



“बेटी बचाओ, बेटी पढ़ाओ”

JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

FACULTY OF EDUCATION & METHODOLOGY

Faculty Name : JV'n Daksha I (Assistant Professor)

Program : B.A.-Des [FD] 7th Semester

Course Name : Weaving and knitting

Session No. & Name : 2023-2024

Academic Day starts with –

- Greeting with saying ‘**Namaste**’ by joining Hands together following by 2-3 Minutes Happy session, Celebrating birthday of any student of respective class and **National Anthem**.

Lecture Starts with - Review of previous Session-Product development process and understanding the terms i.e. Segmentation, Targeting and Positioning .

Topic to be discussed today-Types of routine finishes

Introduction & Brief Discussion about the Topic.

University Library Reference-

- E-notes, handmade notes.
- E- Journal
- Online Reference if Any.

- Suggestions to secure good marks to answer in exam-

- Explain answer with key point answers
- Questions to check understanding level of students-
- Small Discussion About Next Topic-

Academic Day ends with-
National song 'Vande Mataram.'

Finishes

Fabric finishing is the process that changes, improves or develops the appearance or desired characteristics in a fabric. Finishes for fabrics can be classified in different ways.

Classification of Finishes

I - On the basis of the characteristics imparted to the fabric, finishes can be of two types:

Routine finishes: These are the finishes that are applied to almost all fabrics to improve their performance. Example: desizing, scouring and bleaching to name a few.

Special finishes: These are the finishes that are applied to impart specific properties to the fabric. Example: waterproofing.

Routine and special finishes can be further classified according to the characteristics they impart to the fabrics. They can either be used to enhance the aesthetic appeal of the textile material or impart some functionality to them.

II - On the basis of the method used to apply the finish, there can be two types of finishes:

Mechanical Finish: These are the finishes that are applied using physical principles such as friction, temperature, pressure, tension and many others. Example: calendaring.

Chemical Finish: These are the finishes that are imparted with the use of chemicals. Example: mercerization of cotton.

III - On the basis of durability of the finish on the fabric, the two types of finishes are:

Permanent Finish: Finish that remains on the fabric for its life.

Example: crabbing of wool and durable press.

Temporary (renewable) finish: Finishes that remain on fabric for one or two launderings only and need to be renewed to achieve the desirable fabric property are temporary finishes. Example: sizing.

Table 1 Classification of Routine and Special Finishes

Routine Finishes	Special Finishes	
	Aesthetic Finishes	Functional Finishes
Singeing	Special calendaring	Abrasion-resistant
Desizing	Schreinerling	Absorbent
Scouring	Moireing	Durable press
Bleaching	Embossing	Flame-retardant
Sizing/Stiffening	Napping	Water repellent and water proof
Degumming	Softening	Stain and soil resistant
Weighting	Beetling	Shrink-resistant
Tentering	Optical brightening	Soil release
Mercerization	Brushing	Ultraviolet protection
Calendering	Shearing	Moth proof
Carbonising	Heat setting	Antistatic
Crabbing	Fulling/Milling	Anti-slip
Decating	Antimicrobial	

ROUTINE FABRIC FINISHES

Also known as basic or preparatory finishes, all the fabrics undergo these finishes to make them acceptable to consumers and prepare them for subsequent processes like special finishes and colouration.

Singeing

Singeing is a process applied to both yarns and fabrics that consists of burning off the fuzz or fiber ends on fabric in order to obtain a smooth surface. Fabrics of natural and man-made staple fibers are singed when a clear smooth surface appearance is desired. For these fabrics, singeing is the first step in the total finishing operation.

Desizing

Preparatory process for weaving includes application of sizing agents on the warp yarns prior to their placement on a warp beam for weaving. These stiffening agents must be removed before further processing as they have a waterproof property which impairs the wettability of the fabric and thus hampers application of subsequent finishes and coloration. Removal of the sizing material from warp yarns is called desizing.

Scouring

Scouring means washing. A gray fabric may have certain inherent impurities as well as acquired ones. Fabrics that are generally made of natural fibres must be scoured to remove foreign materials that might be present like natural waxes, dirt, processing oils and sizing compounds. For example, a cotton woven fabric may contain natural waxes and pigments (inherent) as well as dirt and oil (acquired) due to handling of hands and loom processing.

These can be removed by scouring. For cotton, boiling water, soaps/alkaline builders as well as wetting agents, are all used proportionately to obtain clean fabrics. Protein fabrics are treated with neutral or slightly acidic chemicals since alkaline reagents can harm them. Man-made fibers may be scoured to remove temporary colours that were used for yarn and fabric identification.

Bleaching

Bleaching is chemical process of whitening the fabric by removal of natural colouring matter. Natural fibers have greater degree of unwanted color as compared to manufactured ones. Fabrics, yarns or fibers are bleached either to make them white or to prepare them for dyeing or printing. Bleaching is relatively durable when the bleaching method is appropriate to the fiber/fibers involved.

Sizing/Stiffening

This finish imparts firmness and body to the fabrics. Although a basic finish, stiffening may be done after coloration. Cellulosic fabrics can be stiffened with starch (temporary) or resins (permanent). Starch or other sizes gives weight to a fabric and can make an inferior product look attractive until laundered. It also prevents fabrics from soiling quickly. These days easy to use stiffening agents such as revive are available in the market. For stiffening of silk, gums are used.

Degumming

Also known as silk scouring, degumming is the process of removing the sericin, or silk gum, from silk in order to improve its colour, lustre and texture. Degumming can be carried out on yarn or fabric.

Weighting

Weighting is a sizing technique applied to silk fabrics. After complete degumming, silk become soft and light (silk gum sericin, which is removed contributes 25% of the total weight). This loss in weight is compensated by treating silk with suitable organic and inorganic compounds. To make heavy or stiff materials, manufacturers resort to weighting the fabrics with metallic salts, such as stannous chloride. Weighted silk has body and density, but the fabrics are not as durable, for they are more sensitive to sunlight, air, and perspiration

damage. However, as a malpractice, some silks are weighed above. This is harmful as it lowers the strength and luster of silk.

Tentering

Tentering is the mechanical straightening and drying of fabrics. This finish follows any wet treatment. As the fabric leaves the liquid bath, it is stretched between two parallel chains with pins or clips (this may leave small hole in the selvedge). The chains spread apart to the desired fabric width, move with the fabric through finishing or drying units, and release the fabric to be rolled or folded onto cylinders. Fabrics may be tented several times during finishing and colouring.

Mercerization

Mercerization is a chemical process applied to cellulosic textiles, especially cotton and cotton blends. It is a finish that contributes luster to cotton and increases the ease with which cotton accepts color and adds strength. Mercerization can be carried out at the yarn and fabric stage. Mercerization under tension produces fibers with increased strength and increased affinity for dyestuffs, which is due to the rounding of the fiber and the increased space between the fiber molecules. This finish is given to cotton prior to dyeing.

Calendering

Calendering is applied to cottons, linens and silk as well as to rayon and other man-made fiber fabrics. Pressing is the term used for wool fabrics. Basic The finish is similar to ironing but is done with much greater pressure. It gives a smooth surface to fabrics. Calendaring is done by feeding the fabric between large rollers. One of these rolls is somewhat soft while a second roll is firm and heated. The action is similar to the use of heated irons on fabric placed on a padded ironing board.

Carbonizing

Carbonizing is a chemical finish applied to wool fabrics. Wool yarns and fabrics frequently contain vegetable matter that was not completely removed during carding. To eliminate this, manufacturers immerse the wool fabric in a solution of sulphuric acid or hydrochloric acid. It is then subjected to high temperatures for a brief time. The acid and heat react to convert the vegetable matter to carbon which is easily removed by a final scouring and if necessary, brushing. The fabric is then neutralized and rinsed.

Crabbing

A mechanical finish applied to woolen and worsted fabrics, crabbing permanently sets the weave. The fabric is immersed in first hot, then cold, water and passed between rollers. If properly fed into the rollers, the warp and filling yarns are set at a true ninety degree angle to each other. Improper crabbing contributes to “off-grain” fabric. Crabbing may reduce or eliminate shrinkage in wool fabrics. It generally prevents uneven shrinkage.

Decating

Decating is a mechanical finish. On wool it is used to set the luster and develop a permanent sheen. On rayons, silks, and blends it softens the hand of the fabric and helps to set the grain in its proper relationship in the woven structure. Decating may be done wet or dry. If luster is desired, wet decating is used. The process involves exposure to heat, either hot water or steam, followed by cold water or a blast of cold air.

Fulling/Milling

Fulling is a mechanical finish applied to wool to produce a compact fabric. When wool is removed from the loom, it bears little resemblance to the fabric that the consumer purchases being loose and hard in texture. To make the fabric

compact and soft manufacturers apply moisture, heat and friction. The fabric yarns shrink together, and the fabric softens to the desired texture.

Optical Brightening

Modern day fashion demands bright whites to catch the eyes of the consumer. Most of the textile substrates have a yellowish tinge even after they have been bleached, blued etc. In order to remove this yellow tint completely optical brightening agents (OBA) are used to make white or light coloured fabrics appear brighter. These compounds are colourless dyes that absorb the invisible ultra-violet light and re emit it within the visible range (violet-blue light) causing more blue light to be reflected due to which the material appears brighter. Optical whiteners can be applied during the laundering process.