Fabric Finishing Process

The fabric finishing process refers to the treatment to improve the appearance and feel, enhance the performance or give special function. To be more specific, it is a technical treatment method that gives fabrics color effects, morphological effects (bright and clean, suede, crisp, etc.), and actual effects (impermeable, non-felting, non-ironing, non-moth, flame resistance, etc.).

Finishing process methods can be divided into physical/mechanical finishing and chemical finishing. According to the purpose, it can be classified into basic finishing, appearance finishing, and functional finishing.

Purpose of Finishing:

- Making textiles uniform in width and stable in size and shape
- Improving the appearance of textiles
- Improving the touch feeling of textiles: such as softness, stiffness, weight gain, etc
- Improving the durability of textiles: such as anti-moth, anti-mold, and so on
- Giving textiles special properties: such as flame-retardant, anti-bacterial, water-proof, oil-repellent, anti-ultraviolet, and anti-static

Finishing Processes:

1 Pre-shrinking

Pre-shrinking is a process that uses physical methods to reduce the shrinkage rate of fabrics.

2 Stenter

Stenter takes advantage of the plasticity of cellulose, silk, wool, and other fibers under humid conditions. The width of the fabric is gradually expanded to a specified size and dry it to stabilize the shape of the fabric. It is also called fixed-width finishing.

3 Coating

Coating refers to the finishing process in which the fabric is dipped into the solution and dried to obtain a thick and stiff texture. Our stiffening agent is suitable for this application. For more information, please visit our website wwwpolyestermfg.com.

4 Heat Setting

Heat setting is a process that makes the morphology of thermoplastic fibers and blended or interwoven fabrics relatively stable. It is mainly used for the processing of synthetic fibers such as nylon or polyester, which are easy to shrink and deform after being heated. The heat-set fabric has better dimensional stability and a more stiff hand feel.

5 Whitening

Whitening is the process of increasing the whiteness of textiles by using the principle of light complementary colors. There are two kinds of whitening methods: blue and fluorescent whitening.

6 Calendering

Calendering is a process that uses the plasticity of the fiber under humid and hot conditions to flatten the surface of the fabric or roll out parallel fine twills to enhance the luster of the fabric. Flat calendering consists of hard rolls and soft rolls. After the fabric is rolled, the yarn is flattened with a smooth surface, a bright luster, and stiff hand feels. Soft calendering consists of two soft rolls forming a soft nip point. After the fabric is pressed, the yarn is slightly flat, with a soft luster and a soft hand.

Electro-optical is the use of electrically heated rollers to calender the fabric.

Embossing is composed of steel rolls and soft rolls engraved with positive patterns. Under hot rolling conditions, the fabric can obtain shiny patterns.

7 Sanding

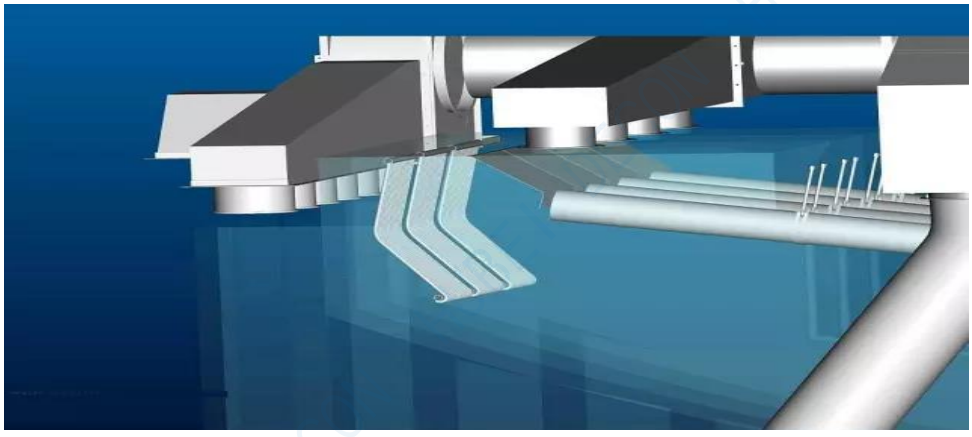
Sanding is the process of using a sanding roller (or belt) to grind a layer of short and dense fluff on the surface of the fabric. The sanding finishing can make the warp and weft yarns produce fluff at the same time, and the fluff is short and dense.

8 Fuzzing

Fuzzing is the process of picking up the fibers on the surface of the fabric with dense needles or thorns to form a layer of fluff. It is also called brushing finishing. Fuzzing is mainly used for woolen fabrics, acrylic fabrics, and cotton fabrics. The fluff layer can improve the warmth of the fabric, improve the appearance and make the hand feel soft.

9 Shearing

Shearing is the process of using a shearing machine to cut the unwanted hair on the surface of the fabric. Its purpose is to make the fabric weave clear and the surface smooth, or to make the fluff or suede surface neat. Generally woolen, velvet, artificial fur, carpets, and other products need to be sheared.

10 Softening

There are two methods of softening finishing, mechanical finishing, and chemical finishing. Mechanical soft finishing is achieved by rubbing and bending the fabric many times, but the effect is not ideal. Chemical softening is to apply a softener on the fabric to reduce the coefficient of friction between fibers and yarns, so as to obtain a soft and smooth hand feel, and the finishing effect is significant. Nonionic polyester resin can be used for this application.