



Understanding of Fabric Manufacturing (Knitting)

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Abstract

During the manufacture of clothes, the threads made of fibers are the main basic structures. Clothes are prepared by weaving these threads with each other from both the sides. According to Colliers, 'Fabrics are made of inter weaving threads or yarns, and these yarns in their turn, are produced by twisting together long, thin fibers. There are two main types of yarn available, continuous filament yarn and spun yarn, although techniques have been developed for producing filament yarn by splitting a film. Is. Making beautiful and attractive nests by weaving straws together is the best natural way of weaving. Presently, mainly 4 methods are used during textile manufacturing.

Keywords: Knitting, Fabric Manufacturing, Felting, Weaving, Plain Weaving.

Introduction

Felting: Under this method, small or tiny fibers are affected by heat and pressure. However, the use of this method for textile manufacturing is limited. By this method mainly woolen clothes like blankets etc. are made. There is always a lack of coordination with other classes of fibers, which is mainly due to the freezing of woolen threads. In this regard, according to Dr. Lebarthe, these come under non woven febricfebric, which is much like paper and formed in a sheet like structure'

Knitting: Knitting method also has a very important contribution in the manufacture of clothes, mainly in the manufacture of winter clothes. During this method, the fabric is made row by row by removing the loops of the second row from the loops of the first row. The quality of stitching is present in the clothes made by knitting, that is, they spread when pulled and come back to their former shape when released. Apart from cold weather clothes, cotton and silk clothes are also manufactured by knitting. In this method of making braids or lacy cloth, two or three threads are braided to form a cloth. Mainly they are used to decorate clothes.

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Weaving

Most of the weaving method is used in the manufacture of clothes. In fact weaving is the best method based on warp and weft. Under this, threads are applied from both sides to make clothes. The cross threads are called warp while the cross threads are called weft. Clothes are manufactured by interweaving these warp and wefts. First of all, warp threads are stretched parallel to the beam. The length of the warp threads is kept the same as the fabric to be made. Also it is very important to avoid any type of joint in their length. After this, the weft threads are wrapped on the shuttle, the thread is taken out by trapping it between the threads of a warp thread, due to which the warp and weft threads get stuck together and the fabric continues to be made. , Mainly hand operated machines are used in weaving, but gradually due to increase in this industry, the prevalence of electric operated machines has also increased. Among these hand looms and electric looms are the main ones.

Types of Weaving

There are many types of weaving of cloth which are as follows -

Plain Weaving

Sometimes plain weaving is also called cotton, taffeta or tebi weaving. This is the simplest weave. In this, the warp threads pass over the weft threads respectively. The warp threads inside the fabric should be visible in such a way that if the first thread of the warp is visible above the weft, then the second thread of the warp will be visible below the weft. The third above and the fourth below means all the threads in the cloth will be visible above and below this type of weft. If the odd thread is down, the entire even thread will be up. If you look at the weft, the order of the weft will also appear to be the same with the warp threads as with the weft of the warp threads. It is difficult to distinguish between the reverse and the straight in a plain weave fabric, unless its surface is specially treated or printed. The surface of this type of cloth is plain and rough, but it is a beautiful base for printing etc. Unsightly surface can also be made beautiful by using different types of colors or lengths of yarn. By dyeing the yarn before weaving, it can be woven in such a way that the cloth is beautiful, striped; Be made of frames and designs.

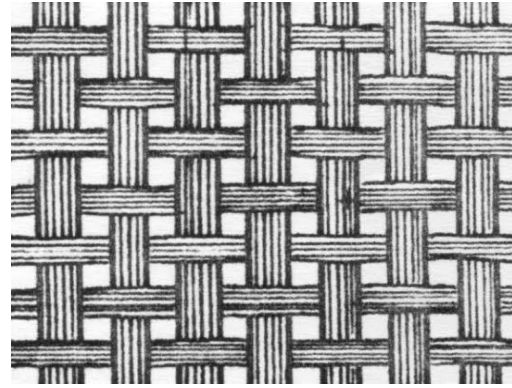


Fig. 1 Plain Weave

Rib Weave

Rib weave is that in which a single weft is inserted by raising and setting the double, triple and quadruple warps. The warp threads completely cover the weft threads so that the surface of the fabric appears taut. This thing becomes very clear at that time when the color of the warp and weft threads is different. In this case, only the color of the warp threads will be visible on the surface. Rib knit fabrics may use weft yarns of the same size or the weft yarns may be of a larger size than the warp yarns.

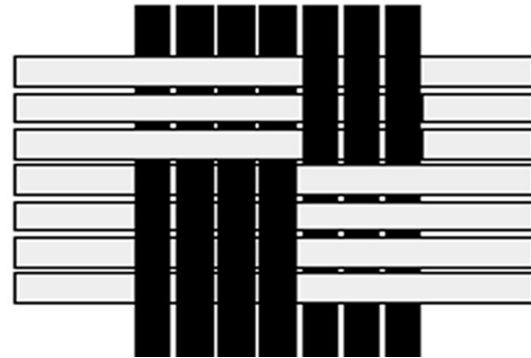


Fig. 2 Rib Weave

Basket Weave

In this weave, two or more weft threads are passed from above and below two or more warp threads. In this weave, the same number of weft threads are inserted by moving two or three or four warp threads up and down. According to the number of threads, the weave will be called Dusuti, Tisuti or Chausuti. Very attractive clothes can be made by using colored threads in Spada Dusuti weaving. But this weave produces a loose weave fabric. Hence it shrinks quickly when washed. That's why it doesn't prove useful for daily use clothes.

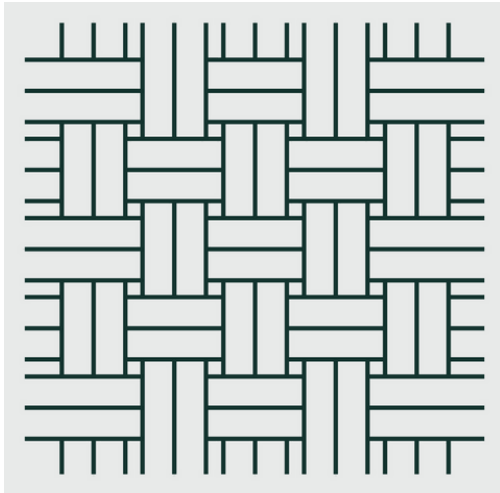


Fig. 3 Basket weave

Twill Weave

In this weave, the weft threads appear to float up and down the warp threads at regular intervals. In this weave, the slanting edge of the weave is clearly visible inside the fabric. This stripe can also be from right hand to left hand or from left hand to right hand. In this weaving, the first warp thread is caught in the first weft, then the second warp thread is caught in the second weft thread and the third warp thread is caught in the third weft. The slant weave twill weave is attractive and the design becomes spontaneous on its surface. Hence it does not require printing. The fabrics of this weave have straight and reverse direction.

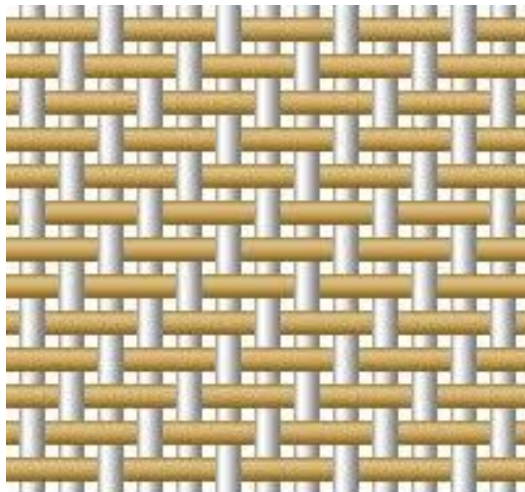


Fig. 4 Twill Weave

Satin Weave

Satin is also the name of weave and the fabric which is woven by this weave is also called satin. The main purpose of satin weaving is to create a surface on one side of the fabric, so that its surface becomes shiny and smooth. If the warp threads are visible in large quantity on the surface, then they are called satin weave or warp

surface. Its fabric looks uniform and there is no depression etc. on the surface. Inside the weave of satin, one by one, two to four warp threads are trapped in the west. In these weaves, the more widely the threads are trapped, the less the warp threads will appear trapped in the fabric.

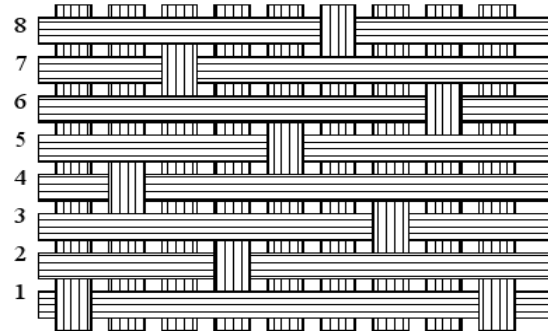


Fig. 5 Sateen Weave

Sateen Weave

This weave is just the opposite of the Sateen weave. If the weft yarns are visible in excess on the surface of the fabric, then this Sateen weave is called Filling face fabric. Satin is a fabric with warp surface and sateen is a fabric with weft surface. Fabrics made of both types are smooth, shiny and attractive and are also durable to walk. This weaving is done in many types of fabrics. To bring luster effect to silk, rayon and wool fabrics, wefts with satin weave and warp surface are made. The woolen fabrics are prepared by making sateen. These are often piled.) are prepared by weaving only. To find out the difference between sateen and sateen, fingers are run over the surface of the fabric. If the fingers are easily moved in the longitudinal direction, it is clear that the surface weave is similar to that of silk and rayon. Used in textiles. Satin is very smooth and lustrous. Lee will rotate in the transverse direction. This weaving is done only on a small number of mercerized cotton fabrics. Its cloth is not as shiny or smooth as that of satin. In this weaving, satin crepe, satin, georgette, satin, cotton, twill satin, etc. are prepared.

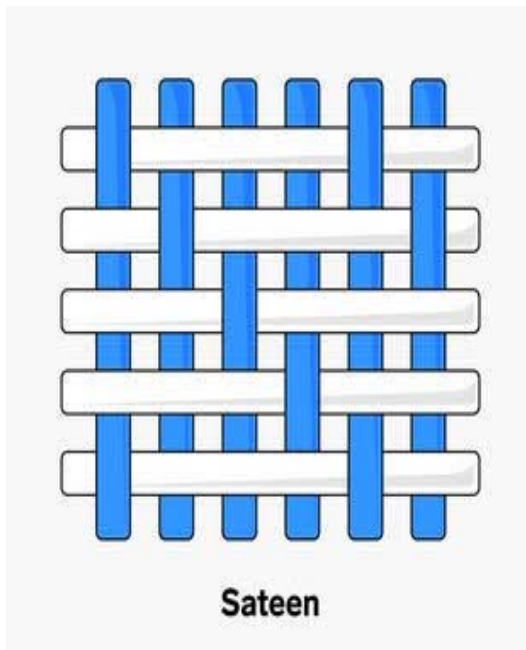


Figure 6 Sateen Weave

Huckaback Weave

This weave is used for making curtains and linen and cotton towels. In this weave, the warp threads are visible floating on the surface of the fabric. In this, the weft is filled in such a way that the odd (Odd) threads are filled in the first two wefts and all the even (Even) threads are filled in the next two wefts.



Fig. 7 Huck Back Weave

Honeycomb Weave

This weave looks like different cells. These raised cells are made of floating yarn. In this way, the warp and weft threads are seen floating on both sides of the

fabric. This shape is especially useful for towels. Vertical lines are produced by floating threads and horizontal lines are generated by weft threads.

Carduroy Weave

The surface of a fabric is created by weaving the surface weft yarns with the weft yarns in plain weave. The weft threads are knitted with one, two or three grain threads. They then emerge or float on three or more warp threads so that they are again woven into one or two warp threads. In the same way its weaving continues. After weaving the fabric, the raised weft threads are cut from the middle of the knotted threads. After this, the cloth is refined, in which the piles are visible. Play clothes, bed sheets, curtains, etc. are made from this weave.

Velvetine Weave

This weave is similar to Corduroy. Its surface can be like plain, dusuti or satin. With this weaving, the cloth comes out of the loom in a flat shape. After being taken off the loom, this weave fabric is taken to the cutting machine, where the raised weft yarns are cut. Since the bulge of the yarn is spread. Hence they spread over the entire surface with the help of cut hairs. The length and number of protrusions of the threads determine the closeness and depth of the hair.

The main activities of knitting

During the manufacture of clothes, different types of activities are done under knitting, which brings prosperity in the work of manufacturing clothes. There is a continuous repetition of these activities by which the cloth is manufactured.

1. Shedding

In this process, the harness of the loom raises the threads of the warp under which the shuttle has to pass. During

2. Peaking

Shedding, the shuttle with the filling threads enters it from one side and exits the other. This way the thread fills the entire row. The said thread continues to come out freely on the bobbin through a hole in the shuttle case and is collected. In this way a row of cloth is formed. Which are called picks.

3. Betting

Under this when the weft threads are filled in a row by a pick on the warp threads, then this action is called batting.

4. Wrapping and Releasing

During this, both the beams attached to the loom quickly and efficiently catch and release the thread simultaneously.

5. Yarn Distraction

During the process of weaving the warp and weft of the fabric, only the interlinkages of the warp and the weft prove to be very effective for manufacturing the fabric, but it has often been seen that the outer appearance of some fabrics is not normal but its threads appear to have shifted or moved out of place, this condition is called yarn retraction. Yarn retraction can have various causes.

6. Number of threads per inch

If the number of threads per inch remains less during the weaving of the fabric, due to which the yarns move to their place along the entire length and yarn distraction is generated.

7. Type of yarn

Yarn distraction is also generated by the type of yarn used in fabric manufacturing. Filament threads tend to move more than staple threads because their floor remains completely smooth and uniform.

8. Methods of Weaving

Under plain weaving, the interweaving of the weft threads is more close, which helps to keep them in place, whereas under the weaving of satin, the interweaving between the warp and weft threads is very less and sliding. Is.

9. Finish

Sometimes the finish also affects the speed of the thread. During this many times due to finishing the threads get stuck together and spoil the shape of the cloth.

Conclusion

After the analysis of the present study, it can be said that the appearance of beautiful and attractive clothes is the result of different types of weaving activities. Under this, different types of clothes are woven. The main basis of these activities are those fibers made from threads which are used in the manufacture of different types of clothes. Textile manufacturing has flourished in India since ancient times. The use of handlooms in hand weaving has been remarkable, as well as in the era of modernity, there is a new trend.

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