirety within one company, but was carried out by various companies according to a strict division of labour, which in various steps semi-finished products were produced. The entire production process was under strict control. This was a constant high quality of the cloth, Leiden baize was highly sought after.

In 1417 the Hanseatic decided that only approved Leiden cloth should be sold. After 1500 took the competition from other parts of Europe, particularly from England, and Lead lost its leadership in the cloth production. Florence in Italy was an important centre of the cloth industry.

Emerging market-oriented production

Prior to the mechanization in the 18th century was made there in the home work in the *textile industry* a transition to market-oriented production. Initially, the farmers who could afford a loom (sometimes on installment), especially in the winter for the clothier or carpets manufacturer. The wages of home workers was calculated per piece, the so-called piece rates.

Around the textile industry since the middle ages, different guilds were active. So for example, existed in the 14th-century Helmond seven guilds: that of *the teul leads or farmers, the bontmaeckeren (fur and fur makers), the bakers and butchers, the so-called Low craft (forging, tinsmiths etc.), the weavers, fullers, and the snyders and dry shearers.* The last four guilds had with **textiles** , and three of them had to do directly with the cloth industry.

A next step in the home industry was that one produce went on behalf of the merchant, which then was called a label manufacturer or broker and which often also the raw materials or semi-finished products bought. Gradually these developments led to the concentration of activities in specially equipped buildings, factory houses were called. These were the forerunners of the later factories.

Cotton industry

Since the late Middle Ages in Northern Europe **cotton** became known as one of the *imported fibers*. By the end of the 16th century was **cotton** grown in the warmer regions in *Asia and the American continent.*

Today, **cotton** produced in all parts of the world, which have been cultivated cotton plants be used selectively so that each plant yielding more fiber. In 2002 there was cotton grown on 33 million hectares of agricultural land. This provided 21.3 million tons of raw cotton, with a value of $ 20 billion.

Mass production

Weaving machine, 1835.

Factory hall decorated with 1200 looms, 1877.

Inventions as the shuttle by John Kay in 1733, the Spinning Jenny in 1764 by James Hargreaves, and the spin machine by Richard Arkwright in 1769, made cheap mass production in the United Kingdom. The production capacity was further improved when Eli Whitney in 1793 invented a machine that could separate the cotton fiber fast by the seed pods and the often sticky seeds.

From 1769 was considerably improved the steam engine by James Watt. A major change took place in the *textile industry*. By the population growth and the colonial expansion also began to increase quickly the demand for cotton products. Because the spinners and weavers the big question could not keep up, there was an urgent need for a by a power-operated mechanical loom, power loom.

There was a loom with semiautomatic shuttle invented and there came a machine that performs multiple threads at the same time could be spun. This Spinning Jenny created by James Hargreaves in 1779, was followed by a much improved loom: the Mule Jenny. In the beginning they were still with water powered, but after 1780 was the steam engine so far improved that this also could be used in the factories as drive. There could now be produced much more textile. That was also necessary because Europe had 130 million inhabitants in 1750, but in 1850 were doubled. All those people had clothing. Thanks to the machines was produced and there faster and cheaper labour costs remained low. The **textile industry** is one of the drivers of the **industrial revolution**.

Synthetic fibers

At the end of the 19th century are the first artificial fibers. Because the natural fibers consist of long molecules, *macromolecules*, was looked for suitable molecules consisting of cheap natural resources. For this is the cellulose molecule out of wood used. It is the first artificial fiber on natural basis created: *rayon*.

In the 20th century was looked to synthetic macromolecules from which fibers could be made. In 1938, the first completely synthetic fiber: *nylon*, a polyamide fiber discovered. Below are still very much other fibers, such as *polyester, poly acrylic, polyurethane, polyethylene, polypropylene and aramid.*

Netherlands

In **Netherlands** was the **textile industry** in 1950 still account for around 20 percent of industrial added value, but this was dropped to 2.3% in 2002. This downturn is due to the growing competition from

abroad. After the creation of the EEC in 1957 took the trade within Europe and gone all kinds of trade barriers. Also from outside Europe took the competition, mainly due to the low-wage countries.

Specific places, where the textile industry had a significant influence are:

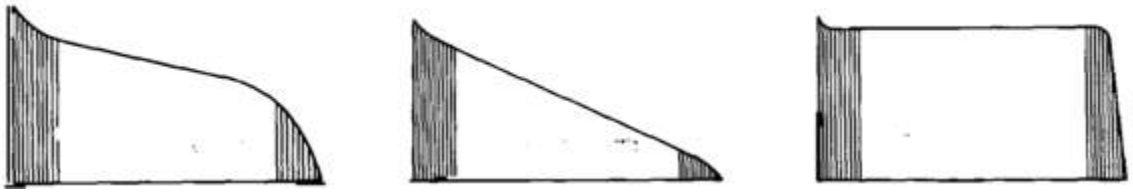
- Eindhoven, see textile industry in Eindhoven
- See textile industry in Geldrop, Geldrop
- Gemert, see textile industry in Gemert
- Goirle, see textile industry in Goirle
- Helmond, see textile industry in Helmond
- Tilburg, see textile industry in Tilburg
- Veenendaal, see textile industry in Veenendaal
- See textile industry in Winterswijk, Winterswijk
- Almelo, see Royal Ten Cate NV
- Enschede

A specific place where the **textile industry** has a significant impact nowadays is Wormerveer. Here is the worldwide first in the field of **textile recycling**; the first automatic sorting machine of the consortium T4T. The consortium received subsidy from the EU to previously available to develop technology for use on an industrial scale.

Textile raw materials

Fibers and filaments are the textile raw materials for the textile industry. Fibers are characterized by a limited length of 10 to 500 mm, while filaments in principle are endless. Filaments are already a yarn and are basically suitable for further processing. Both the fiber as filaments have standard a diameter from 10 to 40 microns. Spinning a yarn from fibers to the fibers have a spin connection. The fibers are then not quite right. Straight fibers keep each other not fixed and sliding along each other so that no thread can be formed. Cotton has a corkscrew shape, wool is corrugated and artificial fibers usually have a zigzag crimp. The fiber length is indicated by the stack or pile length. Specifies the average fiber length. Different types of stack diagrams are drawn below. The two left-wing are of natural fibers and the right-wing of an artificial fiber. It is with this technique that infra-red sensors can automatically sort by textile fiber composition. The t4t-machine in Wormerveer sort used clothing to textile bales of one kind, for example 100% cotton. After that, the via fiberization machines ready made to spiders.

For a good yarn quality is a long fiber with a stack diagram of advantage as evenly as possible.



Even	Uneven	Artificial

The raw materials can be divided into a number of groups according to the following schedule:

- Natural fibers
- Vegetable fibers
- Seed Fibers: Cotton
- Bark or stem fibers: flax (linen), jute, hemp and rameh
- Leaf fibers: Manila-hemp, sisal hemp grown for fiber
- Fruit fiber: kapok, coconut fiber
- Animal
- Wool, silk
- Mineral
- Asbestos, Wollastonite, peat wool

Cotton

Cotton is a product we know of course all of the *t-shirts to the Denim Jeans*.

Cotton is a *soft fine processing natural substance.*

A single-cell fiber, which from the epidermis of the seeds of the cotton plant (Gossypium) grows. The fibers are spun into threads and as such typically used to soft, breathable textile out of it.

There are four types of cotton plant used for cotton production:

- *Gossypium arboreum*- endemic to India and Pakistan, accounting for less than 2% of the world production
- *Gossypium barbadense* (American cotton)-endemic to South America, accounting for 8% of the world production
- *Gossypium herbaceum* (Asian cotton)-endemic to the Arabian Peninsula, accounts for less than 2% of the world production
- *Gossypium hirsutum* (hairy cotton)-endemic to Central America, accounting for 90% of the world production.

Here you can see ripe cotton balls:

Different colors cotton yarns:

Here you can see katen be woven:

Flax (crop)

Flax (*Linum usitatissimum*) is a species of plant in the Linaceae. It is a crop that is grown for a long time. There are blue and white-flowering varieties. In addition, there are varieties with Brown seeds and varieties with yellow seeds. The seeds of the flax (linseed) are about 5 mm long to use The races can be classified as follows:

- Flax: for linen, for over six thousand years grown
- Oil flax: flaxseed oil

Planting oil flax are shorter and more branched than that of flax and are grown for the seeds where oil is won out.

Fiber flax

Flax is grown for the fiber. The fiber consists of a bundle of cells, of which the cell walls thickened with cellulose. To the fiber bundle sit lignified cells, the wood pipe.

Important is that the plant between 80 and 120 cm long, but not encamp and only as high as possible. Flax is sown in the first half of April. It blooms in June and is harvested in the second half of July.

The flax plant is with roots from the ground pulled to fiber to maintain as long as possible. Past, this was done by hand and the flax was in sheaves put. This gave the typical image of the "flax chapels": small clumps drying flax. Nowadays happens pulling usually machined and flax is laid flat on the ground, an operation that in technical jargon is called wear out.

That the field is not immediately removed the flax has to do with the malodorous, the. As a result, the pectin which binds the Ribbon to the fiber removed. This is called dew. The flax is so laid back flat on the field and should be reversed, in order to obtain an even retting. Also for this there are separate machines. During the so-called times can also be the flax seeded. This is the time berate, where the seed bulbs a few days later when turning. When pull berate is at the same time the straw of the seed bulbs stripped. Pulling gives whether or not flayed flax.

Operations

Flax in the old situation was not on the field gedauwroot. The large flax flayed flax was stored in barns. Then it became deseeding. When is the seed bowl of the stem satirize removed. To remove the bark then retted flax should be. That happened in the river earlier (therefore the Leie in Belgium was the "Golden River"). In Netherlands this happened among other things in the Binnenmaas in the Hoekse Waard and the Waaltje, a distributary which dead by and along the villages of heerjansdam and rijsoord. Also Lakes, of which some still ' Rootven ', were used for this purpose. Later, the root process also performed in large concrete boxes with a content of 100 cubic metres usually. In it was the flax 100 hours in water at 100

degrees Fahrenheit (37.8 ° c) submerged. In villages such 's-gravendeel and rijsoord were dozens of these bins. This process yielded the most beautiful quality linen flax workers had, however, often on. to contend with flax fever, caused by the bacterium that butyrate at retting became available. Since 1968, this way of working quickly reduced by competition from Russia.

Nowadays it happens on the field (DEW). By the way to vomit on mechanical and gerote flax scutching (wood from the fiber removal) comes the soft fiber free (long fiber). The surplus is called Laura. These are then pressed in bales for further processing. The core pieces (wood pipe) are called shives. This shives (as an addition) used in furniture boards, building boards and insulation material. In purifying the shives comes some flax fiber free (short fiber) that together with rags is ground into raw material for paper-making. Here is old-Dutch paper, bank paper or cigarette paper. Also, it can be processed into insulation material and products for moulded parts in cars. New applications, such as the hybrid fiber flax-carbon bike or suture in surgery.

Entering retted flax in the Swingle machine

After scutching is castigated. Here the fibers to hate band mixed. The long flax fibers are carded and combed to make them suitable for spinning of fine yarns. The flax yarn is woven into cloth and after bleaching gives this the bleached linen. The hate snout, the comb debris and the other short fibers are carded in which all the fiber in the same direction and spun to lure yarn, coarse threads (flax rope, work or etoupe). The short fibers, hede called, are also used for the production of rope that is obtained by twisting or save.

On the flax plant are as many short and long fibers, which nowadays also spun dry to medium fine yarns can be processed or through conization (further dissolution of the fibers by chemicals) or cutting on cotton machines cheap can be spun.

The finest long fibers are on wet spinning machines (the wick runs here through hot water) to extremely fine yarns spun by the water used so much cohesion, that they have excellent little fibers and immediately suitable to be used as Necklace (without first glued (strengthened)). This made it an ideal long flax yarn warp yarn in front of cotton, that in single ply always needs to be strengthened.

Until the 18th century the flax fiber in Europe next to wool was the most important raw material for textiles, but in the nineteenth century, as such he supplanted by cotton. The cultivation can no more is left standing keep using subsidies.

In Europe the flax for linen concentrated in South-Netherlands (Zeeuws-Vlaanderen), Belgium and Northern France. Normandy also has its "capitale du lin". In Netherlands is both for the fiber flax seed as grown. The cultivation of flax within the three classical production countries thanks to a targeted promotion in the last 25 years almost tripled and includes more than 100,000 hectares. More than 70% of the linen is fashion. Production takes place in low-wage countries, mainly in Chinese spinning, which without processing of the fiber coming from Western Europe impossible to manufacture a product that meet the quality requirements for the rich world. The expansion of the market for fiber flax has almost entirely on French soil occurred, from 25000 to 75000 ha, thanks in part to the development of own

French flax varieties. The time was leading Netherlands as an exporter of seed is now long gone. This is partly responsible for the fact that the flax acreage in Netherlands not explosive.

Linen

Linen is a kind of textile made from flax.

After pulling (harvesting) is the dried flax.

Then follow the following treatments:

And times:

Flax was first used on the field dried. Before that, it had to be turned several times. After drying the flax get deseeded (stripped of seeds) and exposed to moisture to the pectin to break down that the fibers together, the 'called' Dew. In the past one six the flax in rivers, especially in the Lys, or bake in water which makes the flax fibers, the so-called water got a golden glow.

For ecological reasons, directly after pulling the flax retted by to spread out the field, where it is exposed to rain for several weeks, dew and sunshine; Dew root so. Also here it is to be turned flax.

Scutching and denounce:

During this mechanical processes fibers are separated from the straw. Short fibers (the rope fibers or waves) are used for spinning rope and coarse yarns; the fine, long fibers (the Ribbon) eventually deliver the finest linen yarn on. The straw is used for pressing plates for construction.

Here you can see typical linen structures:

Hemp

Hemp is actually one of the oldest known textile kind until it was taken over by cotton & polyester.

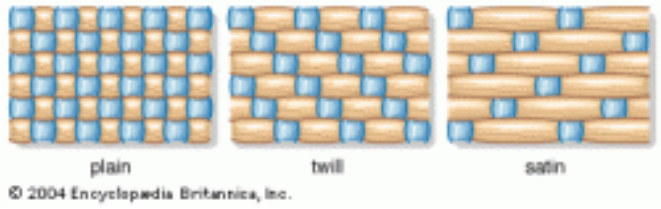
For me remains hemp textile something special.

People are already thousands of years fabrics from hemp. Once was the most widely used fiber hemp crop in the world, but it is now largely supplanted by cotton and other fibers, both natural and synthetic. But modern techniques improve more and more and there are advanced new materials produced that the interest in this industry have new life.

Innovations in hemp textile

People are already thousands of years fabrics from hemp. Once was the most widely used fiber hemp crop in the world, but it is now largely supplanted by cotton and other fibers, both natural and synthetic. But modern techniques improve more and more and there are advanced new materials produced that the interest in this industry have new life.

Basic types of textile



Plain, twill and satin, the three basic types of textile binding (Encyclopaedia Britannica)

The three basic types of binding most of woven fabric is derived, are plain weave, satin weave and twill weave. Examples of plain bound substances are chiffon, organza and taffeta. Rafters include denim, caftan and khaki, and satin weave we find back as charmeuse, sultan linen and duchesse.

Solid bonds are the simplest, are strong and durable and are used as the basis for fashion and upholstery. Solid tissues may lightweight and translucent, such as chiffon, or heavy such as canvas. They are formed by perpendicular threads in a crosswise pattern to weave evenly.

Rafters are formed by a permutation to add to the solid binding: instead of ' a ' under, one above, is a Twill usually ' two under, one above '. When two or more colors wire are used, one can distinguish the diagonal pattern characteristic of this technique. Rafters can lightweight, such as flannel, or heavy like denim or caftan.

Satin are generally lightweight and are shaped by wider holes (' missing links ') in the fabric, so that the weaving pattern called "five under, one above ' can be. This pattern is a substance that there is usually smooth and luxurious looks at the front and at the back boring.

Of hemp made fabrics

It's always been possible to make all kinds of sustainable quality fabrics, hemp, either on its own or in combination with other natural fibers such as flax or silk. Although the traditional image of hemp fabric there is a raw, abrasive jute and canvas, the variety of delicate fabrics that make hemp are considerable.

Linen is a good example of a lightweight substance that pure hemp can be made. Although ' linen ' strictly speaking refers to substance that flax fiber is created, the standard linen also used with other fibers. The resulting textile is mostly all linen. When such substances of hemp are made, they are lightweight, durable and breathable and they are excellent for hot, humid conditions.

Hemp is also widely used to make Terry cloth, the tufted material that may be woven or knitted and that especially for towels. It can even be used for logo, a certain variant used for clothing. Because of its remarkable absorbent properties, hemp as particularly suitable for this purpose.

Hemp fibers are also very suitable for all types of Twill, including denim and flannel, herringbone, and for different types of knitted fabric, including jersey and velvet.

Mixed hemp fabrics

Hemp- silk charmeuse (dust and technique)

In combination with silk hemp can be used to make a stiff taffeta, shiny substance used in ball gowns and wedding dresses, or charmeuse, a luxurious satin that lovely wavy falling lingerie and evening dresses. Even complex in jacquard woven fabrics (where a embossed pattern in the fabric is woven) such as damask and Brocade can of hemp-silk blends are created.

Hemp-silk jacquard (dust and technique)

Hemp is often blended with cotton to diapers out of it. These absorb better and are more durable than cotton, that usually is added to soften the fabric. Hemp also has antibacterial and antimicrobial properties making diaper rash and such skin conditions less often occur.

Hemp is also mixed with cotton to fine muslin or cheesecloth. Some of these substances are exceptionally light and strong with excellent absorbing properties. In addition, most knit fabrics of hemp mixed with cotton to make them softer.

The antibacterial properties of hemp fiber

Recent laboratory research has found that hemp fabric is fatal for the common bacterium staphylococcus aureus. Researchers viewed the growth of the bacteria on substance that was made from a mixture of 60% hemp fiber and 40% rayon and discovered that 98.5% of the bacteria was dead at the time of the first test. The same substance was also infected with Klebsiella pneumonia and appeared at the first test 65.1% to be effective in killing the bacteria.

This is exciting news for health care because infections by staphylococci often are transmitted by touching towels, sheets or clothing that was previously touched by an infected person. Methicillin-resistant staphylococcus aureus (MRSA) is alone in the USA an estimated charge of 19000 deaths a year. The global death rate is unfortunately difficult to establish.

EnviroTextiles, an emerging industry leader

The company responsible for the substance that was used in this test, is EnviroTextiles. The lead engineer for textile, Barbara Filipponne, began in the early 1990s to work with Chinese hemp. EnviroTextiles sells over a hundred different pure and mixed hemp fabrics, some of which is added to the BioPreferred program of the USDA (a program for preferred purchase for federal institutions and contractors).

Such substances should be of great value to the army. Or advocates of hemp the fabric well or may not used would like to see in a military role, the fact clearly underlines, however, the rapid development of hemp to normal and acceptable.

Hemp in mainstream fashion

Chain stores like H & M now use hemp in their designs

The fashion house Ralph Lauren has made extensive use of hemp to produce all kinds of silk charmeuse of EnviroTextiles-clothing, including evening dresses and a jacket in military style.

Ralph Lauren has in recent collections different mixtures used hemp: hemp, acrylic and cotton for jerseys, hooded sweaters and sweatshirts; hemp and cotton for shorts, blouses and trousers; and linen, cotton and hemp for curtains, bedding and upholstery.

Even top designers such as Hermès today use hemp blends for their clothing

The fact that hemp has become a mainstream fashion item, is thanks to the dozens of hemp-based garments that are now in retail chains like H & M and to the spread of expensive top designs, such as a Hermès scarf in cashmere, silk and hemp that have more than 1000 dollar costs.

Next to Ralph Lauren have Noori Sarafpou, Donatella Versace, Donna Karan International, Isabel Toledo and substances used by EnviroTextiles By. Ri. The New York Fashion Week of 2008 represented a milestone, because when many of these designers showed for the first time their new hemp designs.

Striking hemp textile companies

In addition to EnviroTextiles, there are several other companies that produce high-quality hemp fabrics: Clothing Matters, Dash Hemp, Hemp, Hemp Livity Outernational Traders, Hempy's, Elegance, Mountains of the Moon, Satori Movement, Sweetgrass and Two Jupiters, to name just a few.

Of course textiles just one of the many products that can be made of hemp. Daily progress in composite plastics, construction materials, food and health care products.

Cashmere (wool)

Kashmir is a cashmere or wool type submitted by the Kashmir goat. The wool is named after the area of Kashmir in India, Pakistan and China. From this area the original goat breeds.

The cashmere Wool is a fine (19 to under 12 µm) and very soft, flexible fiber. She is traditionally won by the Undercoat of the goat to comb, but in the modern companies, goat shaved. The goats have the colours white, grey, Brown and black. The desired fine fibers are only in the Undercoat. The stiffer fibers of the outer coat must be removed. This is done by machine. Per animal is the yield approximately 150 grams at a time.

Kashmir is one of the most expensive natural fibers and is therefore often mixed with merino wool or other. The price mainly depends on the fineness of the wool. Continue playing the fiber length, the degree of crimp and the color a role. Kashmir can be just as sheep's wool processed and painted. As a

result of the fine fibers have articles of cashmere Wool very good heat-insulating properties at low weight.

Cashmere scarf

The main producing countries were China, Mongolia, Iran and originally the Highlands of Central Asia. At the moment, however, large herds of Kashmir goats are held in Australia, New Zealand and Scotland. In the original countries the fiber especially to hats and scarves processed. In the other countries is fiber processed in outerwear ranging from sweaters to coats.

Alpaca wool

Alpaca fiber is ten times warmer than sheep's wool, has the quality, appearance and softness of cashmere and silk and is non-allergenic. These factors make it possible to clothing of alpaca wool very comfortable on bare skin. The density of alpaca fiber varies between 15 and 30 fiber per mm2.

Two-after-World's most expensive wool

The vicuña delivers the most expensive wool in the world. The wool is not only of excellent quality, but a vicuña delivers only small quantities, and can also be shaved just once every three years. And what we mean by expensive? F is the first brand that produces socks that are made from the wool of this rare wool from the Andes. You have a pair of socks for € 860.0-€ 2400.0, while a matching sweater-costs.

Guanaco fiber is in second place, especially appreciated for its soft, warm atmosphere. Then immediately follows alpaca wool.

Wool

Wool consists of soft, thin hairs of the coat of some animals. People use wool (usually comes from sheep) for clothing, blankets and such. Most wool is produced in Australia, China and New Zealand.

Wool is distinguished from her because the scales has, leaving seeds and twigs in linger. As a result, the skin of the sheep protected from damage. Can a sheep without damage by thorny vegetation, unlike for example a cow. Furthermore, wool frizzed. It has up to 20 bends per 2.5 centimeters. As a result, the air held, making wool a good heat insulator. This insulating outer layer prevents a sheep are losing body heat. Both properties, the scales and the Crucible, that also can be easily spun wool. The fibers hooks namely easy into each other and then remain stuck together.

Types of wool

Raw wool, unwashed

Wool is the undamaged wool, shaved a healthy and live sheep. Wool is in a store identified by the international logo, that in more than 100 countries enjoy legal protection.

Blootwool or plootwol is wool of a dead sheep. It is obtained by a chemical treatment of the skins of slaughtered sheep.

Shoddy refers to Wools of lesser quality, regained from worn clothing or from yarn and tissue wastes from the textile industry.

Shoddy is wool that comes from reuse. It's not come directly from the animal, but is extracted from wool containing rags.

Some materials have a structure that reminds to wool, but are no wool:

- Glass wool
- Steel wool
- Rock wool
- The wool fiber

Wool fibers vary in thickness, between 10 micrometers for the fine wool of the Merino sheep in the internal fur to 40 micrometers in the outer coat of the Shetland Sheep. The thinnest fibers give the least irritation on the skin. Some people, however, can not even against the finest wool, and are fond of the tickling. Most people suffer from Tickle as the wool is thicker than 28 microns. This is the itching point.

From the outside in is the wool fiber from four layers:

- The Horn-like (cuticle)
- A between membrane (subcutis)
- A hoarse layer (cortex)
- The marrow (medulla)

The wool on a sheep grows is not everywhere alike, whereby also the quality differs. One distinguishes:

- Wool of the flanks, shoulders and back

- Wool of the thighs
- Wool of the abdomen
- Wool of the other parts.

Properties of wool

Wool is a good insulator against the cold. This is because between the small curly fibers of the lot. Stationary air conducts heat very bad. Only if it has hard blowing wool less good properties. Wool can absorb a lot of water (up to 40%% m/m) off the air recording without itself moist. To a moisture content of 17% no change of the properties of the fibers.

Wool naturally has a high elasticity. This means that wool tends to return to its original form. So it is a resilient fiber, making wool clothing soft to the touch and a Wool Sweater do you get excited because the wool fibers protrude from the yarn. Wool clothing creases disappear quickly but the crease again, just like pressed folds. Another disadvantage of wool fluff, easy and difficult is that it is washable.

Wool has a high elongation and 30 to 40% can be stretched without breaking. The tensile strength of the fiber is much lower than that of many other fibers (linen, cotton or synthetic fibers).

Application of wool

Wool-blanket, yarn, raw and carded wool, carpet, Textiles clothing textiles, drawer Cabinet, Textile Museum, Tilburg

Wool is used in:

- Clothing (by knitting, crochet or weave)
- Carpet (knots or weaving)
- Blankets
- Insulation materials
- Hats (especially if felt)
- Nowadays wool, at the disappearance of the blanket from the bedrooms, also applied in duvets.

Production of wool

The production of wool takes place in a large number of steps. Below is the keeping and breeding of sheep also disregarded.

Shaving

Sheep shearing

Sheep are sheared every year in spring. An experienced can to about 150 sheep per day shaving. While shaving continues for about 2 centimeters wool.

After shaving the fur rolled up and packed in bales, each weighing 170 kilograms. The sheep is sometimes sent by a disinfectant bath after shaving, in which parasites are killed.

Cleaning

Shaved a Merino sheep wool

The coming of a sheep wool that has been contaminated with grease, sweat, grass and other plant matter. Around the anus of the sheep is also stools. To wash the wool, the dirt removed. For spinning, however, it is useful if the wool is still somewhat fat. Contains lanolin wool naturally. This is a raw material which is used in cosmetics.

Carding

Before spinning the wool is carded. The fibers are teased out. Carding is done with a comb with steel points. Machine, this is done with a fast spinning cylinder with steel points or even a needle bed. Formerly were the fruits of a plant, the teasel used. Carding also disappear with the last remnants dirt. After carding can there possibly be spun directly. For a finer result must, however, be a better first still combed regularities in the final yarn, also serve various stretching and rebound passages to be applied, with the lane more and more regularly and becomes thinner.

Spiders (contentions)

The finer the wool fiber, the thinner the wire can be spun. While spinning the wool is turned into each other. This causes the fibers connected to each other and the wire is stronger. The number of spins with which the yarn is spun, called the amount of twist. By spinning creates a single thread.

Studs

Removing any unevenness in the spun thread in the form of knots and loose ends called buttons.

Twisting machines

The single thread that after spinning originated, with one or more other threads in twisted together, making a thicker and/or firmer result. This in each other running multiple threads is called twisting and usually occurs in the opposite direction of rotation of spinning to the volume and to improve strength. This prevents the wires and the extra strength overtwist twisting lose again.

Or fixing

To prevent the spun yarn again loosening, the wool is sometimes. This is especially needed for use in carpet, because there short threads for wool are used. Putting happens chemically, or with use of steam in an autoclave.

Paints

Dyeing can take place at different stages of the production of wool, spinning, for example in the yarn and after weaving. Traditionally were here above all plants for used. Kite, Woad and madder were especially used to be much used paint plants. Also a woven wool rag or a carpet be printed with different colors.

Dark wool, of a black sheep, often remains unpainted.

Felt

Felt fedora made by Borsalino

Felt is an old technique to process wool. Felting of wool is also called fulling. To do this, wool mills were once used. For making a lesser quality wool felt can be used. After carding the wool is laid crosswise. The wool is then rubbed with warm water and SOAP. By constantly kneading grabbing the barbs that the wool fibers are put together and the water is squeezed from the wool which eventually felt. The felt should finally be pressed flat. Felt of wool can also happen by mistake, for example, when washed.

Maintenance of wool

Wool is a sore tissue. It can against wind and weather, but of course as long as it comes to the sheep is not in touch with SOAP and warm water. Sweaters that are worn over a shirt or t-shirt, should not be washed too often. The same applies to m. Skies can often suffice. But if it can, however, be washed wool.

However, this is not true for all wools, and it has actually always prefer wool hand wash, do all manufacturers of detergents and washing machines sometimes believe otherwise. In any case, the label in clothing here be viewed. , The label a hand in a tub, then the wool absolutely hand-washed. When washing by hand in lukewarm water, do this with a wool medium. Never wring the wool, but gently squeezing. After washing rinse also in lukewarm water several times.

It is a misunderstanding that the washing temperature never higher than 30 degrees, after all, dyeing wool takes on much higher temperatures place, without any shrinkage or thatch. Wool is, however, susceptible to rapid temperature changes. Slow heating and/or cooling is therefore crucial. Let wool never weeks, as it can be felt. Centrifugation can also be better omitted.

Delicate wool clothing is best lying, or well supported let dry, where the garment is brought in the best possible shape. Never hang a sweater on the sleeves with a few clothes pegs on.

Wool producing species

Cashmere goats

Animal species that hair fiber and wool provide are:

- Sheep, domesticated cattle held to meat, milk and wool.
- Alpaca, lives in the Andes in South America. Even the smallest lama, the vicuña, wool.
- Rabbit, that is, the angora rabbit. The Angora is particularly soft and very light. In order to make him stronger Angora mixed with sheep's wool or other fibers.
- Goat, Cashmere Wool comes from the cashmere goat, found in Angola and Mongolia. These animals live in the wild in inhospitable areas. The wool is won by 100 to 200 grams by hand from the Undercoat of the abdomen to comb and is also called ' pashmina '. Mohair comes from the angora goat.
- Camel, light or dark brown hair that is used in jackets and blazers.
- Horse, Brown, black and white in tail and mane, which is used for chair covers, linen ' between ' for lapel of clothing.
- Yak (including Mongolia) for carpet and between linen.

Sheep breeds

Merino is seen as the original sheep breed that fine wool. The breed comes from Spain and 200 years ago to Australia. Merino Wool fibers are strong frizzed. With this wool knitted or woven fabrics are smooth, for example for use in scarves.

New Zealand sheep breeds are:

- Border Leicester
- Coopworth
- Drysdale
- Lincoln
- Perendale
- New Zealand Romney

Other sheep breeds by crossing have emerged:

- Cheviot

- Clun Forest
- Corridale
- Fat tailed
- Gotland Fur Sheep
- Hampshire down
- Romney
- Scottish blackface
- Shetland (probably brought to the Shetland Islands by the Vikings.
- Southdown

Most sheep breeds provide thicker, but thereby also firmer fibers, then the Merino sheep. Thicker fibers are more suitable for wearing a lot clothing.

Animal welfare

Most wool comes from the sheep, of which most of the Australia accounts for production; followed by China and New Zealand. The producers are often criticized because of the so called ' mulesen ' which means that there are pieces without skin around the anus are cut away, to certain parasitic infections. Furthermore, there are various undercover investigations in which is shown that brute force often occurs during the handling of the sheep.

Also the Angora industry in the news recently because of serious abuses in China, the largest producer. Several large clothing producers and brands have after following these messages indicated no Angora more in their collection. And a large number of EU countries at the European Agriculture Council has indicated these abuses at European level to want to address.

Silk

Silk cultivation

The silkworm with Cocoon

Raw silk

The silk cultivation dates back to China, where one already in the antiquity discovered how this butterfly on the leaves of white mulberry was to grow. The Chinese also discovered how and when one must kill the pop to the silk thread from which the cocoon spun is, in its entirety to be able to wrap.

Silk was an important export for China and through the silk route was the Silk until the Roman Empire traded.

In 552 was by Persian monks smuggled a number of eggs and larvae to Constantinople and henceforth it could set up its own West Silk cultivation (among other things in the "Morea").

The silk thread is 300 to 900 meters long and about 10 micrometers thick. About 5000 cocoons are needed to make 1 kilogram Silk. Males deliver more and better Silk than females.

From the spider glands of the Caterpillar is surgically yarn manufactured, called silkworm.

Silk (textile)

Silk manufacture in Khotan

Silk is a natural substance that is secreted by certain insects and solidifies on contact with the air. The best known for her production is the silkworm (Bombyx mori), it belongs to the order of de Lepidoptera or winged scale. There are also certain spiders that are suitable for the silk cultivation. While the caterpillars there their cocoon to it, weaving their web of spiders.

The term Silk is used for the natural textile fiber that serves as a raw material for the manufacture of silk fabrics. These substances are also known as Silk.

Types of silk fabrics

- raw silk: Silk who dyed, but not cooked
- Wild silk: Silk of another insect than the Bombyx Mori
- ahimsa silk: silk which the silkworms not be killed during the production
- damask silk
- Crape silk (corruption of Crepe Silk)
- taffeta
- dupion silk

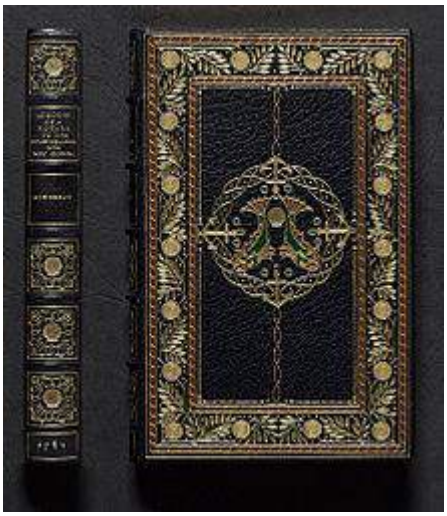
Applications

- Clothing
- Silk painting

Leather (fabric)

Leather and leatherworking tools

In British Columbia a tanning elands sheet



Luxurious leather book binding by Sangorski & Sutcliffe, 1913

Sheep leather jacket

Learn wayang kulit-pop

Leather (also: leather) is material that is made of the skin of (used for meat consumption) animals, such as cows or pigs. More luxurious leathers are submitted by, for example, a deer, a lamb or a calf. Also the skin of crocodiles and snakes is or has been known to learning processes, as well as some cartilaginous fish (sharks and rays).

Content

Use

Before the leathers can be used, the tanned. Thus, the skin is almost unlimited shelf life. It is often also in a color dyed.

Leather is used for bags, shoes, jackets, furniture and the like. Motorcyclists often wear leather suits to protect themselves in case of falls. Wearing leather has for some, also a sexual sense (fetishism).

Leather has require any maintenance. Especially shoes, in order to keep the leather supple, regularly be cleaned with shoe Polish. Leather garments such as motorcycle clothing is preferably rubbed with special leather oily.

Of protected animal species (such as certain species of snakes) can the import and trade of the leather are prohibited. For example, teaching of crocodile leather is that is not the case. But this can vary by country.

Learn that in the soil, sometimes remains well preserved. There are learning objects known from the middle ages. But the Iceman Ötzi also from 3300 BC had learning objects, of which the species could be even more determined.

Production process

Leather comes from the skin of animals and will not be made. It has grown: a natural product with all its quirks and nuances. The production process, where the leather as end product is made consists of various editing course.

Raw hides and skins

After the slaughter of the ox, the skin is cleansed of all perishable waste and stored in cold stores so that the skins remain sustainable. The raw hides and skins are traded on the market where the price by the play of supply and demand. The Tanner buys the raw hides in lots of only hundreds of skins and uses various quality classes. This quality formats determine the price of the leather and is strongly depending on the skin errors, which can, of course, are both as skin errors caused by man. Natural skin errors are: Hornet holes, lice bites and attack by moths. Skin errors man-made may result from: branding, barbed wire damage, off vil, rust spots and leather tanners. Because the European cattle in a more favorable climate life and also better maintained, the better grades of crude skins from Europe.

These skins are generally larger. The skins of the South American, African and Asian cattle are often smaller, and by the climatic conditions in these countries have these skins more natural errors. A cowhide sticks is all hairy on the outside. Since these hairy Silk the top of the leather, this Silk carefully cleaned. With chemical means the hair is soaked off and washed away. After this treatment is the leather entirely white in color.

On the inside of the skin are fat, muscle tissues, etc. These are through a scrape machine removed.

A normal cowhide sticks is 4 to 6 mm thick. To the desired thickness of the leather, the skin is generally split into 3 parts. The minimum thickness for the epidermis is approximately 0.9 mm. the under layer of the skin is used for leather, while the shoe soles interlayer, the so-called split leather, leather covered as low quality, because the coating fast breaks, comes on the market. As the tanned skins not directly, they can spoil and to prevent this, they are in a solution of common salt, hydrochloric acid and water which is called brining.

The tanning process

To be sustainable the skins tanned leather. There are different processes, such as by chrome and vegetable tanned. In General, the chrome tanning applied which means that the skins by action of preservatives shelf life.

After tanning is the thickness of the skins using a Sander that irregularities in the skin are easily sanded off. On the skin is the life of the ox to "read". Small scars, scrapes, stings of insects and difference in density of pores give the leather again and other nuances. Through this natural features of the skin also nuances in the color. The light refraction is influenced by the structure of the skin that is equal in any

piece of leather. The processing of such a natural product requires a lot of skill and understanding to achieve an optimal result.

Traditional tanning

As first the animal skins were skinned. It remained meat remains on the skin. Leather is meant as a material for footwear, the skins first cleared of hair. The skins were soaked in lime-rich water and afterwards were scraped off the hair. On the inside of the skin, there were still many large remnants meat to that skin. Those remains were there with a sharp knife cut off. This is called meats. The vlezer was deeply bent over a sloping slightly convex stone table drawn up.

If that happened, the tanning process really began. In a tannery were vats, also known as LaGuardia, which half were dug in the ground. They were made of oak. After the tubs with run (ground oak bark mixed with water) were full, the skins were hung in it. Where the hides or skins were dried and came out, they could not spoil more.

Before the skins were dry, they were at first still scratched, sanded and rolled. This was all as Finish. Sanding and scratching made sure that the teaching was going to shine. By rolling leather was flatter and smoother. When these steps were leather was as good as ready.

Paints

The leather from all quality classes is stained with aniline dyes. The dyes penetrate deep into the skin up to approx. 1 mm. In doing so, can we speak of a thoroughly dyed leather. Color nuances arise because not all parts of the skin as much dye. The skins are dried and harden thereby. Through walking (the mechanical kneading the leather) are the skins again smoothly. The painted leather is obtained by spraying the through and through-dyed skins with water based colored paint. This classic Edit method delivers a very vulnerable hardwearing and little leather on for daily use. The coating protects the leather against moisture, perspiration and fat.

Suede

Suede shoes

Suede is a type of leather that is used to boots, handbags and clothing, such as jackets, skirts and pants. The name comes from the French "Gants de Suede", or "Swedish gloves '.

Suede is made from the inside of leather, which is not the epidermis shows. Because of this, it is less durable but softer than just leather. Suede has a polished surface and like dust, which makes it suitable for the manufacture of clothing. Nubuck looks a bit like suede but here is at the top of the skin lightly sanded, leaving a velvety look and feel. Nubuck is thicker than Suede and is more commonly used for footwear.

The open structure of suede it quickly becomes dirt and is particularly susceptible to food stains. Because it is not possible to wash Suede, it must be cleaned using a Suede cleaner, which however is not recommended since this is also for higher rates of wear.

For skateboard shoes Suede, however, is often used, as this is when sanding against the board less abrasion than leather or canvas.

Weaving techniques

Weaving

Traditional weaving in Guatemala

Weave in a demonstration on the pumpkin day

Japanese woman

Weaving is the inclusion of horizontal and vertical groups of wires to textiles. It is a very old technique that many variants exist.

The wires which textiles are woven can be of different material, such as:

- wool
- flax
- cotton
- Silk

Content

Description

For weaving yokes a number of wires in vertical direction parallel on. the construction on which this happens is called shaving. The stretched wires called warp. Sometimes these warp threads (or warp threads) glued (encouraged) to be more resilience and resistance to fracture during weaving. Then, one by one, other wires, horizontally at right angles between the warp through, in the loom inlaid. These threads are called weft threads. These wires are tightly pressed against each other by means of a so-called ' cane '.

Weaving

At a loom the threads of the warp (or chain) per group are lifted by shafts or combing. By in a particular pattern the warp threads to lift or dropping, created specific woven patterns (bonds), which sometimes can be very complicated. Until the middle of the twentieth century were the weft threads using a shuttle in the fabric woven. This shuttle is a barge-shaped block, in which a coil with wire while moving back and forth is settled.

Shooting of the coil
(Museum Leiden Weavers House)

Catch on with the cane

Patterns or bindings

The simplest pattern is formed by the linen binding, plain weave, solid-or fast bonding. This requires that the weft thread each time one warp thread record and the next drop. One weft thread takes the even-numbered warp threads on, the next the odd warp threads. With more complicated patterns can the weft thread two or more warp threads at once. Combinations are also possible, in which the weft thread two warp threads and then one drop (the chain Twill), or vice versa (the weft Twill). On the other hand, there are also two or more warp threads are included and an equal number of be skipped (the twill). When one moves the starting point still further arises the Twill, an oblique Ridge in the tissue.

Types of looms

At more modern weaving machines are the weft threads inserted with either rigid rods (grabs), with a small metal projectile (on Sulzer looms) or the weft threads can be inserted with air pressure and/or water jet. The type of loom and the technique used to weave in the weft threads are usually determined by the type of tissue that one wishes to weave.

For carpets and heavy fabrics are usually grip arm used.

At weaving machines that work with water jet technique one can usually only with synthetic yarn weaving.

Velvet

Cope from cut velvet, XVIth century.

French furniture (Louvre), upholstery in cherry red velvet. Napoleon III-style

Velvet is a woven fabric, with upright fluff, the so-called pool of silk or cotton with the chain wires are interwoven and are cut off. Nowadays, other substances used, such as linen, wool and mohair. Also synthetic materials are used. Sometimes a little lycra added in order to achieve a certain degree of elasticity.

Velvet is a soft and fine, shiny fabric, which traditionally used for costly apparel. The technique of velvet weaver originating from Asia came around 1400 in Italy to fruition, particularly in Lucca, Florence, Venice and Genoa; the latter city is still a velvet Centre. In the 16th century Bruges became a center of velvet weavers, that in quality for the Italian example not passes.

Also in other places, however, was velvet woven.

Rich people in the 17th century often wore velvet, and lived on a Grand Canal, where among other things the street name Velvet Banks of testifies, that both in the Hague as in Monnickendam. Also in Amsterdam was once a Velvet Burgwal. The House on the three canals has on the Silk of the Oudezijds Voorburgwal a facing brick which still recognize that naming.

Velvet is woven with a special type of loom. The Metexmachine is a special type of weaving machine designed for the production of velvet. The weft is inserted into the lower gape of a double gape opening. The pool is obtained by placing steel rods or rods in the top gape. While pulling out the rods of the pool

one can choose between cut or uncut pool or a combination of both. We can distinguish the rods into two major groups.

Uncut Velvet

First, we have the rods to create a circular pool. Because there is no blade is on the end are the wires that are not about the rod cut open and one gets an uncut pole. silk velvet is used for robes and by gold embroiderer. The deep color makes this fabric perfect for wearing heavy gold embroidery. Silk velvet is very costly and is manufactured in Europe.

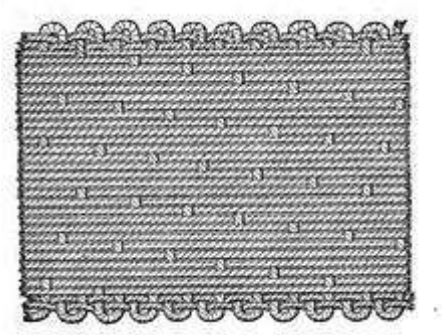
Cut Velvet

A famous kind is the Velvet velour the Genes, or cut velvet. At this ancient craft technique is the pool manually cut. A cut pile one gets by the rod at the tip of a small knife. When pulling out the rod are all (pool) wires out there about are nicely cut in half. By jacquard techniques one can weaving patterns, a technique that was very popular in the 16th century. The Velvet of this kind find application in furniture, heavy clothing and particularly at religious robes.

And as a last possibility one can wireflex two rods on top of each other with the weaving. So does one get a relief.

Satin

Satin used in bedding



Structure of satin weave with silk

Satin is a fabric in satin weave. The satin weave (or atlas binding) is a weaving technique, with the intersections of the warp and weft threads are evenly spread. At a weft satin is the effect formed by the weft threads, because these cover the binding points. With this technique can be very densely woven yarn, making the fabric smoothly. As shiny weft threads and Matt warp threads used is the bottom dull, but the top shining by the loose weft threads. This gives the fabric a luxurious look.

Satin is used to create among other bridal wear, lingerie and bed linen.

We distinguish weft-satin and chain. In tick, damask and also checkered towels are often applied together. The satin weave is always as high as wide. As a rule, we know the number and the count number, that at weft satin cumulative quantity is called and at necklace satin rise number.

Denim

Denim used for a blue jeans, with a copper rivet to strengthen the Pocket

Denim, also called denim, is a tissue in twill weave and is widely used for clothing. It is a particularly strong, herringbone cotton fabric.

Different color jeans

Content

Name

Denim is an abbreviation of the original French name serge de Nîmes. Nîmes is a Southern French town where this substance was first manufactured by the family André for the herdsmen of the Camargue, the so-called gardians. The Blue jeans blue denim jeans takes its name from the blue dye indigo and jeans comes from the French name Gênes van Genoa where the first denim trousers were manufactured.

Clothing

Denim is used for the following types of clothing:

- Jeans
- Shorts, including cut-offs and Daisy Dukes
- Capri pants
- Overalls/Bib
- Skirts
- Dresses
- Hats
- Jackets
- Shirts
- Swimwear
- Tailor made suits
- Boots and shoes
- Sneakers (Keds Surfers, Converse Chuck Taylor all-stars, Vans # 95 and Classic slip-on, etc.)

Accessories

- Bags and wallets
- Silver jewelry with accents of denim
- Belts

Furniture

- Sofas, chairs and footstool covers
- Bean bag
- Office chairs

- Lamp shades

Vehicles

Between 1973 and 1975 Volkswagen produced the Jeans beetle, that are only denim-trim. They also reiterated this concept in some later models.

Jeans

Denim is used primarily to jeans dress out of it. The Americans Levi Strauss and Jacob Davis were in the 19th century the first to did this.