



Glossary of Hosiery Terms

A

Abrasion Resistance -The degree to which a fabric is able to withstand rubbing and chafing within the shoe. Many socks and sheer hosiery products are reinforced, usually with nylon to lengthen durability.

Absorbency -The ability of a substance to take in and incorporate another material; in the case of hosiery, moisture.

Acrylic Fiber -A man-made fiber that is generally warm and lightweight and is used in casual, dress and athletic socks. Acrylic keeps its shape and properties including resilience, softness, easy care, low-shrinkage, rich colorations and wisking.

Active Sport Sock - Styles specifically designed for active sports participation. These socks differ from ordinary "athletic socks" in that they offer high performance features like special fibers, triple layer construction or pads to provide protection against abrasion and blisters.

Aeration - A knitting operation that allows fabrics to breathe, often utilized in pantyhose for cotton crotch panels or cotton soles. (See [ventilation](#))

Afterwelt - The area of knitted fabric just below the double turned fabric in stockings. It is usually made of the same yarn as the welt and is only one layer in thickness.

Air-Covered/Mactex (Yarn) - The process of air entangling a false twist textured yarn around the extended core. This is accomplished by forcing compressed air into a jet device through which both the core and cover yarns travel, entangling or tacing the cover yarn around the core.

Air Jet Textured with Lycra (Yarn) - The spandex and cover yarn are run through the air texturing jet with no heat applied.

All-In-One Pantyhose - A pantyhose garment which includes a true knitted-in panty, constructed of heavier

weight nylon or cotton. Eliminates "panty lines" that can show through clingy knits or tight pants. (See [Panty/Pantyhose](#))

Alpaca - Extremely fine, soft, and costly yarn derived from the hair of a domesticated Peruvian llama.

Ample - A term used to indicate pantyhose for the queen-size or outsize wearer.

Angora - A yarn made from the hair of the angora rabbit. It is prized for its soft feel and fluffy look, is often used in blends, and adds great warmth to socks. Angora is now often simulated by the use of specialty acrylic fibers.

Anklets - Hosiery with a top designed to cover the ankle bone and extending less than one-third of the way up the largest part of the calf.

Anti Embolism - A therapeutically designed hosiery product that has graduated compression to aid blood flow and prevent clotting in the lower torso.

Antron Nylon - A registered trademark of the DuPont Company for trilobal nylon. Antron combines lustre, strength, and coloration properties and is most commonly used in the panty of some pantyhose styles to give sheen.

Applique - Any pre-prepared fabric decoration which is sewn or ironed onto a hosiery product.

Argyle - Geometrically knit pattern that produces a balanced design of multi-colored diamond figures against a solid color background.

Athletic Socks - Hosiery designed for active sports, often having a ribbed striped top and plain foot construction. Usually knit of acrylic cotton, wool, or combinations thereof.

Autoclaving - This process involves placing bagged greige blanks in a large cylindrical steam chamber that can be hermetically sealed. Once sealed, a vacuum system is utilized to evacuate the air in the chamber. This in turn allows subsequent attainment of steam pressure much higher than possible at atmospheric conditions. The net

result is that the undeveloped yarn in the greige leg blanks permanently shrinks and that the knitted stitches are "set". The fabric is thus much less likely to snag in succeeding operations. The shorter, tighter fabric can be handled and sewn with less labor and off-quality costs.

B

Band - A paper construction used to package half-hose; usually coated with special pressure-sensitive textile adhesive.

Bare Spandex - Spandex that has not been wrapped with another fiber.

Basics - Traditional or classic styles which vary seasonally only in color. Basics form the bulk of the sock and sheer hosiery business. For men, the basics are crew-length casual and both crew-length and over-the-calf dress styles. For women, the basics are knee-highs, anklets and pantyhose in neutral colors. Children's basics are flat knit anklets, crews, and bobbies.

Bed - Lightweight, loose fitting sock designed to be worn overnight in bed to keep the feet warm.

Bird's-eye - A small, evenly spaced pattern in a diamond design.

Bikini Pantyhose - A style of pantyhose with a sheer leg that extends to the hip for wear with shorter hem-lines, short pants and deep side-slit fashions.

Blanks - Unfinished socks as they come off the knitting machine or individual legs of pantyhose before they are sewn together.

Bleaching - An oxidizing process that removes color from a fabric or sock, leaving it white.

Blended - Textile materials made of a combination of two or more fibers, yarns or filaments.

Blends - The combination of two or more types of fiber in one yarn to achieve improved performance or styling effects.

Boarding - Socks: In this operation the sock is stretched either dry or moist over flat metal or wooden forms conforming to the desired sock shape and size. It is then pressed between two heated surfaces. This gives the sock form a smooth appearance. It is a process similar to

ironing. Sheers: A full-shaped heat setting operation in which stockings and pantyhose are put on metal leg forms for a specific size and shape and then dried in a steam cabinet. The process is done after dyeing. The term "boarding" stems from the olden days when wooden boards were used to dry stockings. (See [Pre-Boarding](#), [Semi-Boarded](#), and the [Intech Process](#).)

Bobby Sox - A heavy cuffed anklet that was predominantly a girl's fashion of the '40's and which enjoys period revival.

Body Shapers - Term used to describe sheer hosiery providing more support and control in the panty and thigh portion of the garment.

Body Stocking - A body stocking, leotard or jumpsuit is a garment that covers the torso and may extend to the toe. Initially designed as cosmetic covering in flesh tones and sheer texture, the garment is now widely interpreted in design but still retains its body clinging quality.

Body Suit - A one-piece leotard, usually knit of nylon or nylon/spandex, that covers the body from the shoulder area to and including the crotch.

Boot - The portion of the pantyhose leg running from the thigh area to the toe, or below stocking welt or panty.

Boot Fabric - The leg portion of fabric in hosiery or pantyhose.

Boot Liner - A thin gauge jersey or flat knit men's or women's sock designed to provide a comfort layer between the leg and the sock.

Boot Topper - Knee-length men's or women's socks designed to be worn folded over the boot top.

Booties - Soft, fluffy knitted foot coverings for infants. Designed for children of pre-walking age.

Brand - The name used to identify a product, such as hosiery or fiber, which comes from a particular manufacturer.

a) Branded hosiery is that which is marketed and usually advertised nationally, under one name which guarantees the same quality regardless of where it is purchased. (See [unbranded](#).)

b) Name used to identify fiber from which stockings or pantyhose are knit. For example, Glospan/Cleerspan.

Bruised Fabric - Sheer nylons cannot stand coming in contact with any hard surface and contacted by another hard object. This action will bruise the fabric sufficiently to cause a rupture when placed under strain.

Brushed - Brushes used to produce a napped surface in socks.

Bulk - This term is usually used when referring to textured multifilament yarn. Multifilament twisted yarn with low turns produces low bulk or lean yarn. High twist multifilament yarn produces high bulk yarn. The degree of bulk can be built into the yarn by the throwster as desired.

Bulk Yarn - Yarns which have been treated physically or chemically so as to have a notably greater "apparent volume". Bulk is usually obtained when using textured multifilament yarn.

Bundle Goods - Work socks, skating and ski socks, and other heavy socks weighing not less than one pound per dozen pairs and packed and sold in bundles.

Business Sheer - Moderately sheer pantyhose designed for durability.

C

Cable - A knitted pattern usually made up of two vertically intertwined bands.

Calf-High - The name used for short-length stockings that come up to the calf of the wearer.

Cashmere - Luxuriously soft, expensive yarn made from the undercoat of the Kashmir goat.

Casuals - A broad hosiery term used to describe all women's sock and any men's socks with the exception of dress, athletic, and work styles.

Circular Knit - The major knitting method in hosiery construction. Yarn is knitted into hose using a cylindrical tube. Toes are later sewn and a waistband added.

Cleerspan - A registered trademark for spandex by Globe Manufacturing Company. Used in hosiery for its better fit and shape retention, comfort, and/or support.

Clock - A knitted or embroidered ornament on a sock, stocking or pantyhose, usually running up the side.

Colorfast - Fabric with dye retention such that no significant change in shade takes place during the normal life of the sock.

Combed Cotton - Cotton which has been processed through a "comber" which removes short fibers and trash components to achieve higher uniformity and tenacity.

Comfort Top - A wide ribbed nylon band that holds sheer knee highs up without cramping the calf.

Continuous Filament - A fiber produced in a single, uncut strand rather than cut into short fibers such as cotton or wool. Also used to describe yarns which are not spun.

Control Top - Pantyhose with spandex in the top for soft girdle or "control" effect.

Core-Spun Yarn - A yarn made by spinning fibers around a filament of a previously spun yarn, thus concealing the core. Core yarns are used in sewing thread, blankets, and socks and to obtain novelty effects in fabrics.

Cotton Count - An indirect yarn numbering system generally used for yarns spun on the cotton system; the number of 840 yd. lengths of yarn per round.

Cotton Crotch - A cotton panel sewn into the crotch area of pantyhose.

Cotton Fiber - A soft and heat-resistant vegetable fiber used in garments since 3,000 B.C. It absorbs and retains moisture, is readily washable, and is available in a wide variety of types and qualities. Long staple combed cotton is generally considered to provide the finest quality cotton yarn for socks.

Cotton Sole - A cotton insert sewn or knit into the sole of the stocking or pantyhose.

Course - A series of adjacent loops forming a horizontal line across the knitted fabric. Small horizontal stitches mean more yarn has been used, resulting in finer fabric, greater elasticity, and longer wear.

Covered Yarn - A core usually composed of one spandex or rubber fiber, wrapped with a filament or spun yarn.

Creslan - An American Cyanamid registered trademark for an acrylic fiber. Used in manufacturing of sport and casual socks. Noted for fast dye absorption due to round cross section.

Crew Socks - A designator of length, synonymous with "mid-calf" in men's socks. One of the most popular men's styles, available in wide ranges of colors and patterns.

Crochet - A knitting process that creates a fabric by a series of interlocking loops rather than rows of stitches. Needlework that is used to form an ornamented design on the hose whether it is sheer or "wool-like" in texture.

Cuffed - Socks folded over at the top, usually just above the ankle.

Cushioned - Any construction with a terry pile surface on one side and a ribbed or plain knit surface on the other. In most cushioned athletic socks, the terry forms the inside of the foot portion of the sock. Some of more complex constructions feature added layers of cushioning under certain areas of the foot, depending upon the sports activity for which the socks are intended. Cushion constructions are used in men's and women's athletic and casual socks of all types. While terry cushioning normally fulfills a functional purpose of reducing shock of running or jumping, the same terry-knitting procedure is followed in producing novelty socks with a terry or velour outer surface.

Cushioning - The padding ability of a terry-surfaced sock, paired against a ribbed or plain surface.

Cut and Sewn - Bodywear items that are not knitted in one piece are usually cut from knitted fabric that is purchased by the hosiery manufacturer and sewn together.

Cycling - Sport or athletic sock designed specifically for cycling enthusiasts. Generally has a heavy knitted pad in the arch of the foot where the pedal makes contact with the foot.

D

Daytime or Dress Sheers - Pantyhose of 15 or 20 denier yarn for a dressy daytime look.

Decals - Designs printed on paper and transferred to the sock by means of heat and pressure. A term used interchangeably with "heat transfer".

Decitex - The metric measuring system used to indicate weight per unit length of yarns in Europe. (It is numerically equal to the weight, in grams, of 10,000 meters of yarn.)

Demi-Toe - Stocking or pantyhose with a nude, sheer heel and reinforced toe. A popular fashion with sling back shoes.

Denier - Denier is the weight-per-unit-length of the yarn. (It is numerically equal to the weight, in grams, of 9,000 meters of yarn.) The lower the denier, the lighter and finer the yarn, and the sheerer the garment. Hose knit of higher denier yarns tend to be more durable.

Deodorant - A chemical additive introduced to hosiery during the finishing process to control sock odor. Originally used in athletic hosiery. Deodorants control odor by inhibiting the growth of odor causing organisms.

Detailing - Any material applied to the sock body after manufacture, such as lace, stitched monograms or insignia, fringes, sewn-on cuffs, etc.

Diabetic/Arthritic Sock - Heavy elastic used to help make a support sock.

Double Covered Spandex - Spandex that had been wrapped in both directions with nylon or polyester continuous filament yarn or other textile fibers.

Double Covered (Yarn) - The process of wrapping two non-elastic filament or spun yarn around the extended core, the bottom cover yarn controls the stretch, while the top cover serves to balance and provide a smooth appearance.

Double-Reinforcement - Two thread lines, usually nylon or polyester, knitted into portions of the sock foot to achieve added abrasion resistance, most commonly at the heel and/or toe.

Dress Socks - Light to medium weight men's and boy's styles. Lengths may vary from mid- to over-the-calf.

Drop Stitch - When a needle on a knitting machine does not form a knitted loop.

Dyeing - The permanent application of color to a yarn or fabric.

E

Elastic - A term which designates the ability of a yarn to return to its original size or shape after being stretched.

Elasticity - The ability of a strained material to recover its original size and shape immediately after removal of the stress that caused deformation.

Elasticized - Fabrics which have elastic threads running through them, or which have been treated to give them elastic qualities.

Elastomer - Elastic fibers such as rubber or spandex that have physical stretch properties.

Electronic Patterning - Use of an electronic device to control certain needles in knitting to create a pattern.

Embroidery - The application of designs of decorative trim by machine or hand sewing.

Ethnic - Usually sheer hosiery (knee-high, stockings or pantyhose) dyed in colors designed to compliment the natural skin tones of various ethnic population groups.

Extra Long Length - Pantyhose knitted with a slightly extra long length and or slash panty to accommodate taller consumers.

Evening Sheers - Pantyhose made of 10 to 15 denier yarn. Worn for special occasions, they often have a satin finish.

Executive Length - Men's over-the-calf dress styles.

F

Fabric - Specifically in hosiery, the word is used to refer to that which is knitted on hosiery machines from fiber.

Fabric Stretch - The amount of stretch in fabric from the relaxed state to the fully extended stretch.

Fabric Recovery - The ability of fabric to recover from the fully extended state to the original flat state before extending.

Fair Isle - Any nordic or snowflake patterning.

False Twist Covering (Yarn) - The spandex and cover yarn are run through the texturing spindle with heat applied.

Fancies - Men's socks of any length bearing multicolor designs such as stripes, herringbones, argyles and other fashion styles.

Feeds - This term is normally used in conjunction with circular knitting machines and literally means how many yarns are fed into a machine at each revolution to knit continuous rows of stitches.

Fiber - Natural or man-made units of matter which can be spun into a yarn or made into a fabric by various methods including weaving, knitting, braiding, felting and twisting. The essential properties for fibers to be spun into yarn include a length of at least 5 millimeters, flexibility, cohesiveness, and sufficient strength. Other important properties include elasticity, fineness, uniformity, durability, and luster.

Filament - The finished fiber used in sheer hosiery is called filament yarn. It is characterized by continuous length and is extruded either as monofilament yarns, which is composed of one single strand, or multifilament yarn which is made up of several filaments bundled together.

Filament Count - The number of individual filaments that make up a thread or yarn.

Filament Socks - Sheer, dark-toned men's dress or formal hosiery made usually of filament yarns.

Filament Yarn - A yarn composed of long strands of synthetic fibers which continue the entire length of the yarn. The basic yarns used in ladies hosiery are all filament yarns. To describe the size of filament yarns, the term denier (weight-per-unit-length) is used.

Finger Band - A reinforcement just under the waistband of all nude pantyhose to give protection against fingernail punctures when pulling up the pantyhose.

Finishing - Includes all sock and sheer hosiery manufacturing steps excluding knitting and sewing. For socks, it includes bleaching, scouring and dyeing, boarding, pairing, ornamentation, folding and packaging. For sheers, it includes dyeing, boarding, pairing, and packaging.

Firm Support - Support pantyhose that give more support because heavier weights (usually 70) of spandex are used.

Fishmouth Toe - A method for closing a non-reciprocated toe in which the seam runs parallel to the bottom of the foot rather than across the top of the toe.

Fishnet - Knitted knee-highs, stockings or pantyhose with a very wide open knit resembling a fish net. Very stylish and fashionable, but very porous providing little warmth or protection or cosmetic covering.

Fit - It is the combination of yarn and construction that determines the adaptability of hosiery and bodywear to the human form. Stretch and recovery of yarns and knit construction contribute to a garment's fit.

Five-Eighths Hose - Hosiery which reach five-eighths of the way from the ankle to the knee. (Also called golf socks).

Flammability - The test to determine if fabric will ignite under controlled conditions.

Flat Knit - The second most widely used construction. Sock fabric knitted on a single cylinder machine and producing a fine, smooth surface with a jersey-like appearance. Used for casual socks of all types, some varieties of work socks, for children's hosiery, and in socks where the distinction is achieved by the yarn or by treatments such as embroidery, appliques, or small neat patterns.

Flat Yarn - This term is often used by knitters and coverers to indicate raw yarn they use. Flat yarns have no stretch unless they are textured. They are also used as the alternate course in many sheer spandex styles. (See Raw Yarn)

Float Loop - The needle is not raised and the yarn which should have been associated with the needle goes behind the needle and appears as a float. The spandex elastic in the waistband is floated into the garment.

Flocking - Design applied to a boot, usually soft and fuzzy in appearance.

Footsocks - Hosiery with a top which does not extend above the ankle bone. Also known as "footies".

Footed Sock - A sock knitted to conform to foot shape - as contrasted with a tube sock.

Footies - Short, below the ankle bone hosiery of varying weight and fiber content. Often called slipper socks and have varying uses such as athletic wear, casual wear, and come in different sizes for all age groups.

Full-Fashioned - Full-fashioned stockings are knitted flat, and the two sides are united afterwards by a seam up the back. As a result of decreasing stitches over the calf to make the hose narrower in the ankle, small "fashion markings" or loops are visible running parallel to either side of the seam. The popularity of the full fashioned stockings, at a peak immediately after World War II, has declined since the introduction of seamless hosiery.

G

Gauge - The measurement of the distance between needles in a knitting machine. Two-thirds of the gauge equals the number of needles per inch. For example, on a 60 gauge machine there are 60 needles to 1-1/2 inches.

General Athletic - Many sport athletic socks today are designed for specific uses. A general or basic athletic sock is multi-purposed without a specific athletic sport in mind.

Girdle Top - Pantyhose with a sewn-on girdle, for the firmest possible tummy control.

Glimmer - This term refers to a light reflection from the yarn, mainly from a trilobal yarn which gives the glimmer effect by reflecting the light.

Glospan - A registered trademark for spandex by Globe Manufacturing Company. Used in hosiery for its better fit and shape retention, comfort, and/or support.

Golf - A sock designed specifically for use by golfers, particularly during hot weather. Generally has cushioning and is generally short and below the ankle bone.

Gondola - Display module with shelves or slots to hold hosiery or other merchandise.

Gore - The center of the heel or toe pocket, created in the knitting process, sometimes giving the appearance of a seam.

Graduated Support - This type of support hosiery is more comfortable because there are no sudden changes in the tightness of the spandex going up and down the leg.

Graduation - The tapering of the leg from the top to the bottom by tightening the stitches to give a proper fit at the ankle, knee, thigh, and the top of the panty.

Greige - (pronounced "gray") Greige goods are any fabric as it comes off the knitting machine before bleaching, scouring, or dyeing.

Gussett - A term that means crotch panel in pantyhose. The "gussett" can be all nylon, or can be cotton/nylon. It can be any shape from diamond to full back panel, but always means there is an extra piece sewn in at the crotch area.

H

Half-Hose - Short hosiery of a length to cover from the ankle halfway between the ankle and the knee, with rib cuff and plain leg and foot; standard for men.

Hand - The tactile qualities of a fabric such as softness, elasticity, fineness and resilience.

Handle (Hand) - The reaction to the sense of touch when fabrics are grasped in hand. Many factors which give "character" combine in the judgment as to handle.

Heat Transfers - The application of a design or logo to a sock by transferring a design from specially printed paper to the fabric by means of heat and pressure. A term used interchangeably with "decals".

High-Bulk Yarn - Qualitative term to describe a highly-twisted textured yarn. A bulked yarn develops more bulk than stretch in the finished fabric.

High Twist - A yarn spinning process in which more twist is used than is needed for normal processing to provide desired aesthetic properties such as harshness, brightness, or to reduce hairiness on the yarn surface.

Hiking - Sock designed specifically for hiking enthusiasts. Generally heavy weight, with cushion or padding in the foot or heel. Designed with wicking action to carry moisture away from the foot to allow perspiration to evaporate. Usually of longer length to be used with hiking boots.

Hole - Hosiery that has been ruptured by bruised, cut, burned, or abraded fabric to cause a hole to appear that will develop into a run.

Hunting - Sock designed specifically for hunting. Designed to provide both warmth to the foot during the cold weather, and wicking action to carry perspiration or water away from the foot. Generally heavier weight and longer length to wear with boots.

I

In-Line - Method of hosiery display used in mass-merchandising outlets where national brands and private label merchandise are displayed along the same wall.

Many mass-merchants now use an in-line system, as opposed to free-standing "boutique" displays.

Ingrain Yarn - Yarn that has been dyed before knitting, requiring no further dyeing.

Intarsia - A geometric pattern knitted-in either with a different stitch or a different color from the background. In intarsia knitting, both sides of the fabric look alike.

Intech Process - This semi-boarded process is not subjected to a full heat setting operation. ([See Semi-Boarded](#))

Irregulars - Hosiery that contains minor imperfections in dimensions, size, color or knit but without obvious mends, runs, breaks or substantial damage to yarn or fabric.

J

Jacquard - An intricate process for knitting patterns, designs, or textures into the sock fabric, and the method by which is produced the decorative patterns. Jacquard equipment is necessarily slower than conventional knitting machines and the lower productivity is of course reflected in the cost.

K

Knee-Highs - Short hosiery that comes up to just below the knee. They are styled with elastic tops and stay up without the help of garters. They became very popular with the advent of women's slacks.

Knee Warmers - Thigh high knitted garment generally of heavier fabric that usually has no knitted foot and extends from above the ankle or calf over the knee to approximately mid thigh.

Knit-In Waistband - This type waistband is made of spandex and nylon and is inserted into the top of the garment while on the knitting machine. It is not attached later. It is non-binding and does not get tighter, and thus uncomfortable, during wear.

Knit Loop - This is the normal basic loop in knitting.

Knitting - The art of constructing fabric on needles, by the interlooping of one or more yarns in several series of connected loops hanging on and supporting one another.

L

Lace - Ladies sheer hosiery knitted with a pattern resembling lace and/or hosiery with lace seamed to the top of the leg or waistband.

Laid-In - The interlacing of a spandex or rubber yarn into a sock or pantyhose.

Lambswool - The first clip taken from a sheep up to seven months old, which explains its soft hand.

Latch Needles - One type of needle used in hosiery machines. The needle performs the basic act of knitting, pulling one loop of yarn through another.

Latitude of Fit - Textured yarns and spandex yarns have more fit latitude than monofilament ultra sheer yarns. Fit latitude means the lower end of the size matrix and the upper end of the size matrix can be better fit when a style employs a yarn said to have "fit latitude".

Layered - Wearing more than one pair of socks at a time for fashion effect or comfort.

Leg Form - Form for displaying socks or sheer hosiery. Leg forms are weighted so that they are free standing and can be designed to present one or a pair of socks, stockings, pantyhose or leotards. The term, "leg form", may also describe the form used to pull a sock or sheer hosiery on for testing, and may designate the boarding forms used for shaping unboarded hosiery. May also be flat forms (e.g., NAHM forms for sizing).

Leg Warmer - Originally popular with dancers, leg warmers have become a fashion item. Knitted from wool or acrylics, leg warmers are long socks, often without feet, that can reach above the knee or higher up the thigh. Bold geometric patterns and colorful stripes are often used.

Leotard - A one-piece garment, originally worn by dancers, that covers the torso. Today's leotards often double as swimsuits or fashion accessories, and are available in a variety of styles and designs.

Light Support - Pantyhose made with a low denier spandex in the leg, usually 40 denier or lower spandex, to give light compression on the wearer.

Link Jacquard - Type of stitch used in a patterned sock.

Lisle - Hosiery made of lisle yarn, which is a fine, hard-twisted, long-staple cotton yarn with two or more ply.

Loft - A bulky, fluffy quality in yarns usually produced by Turbo processing.

Longfold - Step in hosiery production where merchandise is stored and prepared for final packaging.

Lycra 3D - DuPont brand for hosiery garments that contain lycra in every course. This yields exceptional fit and a smooth appearance.

Lycra Spandex - A registered trademark of the DuPont Company for their spandex fiber, which is commonly used in sheer hosiery, socks and half-hose for its stretch and recovery properties, providing better fit and shape retention, comfort, and/or support.

M

Mactex - A registered trademark of Unifi, Inc. for the process of covering an elastic or non elastic core yarn with a non elastic cover yarn by means of air pressure. This process, also known as air covering, is an alternative to the more costly conventional method of wrapping a yarn around the core. In air covering the core is trapped between the nodes of the cover yarn tac points rather than being trapped between the wraps of a conventional covering process.

Man-Made Fiber - A class name for various genera of fibers (including continuous filaments) produced from fiber-forming substances which may be:

1) polymers synthesized from chemical compounds, e.g. acrylics, nylon, polyester, polyethylene, polyurethane, and polyvinyl fibers; 2) modified or transformed natural polymers, e.g., alginic and cellulose-based fibers such as acetates and rayons; 3) mineral, e.g., glass.

Marls - Multicolored yarns in which each component strand is different color.

Maternity - Pantyhose constructed specifically for expectant mothers that provides an expanded panty and higher waistband for comfortable wear during pregnancy.

Matte - Hosiery with a dull finish; minus a shine or lustre.

Mercerized - A cotton yarn which has been treated with a solution of caustic under conditions of caustic concentration and temperature which effect a permanent or irreversible swelling of the cellulose.

Merino - A fine grade of wool from sheep originating in Spain.

Mesh - An open knit used primarily to achieve a hand-knit, textured look.

Mesh Knit - A hosiery fabric produced in a variety of tiny patterns. Upon close inspection it looks like lots of fine zig-zag lines. Actually, the knit is a variety of tiny patterns with loops interlocked. This kind of construction helps prevent runs, but a snag in a mesh stocking will generally leave a hole. There are variations of mesh stitches, but for the most part, because the mesh stitch isn't as sheer, it is seldom used in the leg portion of the pantyhose. The ranguard, however, does use the mesh stitch.

Metallic Yarn - A manufactured yarn usually made of metallic coated polyester plastic and used as an accent in novelty socks.

Microfiber - Microfiber is a generic term used to indicate yarns made of filament weighing less than one denier per filament (DPF), most commonly used in creation of nylon and polyester products.

Micro-Mesh - A seamless mesh stocking where the loops are knotted in one direction only. Because of this the stocking can run in one direction - from the foot up towards the welt.

Mid-Calf/Crew - Hosiery with a top extending beyond ankle length but not beyond the largest part of the calf.

Mock Rib - A surface texture variation used in flat knit socks to simulate the look of a rib.

Mock Seams - A false seam sewn into the back of a seamless stocking of circular knit hosiery.

Modulus of Elasticity - The determined ratio of stress versus strain that expresses the measure of elasticity in the hosiery fabric.

Monofilament Yarn - Yarn made of one single filament of fiber. (See [Filament](#))

Multi-Feed Hosiery Machinery - A machine that is usually fed by two or more spools to knit pantyhose and stockings.

Multifilament Yarn - Yarn made of several filaments twisted or bundled together. (See [Filament](#))

N

Natural Fibers - Cotton, wool, or silk hosiery fibers.

Neats - Solid color socks with tiny evenly-spaced patterns such as dots or fleur-de-lis.

Needle Count - The total number of needles used in knitting a sock or sheer hosiery product. The higher the needle count the closer the stitches and the finer the fabric.

Non-Reciprocated - Socks or sheer hosiery knitted with no heel or toe pocket, e.g. tube socks.

Non-Run - Stockings or pantyhose with a special interlocking stitch that prevents runs (but not holes). Also called run-proof and run-less. Special processes under which the hosiery are manufactured are all designed to give the stocking or pantyhose extra life.

Non-Stretch - Garment manufactured without stretch yarns. Usually made of natural, ridged non-stretch fibers. Product has no compression or stretch ability which generally makes for a less satisfactory fit but is desirable for varying reasons such as fashion or medical conditions.

Novelties - Women's non-basic styles characterized by unusual patterning and/or coloration.

Novelty Yarns - Yarns showing unusual and fancy effects.

Nude Heel - Pantyhose or stocking without reinforcement in the heel area. The exact same knitting is used as in the boot or leg of the stocking or pantyhose. Enjoys a popular appeal thanks to the open-heeled or sling-back shoe.

Nylon - Man-made fiber introduced in 1938. It is the first and the oldest of the true synthetics. Chemically, nylon is a man-made polyamide fiber derived from coal, air, and water. This fiber is famous for its strength, abrasion resistance, dimensional stability, soft hand, elasticity, and easy-washing and quick-drying characteristics. There are two basic types of nylon used in hosiery. They are Type 6 and Type 6,6. Type 6 nylon is softer and has less memory when textured than Type 6,6. Most of the yarns used in ladies hosiery are made of Type 6,6 nylon to impart the maximum memory to the fabric. In socks, it is used primarily in men's dress socks, novelties, and as a reinforcement with other fibers. Another use for nylon in

socks is the stretch filament nylon plaited with other fibers to obtain multi-sizes.

O

Olefin - Man-made fibers derived from polypropylene or polyethylene.

Odor Preventive - Hosiery treated to kill bacteria which grow under warm, moist conditions such as in shoes, socks, or on the feet. This bacteria generally is odorless, and the compounds the hosiery is treated with inhibits bacteria growth.

One Piece Pantyhose - Pantyhose that is knit in a continuous operation beginning at one toe and ending at the other, eliminating the seams of a conventional style.

One Size - The term applied to pantyhose or stockings that fit most sizes from very small to large.

Opacity - Degree to which light passes through, not transparent. When used to describe the panty of pantyhose-in-one garments, it creates an important part of the wearer's feeling of security when she opts to wear hosiery without undergarments.

Opaque - Stockings or pantyhose made of yarn which give them heavier appearance, usually 40 denier or greater in weight.

Open-End Spun Yarn - Yarn-making process in which fibers are twisted and wrapped around each other by the use of a rapidly rotating rotor. The process is much faster than ring-spinning.

Orlon Acrylic - A registered trademark of the DuPont Company for their acrylic fiber. Used in socks for its combination of softness, durability, rich color clarity, comfort and easy care. Currently no longer available.

Outpost - Generic term denoting placement of a portion of hosiery merchandise at a location removed from the hosiery department itself. Outposts are often utilized for specific categories of merchandise - dancewear or casual knee-highs. When an outpost is placed in the hosiery department, or in close proximity, it is termed an "inpost".

Outsize - Stockings or pantyhose proportioned to accommodate the heavier woman or the taller than average figure. (See [Queen Size](#))

Over-The-Calf - Men's and boy's socks that extend above the fattest part of the calf.

P

Pairing - The finishing operation in which individual socks are inspected and made into pairs prior to folding and packaging.

Panty/Pantyhose - A pantyhose garment that includes a true knitted-in panty, constructed of heavier weight nylon or cotton. Eliminates "panty lines" that can show through clingy knits or tight pants. (See [All-In-One Pantyhose](#))

Pantyhose - A garment that combines both panty and stockings into a one piece waist-high garment that extends above the crotch, but not above the waist, to the toes.

Patterned - Socks or sheers having a design knitted into the garment or impressed on the side, front or over-all surface. (See [Textures](#))

Peds - A registered trademark of Americal Corporation for a broad range of hosiery products including socks, pantyhose, tights, knee-highs, slippers, foot covers and shoe liners of varying weight and with multiple uses.

Pilling - When a fiber exceeds its abrasion level and the fibers begin to break and form a small ball of fiber on the fabric surface.

Plain Knit - The most common knit in hosiery, similar to a jersey or hand-knit stitch. Plain knit gives a smooth, sheer surface. (See [Mesh](#))

Plaiting - A sock knitting method in which two different yarns are combined by a process similar to braiding. In plaiting, one yarn becomes the outside of the sock and the other one the inside. Nylon or polyester reinforcement is often incorporated into socks by this process. Also spelled "plating".

Plied Yarn - When strands of single yarns are combined, twisted together, or air entangled, resultant yarn is referred to as "plied".

Pointelle - An open, lacy-look knit similar to crochet.

Polyester - Polyester is a man-made fiber which has abrasion-resistance, excellent washability, and is fast-drying. It is readily heat-settable and dyeable. Polyester is used in men's and boy's dress socks, in decorative

applications such as cross-dyeing and jacquards, and as a reinforcement.

Polypropylene - A petrochemical-based man-made fiber usually used in socks in combination with other fibers.

Pom - A women's or girl's footsock, or footie, with a pom-pom sewn on at the back.

Popcorn Stitch - A pattern composed of a series of geometrically arranged round or lozenge-shaped raised areas; so-named because of their resemblance to popcorn.

Pouch Heel - A simulated or "false heel" in what is fundamentally a shaped tube sock. The heel effect is created in boarding. Unlike the tube, a pouch heel sock usually has a fishmouth toe.

POY (partially oriented yarns) - Nylon or polyester texturing feed yarns supplied by fiber producers to texturers for processing (texturing). Yarn is then sold to sheer hosiery, sock and half-hose knitters.

Pre-Boarding - After a stocking or pantyhose is knit, each stitch and loop is permanently set in place by an operation called "pre-boarding" or heat setting in a steam chamber. The stocking is placed on a metal leg form called a "board" and then given the steam treatment. Pre-boarding takes place prior to dyeing. (See [Boarding](#))

Press-Off - Condition arising when hosiery presses off the machine and fails to knit, caused by slubs or knots in yarn, poorly wound cones, improper tension, machine in bad mechanical condition, etc.

Printing - Method of producing patterns or designs on hosiery by depositing color or other treating material and fixing with steam, heat, or chemicals. There are many different methods for printing.

Private Label - Merchandising hosiery products under the name of a retail operation, as opposed to manufacturer's brand names. Private label programs, sometimes called private brands, can include all varieties of men's or women's pantyhose, stockings, or socks.

Proportioned Fit - Stockings or pantyhose specially designed to have different circumferences (foot, ankle, calf, and thigh) and lengths for each size wearer.

Prosthetic - Hosiery designed specifically to be worn or used with a prosthesis or artificial limb.

Pull Threads - A thread is snagged and pulled from the fabric causing tight stitches that rupture under strain to make holes and runs. The greatest hazard to sheer hosiery is a pulled thread. This accounts for approximately 80 percent of all ruined sheer hosiery products.

Q

Queen Size - Stockings, pantyhose, or knee-highs sized to fit the heavier woman. Queen size is usually considered an extension of standard garments into a larger size. Outsize, on the other hand, is considered a separate category of merchandise altogether (see [Outsize](#)).

R

Rag Sock - Recycled fiber spun into useable yarn count to create a casual look.

Raw Yarn - Filament yarn which has no stretch and is untextured.

Rayon - A generic term for filaments made from various solutions of modified cellulose by pressing or drawing the cellulose solution through an orifice and solidifying it in the form of a filament. Rayon has a soft hand, high moisture absorbency and retention, and good dyeability and washability.

Reciprocated - In the usual knitting process, the sock is begun at the top and knitted toward the toe. Upon reaching the heel, the machine begins to move more slowly in a semi-circular ("reciprocated") fashion to produce the heel pocket. It may be adjusted to reciprocate again at the toe to form a toe pocket. All socks do not have reciprocated toes and heels. For example, the basic tube styles have neither. The "fishmouth" toe closure is non-reciprocated but may be used on a sock with a reciprocated heel.

Reinforced - The stress areas such as the toe or panty portion have been strengthened with yarns of heavier denier.

Replaceable Legs - Two legged, waist high garment designed to where the legs can be replaced. Legs are either attached to the panty portion at the top of the stocking below the crotch, or a single leg is knitted with a half panty and full waistband so that when two are put together a full panty is created but there are two waistbands to be worn.

Ribbed - Vertical pattern of alternating ridges in socks and sheer hosiery. Design may be formed through differences in weight, in knit stitch or opacity.

Ring Spinning - A system of spinning using a ring and traveler take-up wherein the drafting of the roving and the twisting and winding of the yarn on to the bobbin proceed simultaneously and continuously.

Ring-Spun Yarn - Yarn prepared by drafting and twisting together individual fibers with the use of rings to achieve a desired yarn size.

Rolldown, Rolled Cuff, Rolled Top - A top which is turned over on itself and sewn down, often during the knitting operation. Traditionally a women's style, but recently emerging in men's athletic socks.

Rubber - An extruded, natural latex thread incorporated in some sock tops as an elastic.

Rubber Filament - A filament extruded from natural or synthetic rubber and used at the core of some elastic threads.

Run-Resistant - Stockings or pantyhose knit with micro mesh or tuck stitch patterns that resist runs in an upward direction.

Runblocks - Mesh stitches that act as a deterrent to runs around the crotch seams. These stitches are usually used in all-nude constructions.

Runguard - Acts as a deterrent to runs from the foot into the leg, or from the panty into the leg. It can be made of heavier yarn, or can be a change of stitch from plain to mesh.

Running - Socks designed specifically for running or jogging enthusiasts. Generally has heavier padding or cushioning in the heel to absorb vibrations or pounding the foot takes while jogging. Comes in varying heights from below the ankle bone to mid-calf. Also usually provides some wicking action to carry perspiration away from the foot.

Runs - Stitches that have unchained due to broken stitches.

S

Sandalfoot Hosiery - This is a nude toe, meaning no heavier yarn in the toe than is in the leg.

Scouring - A process (soap bath) that removes chemicals, tints, impurities and foreign matter from socks during finishing.

Seamed - Hosiery manufactured in the old full-fashioned manner with a seam running up the back of the leg. In the past, these garments were manufactured by cutting fabric and sewing it together. Today these products are generally made on a full circular knitted two bases and a fake seam is added up the back for a particular fashion look. Some tights are seamed on the inside of the leg but these are generally not produced by hosiery manufacturers.

Seamless - Stockings knit in one operation on circular machines (one continuous operation) so that no seaming is required up the back. (See [Full Fashioned](#))

Seconds - Socks with major imperfections which make them unsuitable for sale even as irregulars. The Federal Trade Commission defines seconds as all hosiery which is not of first quality, does not qualify as "irregulars" and which contains runs, obvious mends, irregularities, substantial imperfections, or defects in material, construction or finish.

Semi-Boarded - These garments are not subjected to a full heat setting operation. In appearance they are slightly wrinkled and shapeless until stretched over the leg and body. This operation is sometimes called the Intech Process.

Service Weight - Generally considered to be a heavier weight garment for professional use such as nurses. Could be interchanged with opaques and are designed to provide longer wear life as compared to sheers.

Seven-Eighths Hose - Socks which reach seven-eighths of the way from the ankle to the knee. (Also called golf hose).

Sheer Support - A term often used when describing support pantyhose, which are considerably more sheer than the original support garments, due to improvements in yarns and manufacturing techniques.

Sheer-To-The-Waist - Pantyhose without visible panty line or reinforcement in the panty portion. It is an all-sheer garment from waist to toe.

Sheers - Dress sheers are hosiery fashioned generally of 15 or 20 denier yarn - to be worn for daytime glamour. Evening sheers are hosiery fashioned of wisp-weight 10,12, or 15 denier yarn - to be worn for special occasions.

Shetland - Originally a soft, warm shaggy yarn made only from wool of Shetland sheep. Now often used to describe yarns that offer Shetland characteristics.

Shrinkage - A reduction in size that takes place when a fabric is washed and dried, or when hosiery is finished.

Silk - The filaments obtained from the cocoons of various types of silkworms.

Silken Sheers - Category of soft, silky well-fitting pantyhose made from Du Pont nylon and fine denier Lycra spandex.

Single Covered Spandex - Spandex that has been wrapped in one direction with nylon or other yarn.

Single Covered (Yarn) - The process of wrapping one non-elastic filament or spun yarn around the extended core. Single cover yarn has torque.

Sinker - The sinkers are steel elements that are located between the needles. The sinker holds the previously knitted fabric and prevents the loop from rising up the needle and interfering with the knitting action. It also helps support the old loop for the needle to pull the new loop through.

Size - Foot size; length from back of heel to tip of toe.

Skein-Relaxed - A method of applying bulk to a yarn by the controlled application of heat. This softens yarn texture and hand.

Ski Sock - Sock designed specifically to wear in a ski boot. Has extra padding or cushioning to the front portion of the foot or ankle where binding can rub blisters on the foot. This extra cushioning or padding helps prevent blisters and protects the foot. Also designed to provide warmth in cold weather conditions.

Slipper Sock - Casual in the house or bedtime sock that usually has a bonded sole of rubber, leather or extra cushioning or padding on the bottom. This sole can be bonded, sewn or heat transferred to the knitted sock.

Sliver - A loose, soft, untwisted strand or rope of fibers used in making yarn. In diameter about the size of a man's thumb.

Slouch Sock - Fashion sock with an elongated top designed to be pushed down and worn gathered around the ankle.

Slub Yarns - Any yarn made in an irregular diameter to achieve a nubby or knotted effect.

Snag - Same as pulled thread. (See [Pull Threads](#).)

Soccer Sock - Sock designed for specific use among soccer enthusiasts. Has a pocket or pouch knitted into the front where shin guards can be placed for personal protection. May also have extra cushioning or padding in the foot portion.

Spandex - A generic term denoting a man-made elastomeric fiber used in place of rubber. Spandex was developed by DuPont in 1959, offering the unique capacity for stretch and recovery. It can stretch to over five times its relaxed strength and fully recover. Spandex is used in support and light support products to provide the energy to shape and compress the leg. Spandex yarns are often covered with nylon yarns to protect the spandex. Spandex is widely used in sock tops and pantyhose waistbands for its stretch/recovery properties and "stay up" holding power. It is increasingly used in corespun yarn and as plaiting yarn to replace textured nylon for better size range, improved fit, and comfort.

Spandex Sheers - A category of sheer hosiery styles. The leg yarn is composed of sheer nylon and single covered light-weight spandex (20 denier or finer) to give this hosiery good fit, sheerness, and softness. Spandex sheers do not give a support leg, but the spandex does enhance fit and comfort.

Spectator Socks - A casual men's or women's sports sock designed to coordinate with ready-to-wear but not engineered to provide optimum performance when used in active sports. Varies in length from footsocks to over-the-calf.

Splice - Knit-in reinforcement for areas of stress. Particularly effective in the panty of all nude garments.

Split Sole - The foot of a sock made from two different materials.

Sports Specific Socks - Contain extra padding and differ according to where the protective padding is placed - ball, toes, instep, heel, arch, shin - how thick the padding is and what materials they are made of.

Spun Yarns - Short lengths of fiber, of various lengths, are twisted together to form spun yarns. These yarns are more bulky than continuous filament yarns, and are thus used in hosiery manufacturing of knee-highs and socks where a soft, fuzzy texture is desired.

Staple - Short lengths of fiber that are spun together to form yarn.

Stirrup - Sock specifically designed to be worn over a sanitary sock in various athletic sporting events. Has a knitted top but no heel or toe portion. A knitted strap goes under the arch to hold the sock down and in place, and can be manufactured with team colors, stripes or logos as part of a uniform.

Stitch - A stitch is the basic repeating unit of the yarn pattern in forming a knitted fabric, consisting of the needle loop and sinker loop.

Stocking - A knitted, close-fitting covering for the foot and leg.

Strand - A single filament of fiber.

Stretch Hosiery - Stockings knit of processed nylon filament yarn treated to give permanent stretchability. Stretch stockings "change" size to fit each foot, leg length, and volume perfectly. They are extremely desirable to the woman whose dimensions are too heavy or too slender.

Stretch Socks - Socks which are made from stretch yarn such as Ban-Lon, Flexcel, Fluflon, Helanca, Superloft, or Synfoam. A stretch sock can be adapted to fit a range of foot sizes.

Stretch Yarns - Continuous filament yarns (e.g., nylon) that have been textured to give them elasticity.

Super Toe - A construction in which the fabric in the toe has considerable more density than normal. The addition of density in the forward part of the foot is so gradual that no change in appearance is visible. The wear life achieved is significantly improved over the normal nude toe.

Supplex Nylon - DuPont brand for cottony soft fabrics derived from air jet textured 1 DPF nylon yarns.

Support Hosiery - Socks or other hosiery made of nylon or polyester with spandex or other elastic fiber added to give support to the leg. Support hosiery has spandex in the legs to reduce leg fatigue. The principle of support is to provide graduated compression to the leg. A total support pantyhose is one that has control in the panty portion as well as support in the legs. Support no longer means a heavy, surgical garment. Today, it has fashion sheerness and color as well as durability.

Surgical - Support hosiery usually knee high or thigh high in length, that is considered with graduated compression to

aid blood flow before, during or after surgery. Are sometimes called therapeutic or anti embolism hosiery.

T

Tactel Microfibers - DuPont brand for microfiber hosiery yarns (less than 1 DPF) that delivers the ultimate in softness.

Tactel Multifils - DuPont brand for 1 to 1.5 DPF yarns that blends softness with a sheer, clear look in hosiery.

Tartan - Any traditional plaid design.

Tennis Sock - Sock designed specifically for tennis enthusiasts. Can be low cut, below the ankle bone or a higher length. Generally has extra cushioning near the ball of the foot to protect the wearer during a vigorous tennis match.

Tensile Strength - The ability of fabric or yarn to resist breaking by tension.

Terry - A looped pile construction used inside most athletic socks and some work socks.

Textured Yarns - Yarns modified so they have desirable properties such as "hand" (feel), increased softness, and greater fit latitude. (Same as stretch yarns).

Textures - A general term that includes all knitted-in patterns. Typical textures include cable, herringbone, basketweave, fisherman and pointelle.

Texturizing - A method of processing continuous filament yarns using heat and twist to give them bulk, elasticity, and/or better recoverability or "memory".

Therapeutic - Can be a sock, thigh high, or waist high garment that is designed with graduated compression to provide a therapeutic benefit to aid blood flow and muscle support in the lower torso. Most are medically regulated garments, administered by hospitals or doctors particularly after surgery or during long confinements to bed. Some non-medical devices are available over the counter of a mild support construction.

Thermal Socks - Winter-weight boot length socks favored by skiers, skaters, or anyone who spends a great deal of time outdoors in cold weather. They can be made of heavy duty Orlon acrylic, wool, Thermax, silk, polypropylene, or Hollofil yarns, or a blend of fibers.

Thigh-Highs - Stockings that just reach the thigh and are held up by elastomer bands.

Throwing - Term used to describe the twisting of rayon, nylon, or silk yarns.

Tights - A heavy, opaque one-piece garment from hip to toe worn with leotards for dance, exercise, etc. It is usually made with 40 denier yarn and over and is sometimes made of yarn other than nylon.

Tinted Hosiery - Hosiery dyed to fashion shades. It is created to blend with and enhance costume and shoe ensembles and to lend more grace and beauty to the leg.

Toelets - Knitted hosiery of various weights that is designed to cover the toe portion of the foot only. Designed to be worn with special types of shoes such as clogs.

Torque - A term used in the hosiery industry for defining a monofilament or multifilament yarn that has been textured to give residual stitch deformation in knitted hosiery, resulting in high sheerness.

Trilobal Yarn - Contrary to a round cross section of yarn, trilobal yarn is a cross section with three lobes. It reflects light and gives the finished product a glimmer or brilliance.

Tube Socks - Hosiery knit in the shape of a tube, usually on multi-feed machines. Tube socks are nonreciprocated - without a knit-in heel - and are primarily used as men's and boy's spectator athletic socks.

Tuck Loop - A tuck loop is formed by only partially raising the needle so the old loop does not clear, but rises sufficiently for feeding a new yarn into the hook. The old loop which did not clear is the held loop and the new yarn forms the tuck loop. When the needle is cleared on a subsequent course, the knit loop formed is pulled through the tuck loop in addition to the held loop. Tuck loops are used for runguards, in the band area, and some places in the panty. The tuck loops are also used to put in sewing marks and machine identification marks.

Turbo - A process in which large bundles of continuous filament fibers, called tow are stretched randomly, broken and drafted into sliver form. This sliver, with high shrinkage potential, is blended (or combined) with sliver having low shrinkage potential. After spinning this blend into yarn, the yarn is subjected to steam, and the resultant strains force the low shrinkage fibers to yarn surface as loops. This produces a yarn (and sock) with high bulk, softness and loft.

Twist - The number of turns about its axis per unit of length of a yarn. Normally, no more twist is placed in a yarn than is needed for strength and abrasion resistance. (See also "[High Twist](#)")

Two Component - Pantyhose manufactured with two separate legs so that one can be replaced. Are often called replaceable legs pantyhose and can be manufactured where the legs are individually attached at the top of the stocking below the crotch, or a full leg is knitted with a half panty and full waistband.

U

U Seams - Pantyhose that are sewn one leg blank to another with a continuous U seam to join the legs. These garments have no crotch sewn in.

Ultra Sheer - A fine denier fiber which gives the ultimate in sheerness. It is usually 20 denier or less and a low filament count.

Unboarded - Hosiery not subjected to preboarding or boarding operations in its manufacture. In appearance it is wrinkled and shapeless until stretched over the leg and body.

Unbranded - Applied to hosiery that is not marketed throughout the country under a recognizable name. Usually not nationally advertised. (See [Brand](#)).

Utility Weight - A heavier weight ladies hosiery product generally designed for professionals such as nurses. Designed to provide longer wear life than sheer garments, but provide little leg flattering characteristics. Are synonymous with service weight hosiery.

V

Ventilation - A knitting operation that allows fabrics to breath. It is often utilized in pantyhose for cotton crotch panels or cotton soles. (See [Aeration](#))

Vivana - A registered BASF trademark for a yarn used in shiny tights and the panty of some styles to give it sheen. Sometimes this yarn is referred to as "Bright" nylon.

W

Wader - Sock, of synthetic fiber, usually bonded to a rubber sole designed to be worn while wading in water at the beach, river or lake. Can be worn as extra foot protection with swimming fins for water enthusiasts.

Waistband - An elastic band either knitted into or sewn onto the top portion of the pantyhose, to hug the waist and hold the garment up.

Wales - Vertical rows of stitches in a knitted construction.

Walking Sock - Cushioning in foot, reversed cushioning in foot for reduced slide in shoe.

Welt - A fabric knitted separately and machine-sewn to the top of the sock, or hem at the tip of a stocking knit in heavier denier yarn and folded double to give strength for supporter fastening.

Wicking - The capacity of a fiber to transport moisture away from itself.

Wool - Wool is the soft, curly hair of a sheep which is spun into yarn. The wool family includes Shetland (Scottish) and Merino (Spanish) wool which are soft and of high quality. But most woolen yarn used in socks is made from standard grades produced in the U.S., Australia, and elsewhere. (Alpaca and cashmere are animal hairs but are not properly called wool.) Wool is warm, sturdy, and durable. It has a crisp, resilient hand and has excellent insulating properties.

Woolen - Yarns produced by the woolen system of spinning. Generally containing very short fibers, unevenly distributed and not parallel to each other.

Woolen Cut Count - An indirect yarn numbering system based on the number of 300 yd. lengths per pound.

Woolen Run Count - An indirect numbering system generally used for yarn spun on the woolen system; the number of 1600 yd. lengths of yarn per pound.

Work Socks - Designed to meet the needs of people who work outdoors or in heavy industry. There are many styles available including cushioned and flame-resistant socks for fisherman and foundry workers.

Worsted - Yarns produced by the worsted system of spinning. Generally contain long fibers arranged in parallel and well-distributed order.

Worsted Count - An indirect numbering system generally used for yarns spun on the worsted system; the number of 560 yd. lengths of yarn per pound.

Wrapped Yarn - A yarn composed of one fiber as a core, wrapped with a filament or spun yarn of another. For example, spandex is frequently wrapped with nylon to improve strength and durability.

Y

Yarn - A generic term for an assemblage of fibers or filaments, either natural or manufactured, twisted or laid together to form a continuous strand suitable for use in producing fibers.

Yarn Count - A numerical designation expressing relationship of length to weight. (See also [Denier](#))

The Glossary is also available in **Spanish**. The Spanish version can be downloaded from the THA website, www.hosieryassociation.com.

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第一章、袜子的基本常识

一) 袜子制造流程:

1, 原料颜色打样——订购原料——袜子设计——袜子打样——确定工艺

2, 袜子大货生产——下机检验——缝头拷口——定型整烫——整理包装

二) 袜子具体织造工艺流程:

1, 根据不同国家、地区、不同季节、不同场合、不同职业、不同价位分男、女、童采购所需袜子。

2, 根据所需袜子袜子制造商选购不同主、副原料和提花料。

3, 根据客户所需, 分别打出样袜和产前样。

4, 根据客户选定的样袜, 袜子制造商选购原、副材料。

5, 根据客户选定的样袜, 袜子制造商的工程技术人员, 制定科学合理的袜子织造工艺流程。

织造工艺流程见图

袜子货号(编号) _____ 使用机台 _____ 针数 _____ 克重使用原料、主料 _____ 付料 _____ 提花料 _____ 缝头形式 _____ 定型压力 _____ 定型时间 _____ 使用定型板号 _____ 链条排列 _____

工艺尺寸: 成品尺寸:

袜口自然长 _____ cm: 袜口自然宽 _____ cm: 袜身

自然长_____cm:

 袜身自然宽_____cm: 脚底自然长_____cm:

下机尺寸:

 袜口横拉_____cm: 袜身直拉_____cm: 袜身横
拉_____cm:

 脚底直拉_____cm:

包装要求: _____。

- 6, 袜子制造商根据织造工艺流程进入袜子织造工序（上袜机加工）。
- 7, 袜子下机后进入检验，合格品流入下一道袜子缝头制造工序。
- 8, 下机经检验合格的袜子，根据织造工艺流程进入袜子缝头工序（分对目缝头和盲缝）。
- 9, 缝头好的袜子再一次进入袜子全面检验。
- 10, 缝头检验合格的袜子流入定型工序。
- 11, 定型好的袜子（必须经 48 小时自然晾干）后方可流入验袜配对工序。
- 12, 配对好袜子，按货号颜色分别装箱入半成品仓库。
- 13, 整理课（包装车间）根据客户所需进入包装工序。
- 14, 包装好的成品袜子按客户所需分类成箱，入成品仓库。

第二章 纺织常识

1、纤维原料可以分为哪几种？ 天然纤维化学纤维

2、什么物品属于天然纤维？

棉织品、毛织品、丝织品、麻织品。

3、合成纤维有哪六大纶？

涤纶、锦纶、晴纶、维纶、丙纶、氯纶。

4、针织物的特点有哪些？

1) 延伸性；2) 吸湿和透气性；3) 保暖性；4) 弹性；5) 脱散性；6) 卷边性。

5、纺织品的分为哪五种？

棉布类、麻布类、呢绒类、丝织品、化纤类。

6、什么是涤棉混纺物，有何特点？

涤棉混纺物是以涤纶为主要成份，采用 65%—67%涤纶和 33%—35%的棉花混纺线织成的纺织品，涤棉布俗称棉的确凉。

特点：既突出了涤纶的风格又有棉织物的长处，在干、湿情况下弹性和耐磨性都较好，尺寸稳定，缩水率小，具有挺拔、不易皱折、易洗、快干的特点，不能用高温熨烫和沸水浸泡。

7、什么是平纹针织物？

平纹针织物是由一根纱线沿着线圈横列顺序形成线圈的单面组织。

8、什么是罗纹针织物？有何特点？

罗纹针织物是由一根纱线依次在正面和反面形成线圈纵行的针织物。

罗纹针织物具有平纹织物的脱散性、卷边性和延伸性，同时还具有较大的弹性。

9、什么是纯棉梭织物？有哪几类？

纯棉梭织物是以棉花为原料，通过机织由经纬纵横沉浮相互交织而形成的纺织品。

分为本色白布，色布，花布及色织布四大类。

10、什么是涤纶？

涤纶是致聚酯纤维的商品名称，市场上又称为“的确凉”。它先从石油和炼焦副产品中提取原料聚合成聚苯甲酸乙二酯树脂，然后熔融纺丝成为涤纶。

11、纯棉有哪些特点？

保暖、吸湿、耐热、耐碱、卫生。

12、丝光棉有何特点？

丝光棉属棉中极品，比一般棉织物轻薄，手感柔软，穿着舒适，不刺激皮肤，吸湿性、透气性良好。

13、涤纶的特点？

涤纶（又名的确良）具有抗皱、耐磨、保型性好、透气性差、易生静电等性能。

14、灯芯绒是什么面料？有何特点？

属于棉的一种，耐穿、柔软。

15、什么叫水洗布？

水洗布是以棉布、真丝绸化学纤维、稠等织物为原料，经过特别处理后使织物表面色调、光泽更加柔和，手感更加柔软，并在轻微的皱度中体现出几分旧料之感。这种衣物穿用洗涤具有不易变型不褪色，免熨烫的优点。较好的水洗布表面还有一层均匀的毛绒，风格独特。用水洗布制作的服装美观大方，颇受人们的青睐。

16、怎样识别人造丝,真丝,涤纶丝？

人造丝光泽明亮，手感稍粗硬，且有湿冷的感觉，用手攥紧后放开，皱纹较多，拉平后仍有纹痕,抽出布丝用舌端湿揉之,人造丝伸直易拉断,破碎。干湿时的弹力不一样。

真丝光泽柔和,手感柔软,质地细腻,相互揉搓,能发出特殊的音响,俗称“丝鸣”或“绢鸣”,用手攥紧后放开,皱纹少且不明显,真丝品的丝干湿弹力一致。

涤纶丝反光性强,刚度较大,回弹迅速,挺括,抗皱性能好,结实有力,不易断。

17、各种面料特点有哪些优缺点？

棉：优：舒适性好，手感柔软，吸汗性强

缺：耐用性差，弹力较差，褪色缩水，易皱

麻：优：舒适性好，透气性好，价格实惠

缺：对皮肤有刺痒，弹力差，褪色

毛：优：舒适性好，不易折皱，弹性好

缺：对皮肤有刺痒，易发霉生蛀

涤：弹性好，强度大，表面光滑

丝：优：舒适性好，弹性好

缺：折皱性强，易生蛀，会缩水

人造丝：金属光泽，手感粗硬

真丝：光泽文静，亮而不刺眼，手感柔软，富有弹性，不易折皱

18、什么叫树脂整理,经树脂整理的织品有何优缺点？

树脂整理即一类多数能溶于酒精和醚的非结晶性无定型态的有机化合物的整理。

优点:提高抗皱能力、挺括、易洗快干、免熨烫、改变和减轻化纤织物的起球现象、提高弹性、保型性;

缺点:降低织物的抗断裂强度、耐磨损性差,部分树脂处理使织物带有似腥臭的异味,如处理不当,会使织物产生泛黄和破损。

经过树脂整理后的织品外观、手感及其他性能上都有很大提高,适应了消费者的需求。

19、棉涤织品与涤棉织品是一样吗?

涤棉与棉涤织物虽然都是由涤纶和棉纤维混纺而成,但两者决不是同一种织物。棉/涤是以棉纤维为主,涤纶为辅的混纺织物;涤/棉是以涤纶为主,棉花为辅的,其混纺比例是 65%的涤,35%的棉。棉/涤织品不如涤/棉织品那样结实而耐磨,挺括,但其吸湿性能较好,价格和纯棉织品其本相同。

20、鉴别纺织品的的方法有哪几种?

有四种:燃烧法、显微镜观察法、手感目测法、化学试剂试验法。

21、什么叫支数?什么是高、中、低支?

用作纺织品的棉纱有粗,有细,这种粗细程度通常用支数来表示。支数也就是用来比较棉纱粗细的一种标志,用“S”表示。

高支纱:指 29 支以上的纱;

中支纱:指 18—28 支之间;

低支纱:指 18 支以下的纱。

22、什么是服装?

服装是穿于人体,用于起保护作用和装饰作用的制品。

23、决定服装质量好坏的三要素是什么?

色彩,造型,材料。

24、纺织品和服装使用说明中必须具备哪些内容?

(1) 注册商标和制造商的名称; (2) 型号、规格; (3) 原料的成分和含量; (4) 特殊使用性能(包括阻燃性、防蛀、防水、防缩等); (5) 洗涤方法说明; (6) 穿用或使用的注意事项; (7) 保存条件和注意事项; (8) 出厂合格说明; (9) 制造者地址。

25、男女服装号型分为几种?

四种: Y 型、A 型、B 型、C 型。

26、服装上衣的规格有哪几种?

上衣: 36、38、40、42、44

27、西裤的规格有几种标注方法?

S、M、L、XL、或 24、25、26、27、28、29 等两种方法。

28、T 恤衫各种码数之间如何对应?

S	M	L	XL	XXL
46	48	50	52	54
2	3	4	5	6

29、成年男仕袜的尺寸一般在多少?

25CM--28CM

30、熨斗标识中的点带表什么意思？温度多少？

一点是底温熨斗，温度 110 度；

二点是中温熨斗，温度 150 度；

三高温熨斗，温度 200 度。

31、常用材质中英文如何对照？

LINEN--（麻） COTTON---（棉） NYLON--（尼龙） WOOL（羊毛） RAYON--（人造棉） SILK（丝） VISCOSE（人造丝） POLYESTER---涤纶（聚脂纤维）

32、什么是缩水率？常见织物缩水率是多少？

织物的缩水率是指织物在洗涤或浸水后织物收缩的百分数。

缩水率最小的是合成纤维及混纺织品，其次是毛织品、麻织品、棉织品居中，丝织品缩水较大，而最大的是粘胶纤维、人造棉、人造毛类织物。

一般面料的缩水率为：棉 46--10%、化纤 46--8%、棉涤 3.56 --5.56。

33、西裤的码数由多少到多少？

英寸 29 30 31 32 33 34 36 38 40

公分 73 76 79 82 85 88 91 94 100

市尺 2.2 2.3 2.37 2.46 2.55 2.64 2.73 2.82 3.0

符号是什么意思

表示可以干洗，P 表示可使用多种干洗法。

34、 是什么意思？

表示可以洗涤，F 表示在洗涤中可掺入酒精。

35、L 175/100A 是什么意思？

表示身高为 175CM、胸围为 100CM 的标准型人应穿的码数，即 L 码。

36、码数的换算？

1 市尺=（1.3）英尺寸 西裤腰围的换算

16 英寸=(40)CM 33 英寸=(2.5)市尺

中国码 XL 相当于欧码(52)

37、织物上的标志“T25”是什么含义？

T 表示涤纶,T25 就是织物含涤纶 25%。

38、羊绒成份标注有何规定？

羊绒如含量在 95%以上可标明是 100%羊绒，但另外 5%必须标明是羊毛，不能是其它成分。

39、西服如何分类？

可分为正装（套装、二件套、三件套）和休闲装（单件）。

40、西裤与休闲裤如何区分？

用裤腿边的缝制方法进行区分：西裤是挑边的；休闲裤的裤缝是用双线缝制的，双线外露。

41、休闲装的面料以什么为主？

以涤棉为主。

42、休闲装的穿着、设计着重什么？

宽松、随意。

43、领带主要是以什么面料为主？

A 真丝 B 涤纶丝

44、服装在展示方面有何注意事项？

上整下齐、冬不过 5、夏不少 8。

45、纯棉织物在颜色上分几种？

白布 色布 花布 色织布

46、腊染服装以什么面料为主？

以棉，真丝为主。

47、用于制造内衣的材料主要有哪些？有何特点？

有天然、人造两种。天然材质的布料可分为丝、棉、麻等，其中丝的触感柔细，染色效果好，色泽纯正，具有冬暖夏凉的特性，吸汗性及透气佳，其次是棉，棉质内衣吸汗、透气及保温程度好。

人工材质可分为尼龙、聚脂丝等人造纤维，其特点具有耐用、易洗快干，不皱等特点。

48、怎样选择针织汗衫背心？

主要看：款式、规格、纹路、材料、疵点。

49、皮衣的保存时应注意什么？

不能用重物压在皮衣上，应整齐叠放在干燥的衣柜中，雨季前晾晒，通通风，散散气，使用用纸包卫生球，注意防止发霉，防虫蛀。

50、纺织面料的保存应注意什么？

A 真丝：洗涤时用低、中性洗涤剂，应防虫蛀防、在通风阴凉处阴干、勿搓。

B 棉：注意防潮湿、避免曝晒。

C 羊毛：宜干洗，不可手扭垂悬挂，防蛀

D 人造纤维、麻：不易虫蛀，耐腐蚀性强，存放无特殊要求

51、白色棉织物泛黄时，应怎样洗漂和防治？

洗涤时应使用“氯”漂白剂浸泡。平时保管应注意防潮，不能曝晒。

52、各种面料洗涤方法如何？

棉：30 摄氏度水温洗，不可漂白，中温烫，阴凉处晾干；

真丝：冷水手洗，不可拧干，悬挂阴凉处，不可漂白，低温烫，保养时不可放樟脑丸；

毛：使用中性洗涤剂，洗液温度不超过 30 摄氏度为宜，不可使用含氯洗涤剂进行漂白，不得扭绞，阴凉地方处平放晾干，中温整烫；

涤：机洗手洗均可，易洗易干，中温烫；

麻：手洗机洗均可，不可漂白，低温烫，可转笼干衣。

53、羊毛衫的熨烫要点有哪些？

(1)穿过的羊毛衫,在收藏前一定要洗涤,因为看不见的人体汗液和污物寄存在衣物上,存放时易发霉菌虫蛀。

(2)洗涤前,若羊毛衫有大块污渍,应采用其它去污渍先行除去,然后将衣物浸泡在清水中,除去浮尘。

(3)应采用中性洗涤剂和温水进行压洗,不可用力猛搓,避免衣领及袖口的针织线圈变形。

(4)曝晒时间不宜过长,防止颜色受到破坏,熨烫时,应先把衣里推熨出来,使已收缩的衣里恢复原状,才能保证熨烫衣面时更为平整。

54、棉织品洗涤时应注意什么？

不宜在洗涤液中浸泡过久，曝晒时间不易过长。

55、真丝服装怎样洗涤？

冷水手洗，不可用力搓洗，不可使用碱性皂液，易用酸性洗涤液，阴凉滴干。

56、领带应如何洗涤？

领带的洗涤方法是干洗。

知识问答

问：针织物经编和纬编有什么区别？

答：针织物可以分为经编和纬编针织物。经编用多根纱线同时沿布面的纵向（经向）顺序成圈，纬编用一根或多根纱线沿部门的横向（纬线）顺序成圈。纬编针织品最少可以用一根纱线就可以形成，为了提高生产效率，一般采用多根纱线进行编织；经编织物用一根纱线是无法形成织物的，一根纱线只能形成一根线圈构成的链状物。

问：人造棉与人造丝的区别？

答：都是再生纤维类的粘胶纤维。viscose(人造丝)属于粘胶纤维的长纤，rayon(人造棉)是短纤维。

问：OP 指什么？

答：OP 即 OPELON 的缩写，是日本 TPC 公司的氨纶产品的商标。

问：CVC 是什么？

答：CVC, chief value of cotton 是指以棉为主的纺织品；涤棉混纺产品，一般棉含量高于涤纶的称为 CVC 纱，反之为 T/C 纱，我们通常说的 CVC 是指棉含量 65% 以上的产品，C/T 比例 55/45 以下的一般仍叫 T/C 纱。

问：比如 N30D/12F 其中 30D 是什么意思？12F 又是什么意思？

答：9000 米纱线重 30 克为 30D, D 是 DENIER (旦尼尔) 的缩写，是化学纤维的一种细度表达方法，是指 9000 米长的丝在公定回潮率时的重量克数，也称为旦数。D 越大，表示纱线越粗。F 是 filament 的缩写，是一根纱里的单丝数。如 12F 就是由 12 个喷丝孔喷出的丝纺成的股线丝。另外如 100D/36F, 150D/36F, 50D/18F 等，这些是纤维规格的表达方法。斜线上方的数据表示纤维的细度，D 是纤维的细度单位“旦”，即在标准状态下，以 9000 米长纤维的克重表示，如 100 克重即为 100 旦 (100D)；斜线下方的数据表示纺丝时使用喷丝板的孔数，也表示该规格的丝具有的单丝根数，例如 36F，意思是纺丝时使用的喷丝板有 36 孔，即该纤维有 36 根单丝。

问：什么叫高支棉？

答：这里的支是“英支”的概念，代表棉纱的细度，棉纱的英支支数越高就表示该纱越细，要求棉的质量就越好，价格就越贵。一般认为 40 支以上的纱算较高支数的纱。织物密度有经密和纬密之分，一般纱支越细，可能做到的密度就越大，所以高密往往是以高支为前题的。习惯上把经密和纬密的根数相加达到 300 根左右的称为高密。另外如 30 支 78*65 表示 1 平方英寸织物经纬密度是 143(78+65)。40 支 110*90 表示 1 平方英寸织物经纬密度是 200(110+90)。

问：燃烧法如何鉴定纤维？

- 答：1) 棉 近焰即燃，燃烧较快，有燃纸味，余灰极少、柔软、黑色或灰色；
- 2) 毛 熔离火焰，熔并燃，难续燃，会自熄，有烧羽毛味，余灰易碎、脆，黑色；
- 3) 丝 熔离火焰，燃时有丝丝声，难续燃，会自熄，且燃时飞溅，烧羽毛味，余灰易碎、脆，黑色；
- 4) 麻 近焰即燃，燃时有爆裂声，续燃冒烟，有余灰，同棉；
- 5) 粘胶 近焰即燃，续燃极快无余灰，烧纸味夹杂化学味，除无光者外均无灰，间有少量黑色灰；
- 6) 锦纶 近焰即熔缩，熔燃，滴落并起泡不直接续燃，似芹菜味；余灰硬、圆、轻、棕到灰色，珠状；
- 7) 涤纶 近焰即熔缩，熔燃，能续燃，少数有烟，余灰硬圆，黑或淡褐色；
- 8) 腈纶 熔，近焰即灼烧，速燃，飞溅，弱辛辣味，余灰硬黑，不规则或珠状。

问：DTY、FDY、POY、网络丝是什么？

答：假捻变形丝称为 DTY，全称 DRAW TEXTURED YARN。是利用 POY 做原丝，进行拉伸和假捻变形加工制成，往往有一定的弹性及收缩性。（一般分有网络和无网络丝，网络的意思是网络节点）

DTY 网络丝：网络丝是指丝条在网络喷嘴中，经喷射气流作用，单丝互相缠结而呈周期性网络点的长丝。网络加工多用于 POY、FDY 和 DTY 的加工，网络技术与 DTY 技术结合制造的低弹网络丝，既有变形丝的蓬松性和良好的弹性，又有许多周期性的网络点，提高了长丝的紧密度，省去了纺织加工的若干工序，并能改善丝束通过喷水织机的能力。

POY 与 FDY：高速纺丝的纺丝速度为 3000~6000m/min，纺丝速度 4000m/min 以下的卷绕丝具有较高的取向度，为预取向丝，通称 POY，全称 PRE-ORIENTED YARN 或者 PARTIALLY ORIENTED YARN。指经高速纺丝获得的取向度在未取向丝和拉伸丝之间的未完全拉伸的化纤长丝。与未拉伸丝相比，它具有一定程度的取向，稳定性好，常常用作拉伸假捻变形丝（DTY）的专用丝（一般不用于织造）。若在纺丝过程中引入拉伸作用，可获得具有高取向度和中等结晶度的卷绕丝，为全拉伸丝，通称 FDY，全称 FULL DRAW YARN。是采用纺丝拉伸进一步制得的合成纤维长丝。纤维已经充分拉伸，可以直接用于纺织加工。（一般就叫它长丝）

问：大有光，半消光，全消光是什么意思？

答：为了消除纤维的光泽，采用在熔体中加入二氧化钛（TiO₂）以消减纤维的光泽。如果在熔体中不加 TiO₂ 为有光丝（或大有光丝），加入 0.3% 为半消光丝，大于 0.3% 为全消光丝。

下面列出一些常见的纤维的中英文名称。

棉 Cotton 腈纶 Acrylic 麻 Linen 氨纶 Polyurethanes

羊毛 Wool 丙纶 Polypropylene 丝 Silk 氯纶 Polyvinyl Chloride

粘胶 Rayon 铜氨纤维 Cuprammonium(Cupro)

涤纶 Polyester 醋酸纤维 Acetate

锦纶 Polyamide(尼龙)Nylon 弹性纤维 Polythane (Elastean) 维纶 Vinal

人造丝 Nitrocellulose Silk

涤纶——聚酯；锦纶——聚酰胺；腈纶——聚丙烯腈；维纶——聚乙烯醇缩甲醛；

丙纶——聚丙烯；氨纶——聚氨酯

附录：用原色纱织成而未经过漂染、印花加工的布，统称为原色布，一般称为坯布。坯布分为市布、普通市布、细布、粗布、斜纹布、包皮布等；色织布是用漂白或多种颜色的棉、毛、丝、麻及化纤等纱线，借织物组织的变化而织成的。

1) 利用不同色彩的纱线与织物相配合，构成各种美观的花型图案，比一般印花布更具有立体感。

2) 由于采用原纱染色，染料渗透性强，故染色牢度较好。

3) 织造时采用多梭、多臂机织，能将不同纤维或不同纱支交织成色彩丰富、花纹灵巧的品种。

4) 由于采用色纱线或花色纱线及各种组织变化，所以质量较差的棉纱，仍能织成美观的品种。

5) 提花分为颜色提花和结构提花。颜色提花是指用不同色彩的纱线交织而成的面料，即色织布；结构提花是指用同色彩的纱线按不同的交织方法编织而成的面料，它具有立体结构，有凹凸感。

6) 印花是用染料或颜料在纺织品上施印花纹的工艺过程。直接印花是将印花色浆印到白色或浅色面料上，经蒸化等后处理所得；拔染印花是将面料先染上底色，再用染色剂进行印花所得；防染印花是在印花色浆中加入防染剂，使染色呈现不规则状；转移印花是利用分散染料遇热升华的性能进行染色。

7) 染色是染料和纤维发生物理或化学结合，使纺织材料染上颜色的过程。

(1) 直接染料、活性染料、硫化染料、还原染料及不溶性偶氮染料，主要用于棉纤维染色。

(2) 酸性染料、酸性媒染染料用于羊毛、蚕丝等蛋白质纤维染色。

(3) 分散染料主要用于涤纶、锦纶的染色。

(4) 阳离子染料主要用于晴纶染色。

性能要求：染色要求色泽均匀，染色牢度好，包括日晒、气候、皂洗等牢度。

8) 整理是布料经练漂，染色，印花后，再经过物理或化学方法进一步提高面料品质的过程。通过整理使面料门幅整齐统一或尺寸、形态稳定，改善了面料手感，增进面料外观，改善其它使用功能(防水、防油污、防微生物等)，增强了面料的功能性，提高了面料的附加值(抗紫外线、抗霉、防蛀)等。

国际上通常使用的干货柜(DRYCONTAINER)有：

外尺寸为 20 英尺 X8 英尺 X8 英尺 6 吋，简称 20 尺货柜；

40 英尺 X8 英尺 X8 英尺 6 吋，简称 40 尺货柜； 及近年较多使用的 40 英尺 X8 英尺

X9 英尺 6 吋，简称 40 尺高柜。

20 尺柜：内容积为 5.69 米 X2.13 米 X2.18 米，配货毛重一般为 17.5 吨，体积为 24-26 立方米。

40 尺柜：内容积为 11.8 米 X2.13 米 X2.18 米，配货毛重一般为 22 吨，体积为 54 立方米。

40 尺高柜：内容积为 11.8 米 X2.13 米 X2.72 米。配货毛重一般为 22 吨，体积为 68 立方米。

45 尺高柜：内容积为：13.58 米 X2.34 米 X2.71 米，配货毛重一般为 29 吨，体积为 86 立方米。

20 尺开顶柜：内容积为 5.89 米 X2.32 米 X2.31 米，配货毛重 20 吨，体积 31.5 立方米。

40 尺开顶柜：内容积为 12.01 米 X2.33 米 X2.15 米，配货毛重 30.4 吨，体积 65 立方米。

20 尺平底货柜：内容积 5.85 米 X2.23 米 X2.15 米，配货毛重 23 吨，体积 28 立方米。

40 尺平底货柜：内容积 12.05 米 X2.12 米 X1.96 米，配货毛重 36 吨，体积 50 立方米。

袜子常识-----一般人告诉他!!!

1、种类

长统袜、中统袜和短统袜是按袜子统的长充来分；户口袜、罗口袜和橡口袜是按袜口种类来分；男袜女袜和童袜是按使用对象来分。

2、结构

袜由袜口、袜统和袜脚 3 部分组成。其中袜脚包括袜跟、袜底和袜背、袜头。袜口的作用是使袜子边缘不致脱散并紧贴腿上。袜子的主要参数有 5 个：袜号、袜底长、总长、口长和跟高。

3、规格

袜子的规格是用袜号表示的，而袜号又是以袜底的实际长度尺寸为标准的，所以知道自己的脚长后便可选购合脚的袜子。可是，由于袜子所使用的原料不同，其在袜号系列上也有所不同。其中弹力尼龙袜，以袜长相差 2cm 为 1 档；棉纱线袜、锦纶丝袜、混纺袜等的袜号系列，则以相差 1cm 为 1 档。

4、质量

可用“紧、松、大、光、齐、清”6 个字来概括，即袜口和袜统要紧，袜底要松，袜后跟大，袜表面光滑，罗口平齐无歪斜，针纹组织清晰，花纹、袜尖、袜跟无露针。

5、不同穿用者的具体选择

汗脚者宜选购既透气又吸湿的棉线袜子和毛线袜，而脚干裂都就选购吸湿性较差的丙纶袜和尼龙袜；脚短者宜选购与高跟鞋同一颜色的丝袜，在视觉上可产生修长的感觉，不宜选购大红大绿等色彩艳丽的袜子；脚粗壮者最好选购深棕色、黑色等深色的丝袜，尽量避免浅色丝袜，以免在视觉上产生脚部更显肥壮的感觉；对穿高跟鞋的女性来说，宜选购薄型丝袜来搭配鞋跟越高，则袜子就应越薄。

袜子专业用语中英文对照表[socks glossary (english)]

菱形	argyle	线圈	loop
运动袜	Athletic Socks	低针数	low gauge
腰封	Band	起口	make-up
常规袜	Basics	网眼	mesh
睡袜	Bed	半腿袜	Mid-Calf/Crew
半成品	Blanks	中针距	middle gauge
漂白	Bleaching	假罗纹	Mock Rib
翻边袜(尤指少女穿)	Bobby Sox	网眼袜	Nets
袜统	boot	非往复式	Non-Reciprocated
袜套(腿与袜子之间)	Boot Liner	非往复式袜头	non-reciprocated toe
靴子翻口袜子	Boot Topper	中统袜	Over-The-Calf
绳状花型	Cable	配袜	Pairing
休闲袜	Casuals	长统丝袜	panty-hose
男士半腿袜	Crew Socks	毛圈	pile/terry
翻口短袜	Cuffed	平针	plain
底毛圈加橡筋组织	Cushioned	定型跟	Pouch Heel
底毛圈加橡筋袜	Cushioning	双反面	purl
自行车袜	Cycling	往复式	Reciprocated
旦尼尔(细度单位)	Denier	加固/补强	Reinforced
防臭	Deodorant	高跟	reinforced heel
装饰	Detailing	罗纹(抽条)	rib
糖尿病/关节炎袜	Diabetic/Arthritic Sock	双针筒提花	rib jacquard
橡筋	Elastic	抽条袜	Ribbed
弹性	Elasticity	过桥	ring toe
加弹	Elasticized	罗纹口	Roll down, Rolled Cuff, Rolled Top
电子提花	Electronic Patterning	跑步袜	Running
男士的一种中统袜	Executive Length	透明丝袜	sheer

男士花式袜	Fancies	滑雪袜	Ski Sock
长丝孔数	Filament Count	鞋袜	Slipper Sock
鱼嘴式缝头	Fishmouth Toe	学生袜	Slouch Sock
平编	Flat Knit	足球袜	Soccer Sock ^[2]
袜脚	foot	短统袜	sock panel
有跟袜	Footed Sock	翻口短袜	socklet
船袜	Low cut =slipper socks	短袜	socks
船袜	Footsocks=sneakers	袜底	sole
针距	Gauge	九分裤	spats
运动袜统称	General Athletic	脚踩袜	Stirrup ^[3]
高尔夫球袜	Golf	线圈组织	stitch
提针线	gore line	长统袜	Stocking
舒适护腿袜	Graduated Support	袜口	stocking welt/top
变化密度	Graduation	弹力袜	Stretch Socks
坏袜(布)	Greige	横条	stripe
袜跟	heel	横条	striping
人字形(Y heel)	herringbone	网球袜	Tennis Sock
中统袜	high socks	毛圈	Terry
细针距	highgauge	组织	Textures
徒步旅行袜	Hiking	医疗袜	Therapeutic
袜子总称	hose	发热袜	Thermal Socks
袜子总称	hosiery	紧身裤、连裤袜	tights
狩猎袜	Hunting	袜头	toe
提花	jacquard	移圈	transfer
提花袜	Jacquard	直统袜	Tube Socks
护膝 leg warmers	Knee Warmers	直统、无跟	tuble
齐膝袜	Knee-Highs	集圈	tuck
线圈	Knit Loop	劳保袜	Work Socks
花边	Lace	Y跟	Y-heel
袜腿	leg		
护腿	Leg Warmer		
			^[4]
			^[5]
折叠	folding	少丝、单丝	missing yarn
包装	packaging	紧稀路	needl line
定型	Boarding	针号	Needle Count
断橡筋	broken elastic thread	装饰	ornamentation
表面不平	cockling	配袜	pairing
不褪色	Colorfast	预定型	Pre-Boarding
圆盘式缝头机	dial looper	工序	process
双针筒	double-cylinder machine	挂口疵点	running-on defects

漏针	dropped stitch	皂洗	scouring
染色	dyeing	回缩	Shrinkage
舒适性	Fit	单针筒	single-cylinder machine
可燃性	Flammability	松紧不匀	slazy knitting
手摇机	hand-turned machine	加固疵点	splicing defects
定型袜板	hosiery board/hosiery form	定型机	stocking setting machine
缝袜机	hosiery seamer	翻袜设备	stocking turning device
抽丝	laddering	纹路歪斜	straying end
舌针	Latch Needles	断裂强度	Tensile Strength
修疤	mending mark	缝头疵点	toe closing defects
花针	miss tuck	导湿性	Wicking
少丝、单丝	missing yarn	唛头	shipping marks
尺寸表	size chart	口长	length of top
统长	boot length	尺码	size
统宽	boot width	底长	sole length
横密	coursewise density	底宽	sole width
横拉	coursewise extension	线圈密度	stitch density
卷边性	edge-rolling	纵密	walewise density
高跟高	height of reinforced heel	直拉	walewise extension
脱散性	laddering	口宽	width of top
兔毛	angora	莱尔线	Lisle
混纺	blended	拉毛	Loft
		精梳长绒棉	long staple combed cotton
混纺纱/花式纱	Blends	莱卡	Lycra
膨体纱	Bulk Yarn	莱卡包芯纱	Lycra Spandex
普梳棉	carded cotton	主纱	main yarn
羊绒	Cashmere	人造纤维	Man-Made Fiber
精梳棉	combed cotton	段染	Marls
长丝	Continuous Filament	丝光	Mercerized
鞘形纱	Core-Spun Yarn	丝光棉	mercerized cotton
棉	cotton	美利奴羊毛	Merino
包芯纱	Covered Yarn	彩色金属丝	Metallic Yarn
美国的一种腈纶纱牌	Creslan	细旦纤维	Microfiber
德拉纶	dralon	细旦多孔尼龙	microfiber nylon

干式腈纶	dry acrylic	莫代尔	model
尼龙拉伸变形丝	DTY nylon	单孔丝	Monofilament Yarn
面纱	facing yarn/surface yarn	股线	Multifilament Yarn
纤维	fiber	天然纤维	Natural Fibers
长丝	filament	腈纶(常规)	normal acrylic
地纱	ground yarn	尼龙	nylon
高捻	High Twist	气流纺纱	Open-End Spun Yarn
高收缩纱线	High-Bulk Yarn	尼龙低拉伸丝	PFY nylon
衬垫纱	laid-in yarn	涤纶	polyester
羊仔毛	Lambs wool	涤纶	Polyester
丙纶	polypropylene	尼龙弹力丝	stretch nylon
氨纶	polyurethane/spandex/lycra	弹力纱	Stretch Yarns
色纱	pre-dyed yarn	比尔棉(长绒棉)	supima(pima) cotton
麻	ramie ,flax	功能纤维	tech fiber
本白纱	Raw Yarn	天丝	tencel
粘胶(人造丝)	rayon	改良纱	Textured Yarns
环锭纺	Ring Spinning	变形	Texturizing
环锭纺纱	Ring-Spun Yarn	线	thread
蚕丝	Silk	羊毛	Wool
单包纱	Single Covered (Yarn)	毛纺纱	Woolen
膨体腈纶	soft acrylic,bulk acrylic	羊毛袜	woollen
氨纶	Spandex	精纺毛纱	Worsted
加固纱	splicing yarn	包覆纱	covering Yarn
单孔丝	Strand	纱	yarn
五趾袜	toe socks	拉伸	stretch
脚背	instep	强度	strength
漏针	slip stitch	耐久性	durability
缺口	gapping	加强橡筋	support
松垂	sagging	船袜	sneaker
胫骨	shin panel	半毛圈	half pile
弓部	arch	菠萝口	pineapple
乳白	cream	印花	print
浅灰兰	saxe	前毛圈	front pile
藏青	navy	圈数	course
米色	beige	链条数	chain
青紫色	lilac	高针距(细针距)	high gauge
玫红	rose pink	吊线	boss
混色毛纱	melange	中针距	middle gauge
饰边	frills	手工对目缝头	hand linking
高度	height	低针数	low gauge
长度	length	搭配(配色)	assort

吸收力	absorbency	内箱	in carton/inner case
	closure	外箱	out carton
潮湿	moisture	条形码	JAN code/bar code
无缝内衣	seamless	覆膜	coating
持久力	stay-up power	不干胶	seal
碱液处理	mercerize	10 双	decad
过氧化处理	peroxide	包	pack
清洁剂	detergent	吊钩	hanger/hook
织造	knitting	封箱带	band
挡车工	knitter	钉枪/机缝	pistol/machine
喂纱	yarn feeding	塑针	pin
横拉拉伸	cross stretch	胶袋	polybag
校直	align	无辅料包装	maker style
多余线头	extra fabric	宣传不干胶	merit seal
耐磨性	abrasion resistance	花	motif
平罗纹线圈	cuff stitch	毛(羊毛)	wool(lam wool)
不褪色	colorfast	橡筋	gom/elastic
废料	trash components	真丝	silk
折口	cuffed	皂洗	soaping
脚气	odor	纱样	beaker
弹性	resilience	花纱	melange
颜色	coloration	亮丝	lame
免烫	easy care	人造棉	rayon
低缩水	low-shrinkage	素色	straight
弓带	arch brace	象牙白	ivory
耐得住	withstand	本白	off(off white)
延长	lengthen	土黄	khaki
起球	pilling	缝袜机	hosiery seamer
拉伸性	stretchability	手摇机	hand-turned machine
挂口疵点	running-on defects	定型机	stocking setting machine
松紧不均	sleazy knitting	翻袜设备	stocking turning machine
加固疵点	splicing defects	圆盘式缝头机	dial looper
纹路歪斜	strying end	膨体纱	bulk yarn
缝头疵点	toe closing defects	散纤维	bulk fiber
粗针距短袜	bulky sock	膨体弹力纱	bulk strech yarn
缝制船袜	no show	膨松不均匀	bulk variability
优级羊毛,富弹性毛	soft wool	膨松均匀度	bulk uniformity
丝光棉纱	mercerized cotton	混色纱	ingrain yarn
丝光整理	mercerized finishing	纱样	beaker
丝光羊毛	mercerized wool	丝网纱	silk lace gauze
丝光纱线	mercerized yarn	自然纤维	natural fiber
碱化阻力	mercerized resistance	针数	needle count

平针线圈,平针组织	plain stitch	(纤维表面)环染	ring dyeing
平针袜底	plain sole	环锭捻线机	ring doubler
变化密度	graduation	焦糖色	caramel
高度	height	长度	length
添纱	plaiting	十双	decad
三角片袜跟	gore heel	青绿色	turquoise
三角片袜头	gore toe	棕色	brown
毛重	gross weight	紫色	purple
起球度	pilling degree	银色	silver
毛圈组织	pile stitch	金色	gold
毛圈针片	pile point	灰色	grey
毛圈密度	pile density	海军条子	marine stripes
扯样长度	staple length	抑痒	itch free
染色机	vat	比马棉	Pima Cotton
色纱	in-grain yarn	亮泽	luster
浮色	tints	亲水的	hydrophilic
杂质	impurities	疏水的	hydrophobic
全面质量检查	comprehensive quality revie	可压缩性	compressibility
漏针	missed stitches	几何平面图形	geometry
缝头破洞	holes in seams	舒适性	fitting
疵点	flaw	参数	parameter
异纤维混入(疵点)	foreign fiber	治疗的	therapeutic
强度	strength		
纱线支数	yarn count	彩棉混纺纱	colored cotton blended yarn
陆地棉(短纤维)	upland cotton	天丝混纺纱	tencel blended yarn
透气,通风	ventilation	粘胶混纺纱	viscose blended yarn
起球	pilling		Nylon/Polyamide
花型	pattern	绢丝	spun silk
光泽	sheen	长绒棉	long staple cotton
超细纤维	Microfiber	中长绒棉	long and medium staple cotton
抑痒	itch free	超长绒棉	extra-long staple cotton
连裤袜	pantyhose	细绒棉	fineness cotton
防静电	antistatic	中短绒棉	short and medium staple cotton
(织物的)湿热透气性	moisture-heat permeability	竹纤维和棉混纺	bamboo/cotton blended yarn
湿度计	moisture meter		
回潮监控器	moisture monitor	起订量	minimum order
含水率	moisture percentage	多路进线	multi-feeders
透湿度	moisture permeability		
透水指数	moisture permeability index		
吸湿	moisture pick-up		
防潮的	moisture proof		
防潮透明纸	moisture proof cellophane		

回潮率	moisture regain		
湿度敏感性	moisture sensibility		
润湿能力	moisturing capacity		

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Sports Socks, Dress socks,casual sox, Slipper socks,Handmade sox , Chenille socks, Feather yarn socks, Tennis Socks, Hiking Socks,Wool/acrylic socks, Computer jacquard socks, Crew Socks, Ankle Socks, Footie Socks, Tube Socks, Real Heel socks, Pouch Heel Socks, Y-Heel Socks, Cotton Polyester Socks, Mercerized Cotton Nylon Socks, Cotton Lycra Socks, Coolmax Socks, Thermolite sox,Bamboo socks, Baby sox, Children's Socks, Womens Socks, Mens Socks ,Five toe socks, cuff socks,Double layer sox, Lacy socks, Flight socks, Airline socks, Single cylinder fancy socks , Double cylinder rib sox,Hand-linked sox, No show sox, Mesh socks, Half Terry socks, Full cushion pile sox, Nano silver socks, Micro fiber sox, School socks, Diabetic socks, Antimicrobial socks, Anti-slip socks,Sole printing socks,Christmas socks,Reinforced socks,cotton pantyhose,Cotton tights, Wristbands, Head bands,Leg warmers, and other Hosierys.

Asiasocks,Asia socks,Chinasocks, China-socks, china Socks, Zhejiang Socks,

Zhejiangsocks ,Zhuji socks,zhujisocks,Datang socks,datangsocks, sock capital.....

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waji 袜机 hosiery machine 生产袜品的针织机。

1589 年英国人 W.李发明第一台针织机，采用钩针织出成形袜片。

1849 年，由于舌针开始应用于小口径圆机而出现单针筒圆袜机。最初生产裁制袜，直到 1857 年才开始编织带有袋形袜跟和袜头的袜子。1864 年英国人 W. 科顿发明科顿袜机（钩针平型针织机）。1900 年由于双头舌针开始应用于小口径圆机而出现双针筒圆袜机，编织罗纹袜。袜口可用袜机专门机构编织，或由其他机器完成后由人工转移到袜机上。袜统、高跟、袜跟、袜脚（包括袜底和袜面），加固圈和袜头等部段则由袜机编织。

袜机分类

袜机可按针床形式、织针类型和针筒(床)数来分类。平袜机机号较高，生产根据脚、腿形状改变各部段宽度的平幅袜片，经缝合后成有缝袜。圆袜机的机号范围较广，生产管状袜坯是靠改变各部段的线圈大小，或采用弹力纱线，或编织成形袜头、袜跟等方法来适应脚形的。管状袜坯的袜头封闭后成无缝袜。平袜机生产效率较低，目前广泛使用圆袜机。

袜机结构 圆袜机主要由给纱机构、编织机构、选针机构、控制机构、传动机构、密度调节机构和牵拉机构组成。有些袜机还有起口和折口机构。平袜机尚有移圈机构。

给纱机构的作用是把纱线从筒子上引出送入编织区，有消极式和积极式两类。消极式给纱是借张力使纱线由筒子上引出，虽有张力器和张力补偿装置控制其张力和送出量，但纱线张力差异仍然较大。积极式给纱则借专门装置，使纱线以恒定的线速度送入编织区，纱线张力差异较小。

编织机构的作用是把纱线通过成圈机件的工作，编织成管状袜坯或平幅袜片。圆袜机的编织机件有织针、沉降片、导纱器和三角等。平袜机则有织针、弯纱片、分纱片、脱圈片、导纱器和压片等。圆袜机的织针配置在针筒上,导纱器固定在针筒周围,把纱线送进编织区。有几处进线就称为几路，一般有 1~12 路,路数愈多生产率愈高。针筒回转时舌针受三角的

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作用而上、下运动，并由导纱器垫纱进行编织。在编织袜跟、袜头时，由挑针器和撇针器对参加编织的织针进行收针和放针，使之形成袋形。平袜机的织针整列固装在针床上，随针床一起运动。导纱器沿针床移动进行垫纱,同时通过弯纱片、分纱片和脱圈片等的配合进行编织。控制机构的作用是在编织一只袜子的过程中控制有关机件进入或退出工作，并控制针筒和转速与转向以及袜子的长短等。

传动机构的作用是使各机构按预定规律运动。圆袜机的针筒不仅作单向回转，而且在编织袜跟、袜头时要作双向回转。

选针机构的作用是把预先设计好的花纹，按照要求依次排列在选针装置中，通过传递机件，使织针按一定程序进行编织。

密度调节机构的作用是在编织袜子时调节各部段的密度，这是通过改变织针和沉降片的相对位置调节弯纱深度来进行的。

牵拉机构的作用是在编织过程中借助重锤、罗拉、气流等把已形成的线圈从编织区域中引出。

起口与折口机构的作用是在袜子开始编织尚无线圈的情况下起口生头,并当袜口编织到一定长度时折口,把单层袜口对折成双层，使袜口具有良好的弹性，不产生卷边，一般是用袜口钩来完成。

移圈机构的主要作用是用移圈机件把线圈由一只针移到另一只针上，以改变袜片的编织宽度，使之成形。

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袜机可分为平袜机、圆袜机两大类。平袜机的产品是成形的袜片，将袜片缝合后而成袜子，一般用来编织长统女袜，由于生产率低，很少采用。圆袜机产品为圆筒形的成形袜子，圆袜机又可分为单针筒及双针筒两大类。现将圆袜机分类介绍如下：

一、单针筒袜机

素袜机 编织罗口短袜、横条袜。

折口袜机 编织平口中统袜及过膝长统袜。

绣花袜机 单色绣花袜机（如 Z506 袜机）、双色绣花袜机（如 Z507、Z507A 袜机），可编织单色或双色绣花袜。

提花袜机 双色提花袜机（如 Z501 袜机）、三色提花袜机（如 Z503 袜机），可编织双色或三色绣花袜。

提花绣花袜机 编织提花加绣花袜。

毛圈袜机 可编织毛圈袜。

罗口直下袜机 这种类型的不同袜机可编织橡筋假罗口、单罗口及双罗口袜。

单程式全自动袜机 可编织一步成形袜。

二、双针筒袜机

素袜机 可编织各种罗纹素袜。

绣花袜机 在罗纹袜上加以绣花。

提花袜机 可编织二色、三色提花袜，也可编织提花与凹凸复合组织袜。

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提花绣花袜机 编织提花加绣花袜。

普通袜机知识

A、棉袜机

1、手摇机：中国较早的袜机，现一般分布在上海，江苏一带，多数用于做方格袜等。

2、普通国产单针袜机，分平面或提花机：价便，每台单位都在 RMB10000 元以下；按针筒大小分 84、86、118、120、140、160、180、200、220 针等，120 针以下多用于做童装，160 针及其以上多用于做男装袜，其它则多用于做女装袜。

3、双针条子机：此类机台做出的袜有明显的上下针；故弹性较好，耐穿，但不能织花样，只能织 1：1、2：1、3：1、4：2、5：2、6：2、等等的条子袜。有 72、84、96、108、120、132、144、168、176 等针筒。

4、双针筒提花机：双针条子加提花功能：但同样不能提与底色不同颜色的花：价格稍高于条子机，价位多在几万元左右，多为南韩，台湾等生产。

5、单针电脑提花机：与电脑配合使用，能做各种不规则的花，并能提多种颜色，变化多。多数出自南韩，台湾、意大利、日本等国，价格在每台 6-20 万内不等；常用的有 84、96、108、120、132、144、156、168、180、200、220、240 针等。

6、普通毛巾机：一般用两条或以上的双股或单股纱来织较厚的袜，常用的有 72、84、96、108、120 针的针筒。

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7、提花毛巾机：普通毛巾机加提花功能。

8、电脑毛巾机：单针电脑提花机加毛巾机功能。

9、其它棉袜机：如电脑双针毛巾提花机等等。

10、普通丝袜机：一般配 400 针的针筒。多为台湾、日本或意大利制造。价格有第台 1 万美金上下。

11、丝袜提花机：在普通丝袜机的基础上增加提花工能，多为意大利产。

12、其它袜机。

关于袜子生产过程的一些基本知识（下）

[袜子内衣生产材料]

【摘要】袜子图案设计及程序制版，**1：图案设计：**一双袜子有不同的款式，有不同的花型颜色，这就要求根据不同需要进行设计...**2：程序设计，**一双袜子有不同的阶段，如单针提花袜分为扎口，里罗口，罗口，上筒，袜跟，下筒，过桥，袜头，机头线九个阶段...**3：图案制版，**图案制版指将图型稿件通过电脑花型代码转化为袜机的识别代码的操作过程，它包括...

B：袜子图案设计及程序制版

1：图案设计：

一双袜子有不同的款式，有不同的花型颜色，这就要求根据不同需要进行设计，袜子设计的形式属于平面设计，使用格式为意匠格式，它运用格子的有无达到组成整体图案，当前设计已有电脑所代替，它的设计程序原理为：将电脑设计的花型代码转换为袜机的识别代码，通过选针器提花刀片控制提花针，达到提花目的，常用花型排列有对称，不对称，二方连续，四方连续。

4F，5F，6F，7F 机器有什么不同，**F** 是袜机选针器的代号，**4F** 是袜机中有 4 个选针机，**5F** 是指袜机中有 5 个选针器依次类推，因袜机中存在多只选针器，所以在袜子中同一行列可编制十几种颜色，注意的是，同一选针器中不能同时编制两种颜色。

2：程序设计

一双袜子有不同的阶段，如单针提花袜分为扎口，里罗口，罗口，上筒，袜跟，下筒，过桥，袜头，机头线九个阶段，因每个阶段都要指令三角，铡刀进行进退，这就需要进行程序设计，一般情况半电脑设备和全电脑设备基本程序已设好，但遇到特殊花型就需重新编排程序。

3：图案制版

图案制版指将图型稿件通过电脑花型代码转化为袜机的识别代码的操作过程，它包括设计镇数---绘制图案--设置纱道--设置控制情报等步骤，图案制版和程序设计是紧密结合的。

C：袜子试制打样，缝头，定型

为了确保设计产品符合规定要求和各阶段能进行顺利进行，以便更好的控制产品，一个定单在大货生产之前就需要小量的实验，以掌握各种的数据。

根据客户指示图案首先确立生产机型，针数，袜子尺寸包括拉伸工艺，产品原料，缝合方式，二是确立辅助要求。

在打样过程中确立好袜子工艺，中样纱色卡，袜子的原料配比以便大货生产作好准备。

在打样过程牵扯到缝头，定型和整理等工艺，产品的缝合好坏，直接影响外观，现在的袜子一般分为对目缝头和电脑缝头两种。

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关于袜子生产过程的一些基本知识（上）（2008/10/14 08:55）

A、关于袜子的编织

1：袜子组成：袜子属于纬编组织物，在袜机中完成这一任务的零部件主要有：三角，袜针，生克片，提花针，线梭组成。具体的作用如下：

三角的作用：使袜针，生克片，提花针各自按一定的轨迹运动。

袜针的作用：在三角的控制下，织针做径向运动，经过添纱，弯纱，长圈，脱圈，退圈等步骤完成工作，达到织袜任务。

生克片的作用：在眉毛三角的控制下，生克片做纬向运动，在袜针脱圈的时起到防止托扣作用。

提花针作用：在三角和提花刀片的控制下，自身控制袜针达到制作花型的目的。

线梭的作用：使袜针有规律地进行编织纱线。

B、关于袜子针筒的口径与针数

袜机中针筒的口径决定袜子大小，根据年龄不同袜子分为：男袜，女袜，童袜等，常用的口径有 41/2，4，33/4，31/2，31/4 等，粗针机一般用：4，41/2，男女袜机口径常用的有：4，33/4，31/2。童袜，和婴儿袜一般常用的口径有 31/4。

袜机中针筒的针数决定纱线的粗细，棉袜常用的针数有。200，176，168，156，144，132，120，108，96，84 等，丝袜常用的有：480，400，280，240，200 等，针数越大表示纱线越细。

C、关于袜子的纱线

纱线的粗细决定袜子的细腻程度，它和纺纱密切结合，常用的纱线有：80，60，42，40，34，32，28，21，20，16，10，等，支数越大使用纱线越细。

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D、关于袜子的原料

纺织品原来大致可以分为以下几类：a：植物纤维类 b：动物纤维类 c 化纤类和再生纤维类。

植物类包括：棉，麻。木棉等。

动物类包括：羊毛，兔毛，驼毛，蚕丝等。

化纤类包括：涤纶，丙纶，晴纶，锦纶等

合成纤维指两种原料组合的原料，它包括：棉晴，棉涤，毛晴，棉麻等。

E、袜子原料燃烧的特征：

棉：接触火立即燃烧，离开火焰后继续燃烧，有烧纸的气味，少量的灰白色。

羊毛：点燃后徐徐燃烧，离火后有时自己熄灭，有臭味，灰白粉状。

锦棉：接触火焰融化收缩，很慢的燃烧，离开火后自己熄灭，特殊气味，松而脆的黑色灰烬。

涤纶：接近火焰融化收缩，慢慢的燃烧，离开火焰继续燃烧，芳香臭味，很硬的黑色圆珠。

晴纶：接近火焰融化收缩，燃烧时冒黑烟，特异的臭味，催而硬不定形的硬块。

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