

针织专业英语

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Knitting, Knitted Fabric And stitch Definitions

ACCORDIAN- Term applied to fabrics produced on circular open top [single needle jersey] machines which incorporate knit, tuck and welt [miss-knit] effects in pattern. These fabrics bear a close resemblance to jacquard fabrics produced via needle selection on jacquard machines. As compared to rib jacquard fabrics, accordian fabrics are naturally lighter in weight. Selection of needles for knit, tuck and welt is chiefly done via pattern wheels.

ALPACA STITCH- 1 x 1 purl links stitch in which the courses are disposed in garment fabrication in a vortical rather than horizontal direction. Despite the name, an alpaca stitch garment is not always made exclusively of alpaca but can be of other natural and synthetic fibers. Alpaca stitch fabrics are producible on flat-bed purl or circular purl sweater-strip or yard goods machines. The illustration below shows a typical 1 x 1 purl fabric structure, in which the courses are disposed vertically instead of horizontally, as the fabric comes off the machine.

ANGEL LACE- Narrow width patterned face fabrics produced on tricot machines equipped with from two to six guide bars.

ARACHNE --A loop bonding machine which forms fabric via a thick fiber web. The machine was developed by a team at the Czech Knitting Industries Research Institute in Brno.

The fabric is formed by knitting through the fiber web with a multiple series of warp yarns. The knitting-through action to bond the fiber web is performed by means of latch needles, warp yarn guides, knockover sinkers and fiber web holders.

Fabric variety can be achieved by laying down webs of different fiber composition and having different fiber composition and having different dye affinities. Fabric diversity can also be obtained by laying down different colored stock-dyed fiber webs. In either case the fiber webs can be laid down in two or more layers. The web is processed on a conventional carding machine.

The Arachne machine has a working width of 180 cm. and stitches can vary from 20 to 100 wales for every 10 cm.

Output on the Arachne machine is said to be comparable to that of 11 automatic looms. No figures are available, however, on its relative output rates as compared to conventional circular knitting machines or high-speed tricot units.

Although most of the fabrics thus far produced on the Arachne have been interlining and insulating cloth, work is proceeding on the development of dress fabrics as well as materials suitable for use in sweaters and swim suits.

For the latter, the loop-bonding yarn conceivably could be a spandex filament, a covered rubber thread or a thermoplastic stretch filament yarn. All these could impart some degree of elasticity to the swimwear fabric.

ARGYLE DESIGN -- A knitted-in design in the form of diamond shapes of different color. A true argyle design is produced on the intarsia principle [See Intarsia] and the diamond areas are separated from each other by complete loops, and not loops superimposed on ground loops made from other yarns.

ATLAS--A warp knit fabric used primarily in making cut-and-sewn gloves.

BARRE--A defect in knitted fabric that is evidenced by irregular lines or streaks running across the cloth. There are several different types of barre. The two most prominent, however, are yarn barre and stitch or machine barre. The former may be the result of improper processing or varied heat application to the textured yarn. The latter may be the result

of improper stitch, cam, tension and other adjustments. Stitch and machine barre can frequently be reduced by use of positive feed attachments on the knitting machine. It is also possible sometimes to mask yarn barre by appropriate chemical treatments during the dyeing process.

BASKET STITCH-- A knitted structure based on a combination of purl and plain loops and producible on flatbed and circular purl machines and certain types of V-bed flat machines. Actually, the basket weave effect is produced by developing a preponderance of purl loops in the pattern courses. Shown on next page is a basket stitch in which every second course is composed wholly of plain loops.

BEAM--A large spool-like device used for feeding yarn to guides and needles in warp knitting. The beam rests on a beam shaft on the top of the warp knitter.

BEARDED NEEDLE--A knitting needle, the hook of which is shaped like a beard. [See Knitting Needle, Spring Beard.]

BIRD'S EYE--Commonly referred to as twill back. It is a salt and pepper effect on the back of knitted fabric achieved by knitting every other needle on the dial while knitting all needles on

the cylinder. Actually, bird's eye, or twill back, is produced by a scrambling of the colors used on the face design of the fabric.

BLISTER FABRIC, DOUBLE--A double knit fabric produced on a six-course basis in the same fashion as for single blister fabric except that the blister yarn is knitted on cylinder needles not previously selected for two successive courses.

BLISTER FABRIC, SINGLE--A double knit fabric produced on four course basis, using a ground and a blister yarn. The basic yarn is knitted on odd dial needles and selected cylinder needles: at the second feed the blister yarn knits on cylinder needles not previously selected; at third feed the ground yarn knits on even dial needles and selected cylinder needles; at the fourth feed the blister yarn knits only cylinder needles not selected at the preceding feed.

BOURRELET--A ripple stitch or corded fabric in the double knit genre treated by raised loops across the surface of the cloth. Bourrelet fabric can be produced by knitting and tucking or knitting and welting. In the first method, the tucking action is performed over a successive number of feeds --usually four--while knitting all needles on the cylinder.

BRYNJE CLOTH--A trade designation for thermal underwear fabric produced on a Raschel warp knitting machine.

BULKY RIB--A coarse rib knitted structure produced generally by allover tucking on a half-or full-cardigan basis. Bulky rib knit garments or fabrics can be produced on flat or circular rib or links machines. The cut of the machine may range from $2\frac{1}{2}$ to five needles per inch. When finer cut machines are used, half the needles are employed on an alternate basis to achieve the coarse cut loop formation.

BURR--Device on a circular spring beard needle machine of the Tompkins or Crane type which is designed to assist in loop formation. In basic knitting action, there are four different types of burrs--sinker, lander, clearer or castoff, as defined below.

BURR, CAST OFF--Device for casting off or accomplishing a stitch knocking-over action on a circular loop wheel spring needle machine.

BURR, CLEARER--Mechanism on a loop wheel circular spring needle machine designed to assure that fabric and loose yarn have been cleared from the spring needles to facilitate feeding of the yarn by the sinker burr.

BURR, LANDER--Part of the loop wheel assembly on a circular spring needle machine, the object of which is to lift fabric loops and enable them to pass over the closed beards of the spring needles.

BURR,SINKER--Device on a circular loop wheel needle machine for feeding yarns into the hooks of the spring needles.

BURR,Terry--Device on a circular loop wheel spring needle machine designed to feed a longer loop into the spring beard needle than a conventional sinker burr is capable of doing.

CABLE STITCH--A stitch in which small groups of plain wales are plaited with one another like strands hair or the component threads of a thick rope. In its most familiar form it comprises two groups of three wales each, thus involving six needles. At regular intervals during the knitting action, the groups are interchanged by transference of wither stitches or needles. When stitches are interchanged, those made by needles 1,2 and 3 are placed on needles 4,5 and 6, respectively, and those made by needles 4,5 and 6 are placed on needles 1,2 and 3.

CAM--A device for actuating needles in knitting. By operating on the butts of the needles or jacks. the cams position them to desired knitting, tucking.

welting, transferring positions, etc. The camming on a two track sinker top jersey machine is shown below.

CAMS, CHANGEABLE--A cam system in which the individual cams can be removed and rearranged or different ones substituted through the facility of so-called bolt cams.

CAMS, CLOSED--A cam system which is marked by a completely closed track or raceway. In this type of camming only frictionless needles can be used and these are restrained from flying out of the tracks by a safety or guard cam. See Knitting Needles, Friction and Frictionless.

CAMS, FIXED--A cam system which requires removal of an entire cam section to effect a camming change.

CAMS, FULL-FASHIONING AND WARP MACHINES--Cams designed to convert from one type of motion to another; specifically, from rotary to reciprocating motion. Cams on full-fashioning and warp knitting machines are elliptical, heart-shaped or otherwise uniquely shaped and are concerned solely with machine movement and do not actuate needle movement as do cams on circular or V-bed flat or flat-bed puri machines. See Cams, Weft Knitting Machines.

CAMS, OPEN--An assemblage of cams on a circular machine in which a swing cam is employed to change

the path of the needle movement in accordance with the design or construction of the fabric being knitted. Machines with open cam systems use only friction-type needles. See Knitting Needles, Friction and Frictionless.

CAMS, WEFT KMITTING MACHINES--Cams designed to actuate needles to knit, tuck, welt or transfer. On circular machines the cams ring a cylinder or vertical needle housing and are positioned immediately over the dial or opposed radial needle housing. On flat-bed purl and V-bed machines, the cams are located on the underside of the reciprocating carriage.

CARRIER ROD--The mechanism on which yarn carriers in a full-fashioned machine are mounted.

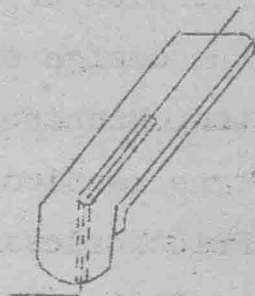
CARRIER, YARN--A device on a knitting machine to feed yarn to needles or other loop-forming elements. The construction of the yarn carrier differs for each class of knitting machine. The illustration immediately below is a yarn carrier on a circular knitting machine [illustration A]. The next is of a yarn carrier on a V-bed flat machine [illustration B]. Finally, here is a yarn carrier from a spring needle full-fashioning machine [illustration C].



A



B



C

CAST-OFF POSITION--The position in the knitting cycle where the needle is retracted to its lowest point, permitting the new loop to be drawn through the old loop and casting the latter over the head of the needle hook.

CATCH BAR-- Mechanism on full-fashioning machine for moving dividers forward simultaneously after sinkers have been impelled forward.

CHOPPER BAR--A patterning mechanism exclusive to the Raschel warp knitting machine. It is a solid metal plate that works in conjunction with one needle bar and two or more guide bars. Forming part of the guide bar assembly unit, it swings backwards and forwards with the guide bars, at the same time being movable upwards and downwards. Its position is between the one or more guide bars that are used for making ground laps and the one

or more guide bars that are used for making fall plate laps. As can be seen from the illustrations right. A shows the ground yarn being fed to the needles by the rear guide bar and the effect yarn by the front guide bar [to right of the chopper bar].

At B, the chopper bar is shown holding down the effect yarn so that it is laid into the fabric structure.

Actually, the term laying-in does not correctly describe the action of the chopper bar. Close examination of B will show that the chopper bar yarn overlaps the ground yarn as if to be knitted in. But it is prevented from doing so by the chopper bar which pushes it below the needle latch.

A wide range of crochet-like and surface texture designs can be produced via the chopper bar technique. The yarns that are overlaid for effect can vary substantially in size from the counts or deniers of the ground yarns. These effect yarns can be standard spun yarns, complex fancy twist yarns or even filaments or strips of off-beat material.

CHOPPER BAR FABRIC --Cloth produced on a multi-guide bar Raschel machine which employs a chopper bar [fall plate] mechanism to intermesh one or more effect yarns with the ground or foundation yarns.

To produce the chopper bar or fall plate fabric depicted below, there must be one fully threaded guide bar located behind the fallplate to make the foundation texture comprising unshaded loops and two partially threaded guide bars positioned in front of the fall plate to make the fall plate laps shown in black and by stippling. The thread denoted in black is supplied through one guide bar and the threads represented by stippling are supplied through another.

During the knitting cycle, after the guide bars have swung backwards with the needles at clearing height, they all make shogging movements and then swing forwards again, each threaded guide thus wrapping new thread around a needle between its hook and the spoon of the open latch. It greatly assists thread control if ground laps and fall plate laps are wrapped around the needles in opposite directions. The needles remain at clearing height until the fall plate has moved downwards, taking the laps made by guide bars situated in front of it below the needle latch. The fall plate has no action on threads which are supplied by guide bars that lie behind it. As the needles descend the

newly-formed ground laps are drawn through the newly-formed fall plate laps and the ground laps of the previous course. On approaching their lowest position the needles cast off the newly-formed fall plate laps and the old ground laps to form stitches with the fall plate laps lying at the back. Since fall plate laps constitute the design elements, the technical back becomes the effect side of fabrics incorporating them.

While it might be impossible to ignore machine gauge altogether when choosing yarn for making fall plate laps, the range of selection is much wider than it is for making ground laps and the introduction of thick and fancy yarns is greatly facilitated.

With a minimum of three guide bars, when the fall plate is situated between the middle and front bars, it is possible to knit a fabric with stable ground incorporating laid-in threads, the effect side being embellished with fall plate laps made from specially chosen yarn.

CIRCULAR JERSEY FABRIC -- A weft knitted structure produced on circular single cylinder machines or on a cylinder and dial, on a superimposed cylinder or a V-bed machine in which needles in only one of the needle housings are employed. Jersey fabric

is characterized by the intermeshing of stitches on only one side with semi-circular loops on the reverse. Basically this structure is produced on machines with a single set of needles; however, on other machines it can be made by utilizing only one of the sets of needles.

See Single Knit.

CIRCULAR KNIT--Knitted fabric manufactures on a circular knitting machine. Such fabric is produced on the machine in tubular form. [See Flat Knit.]

CLOSED TOE KNITTING--Process in hosiery knitting of closing the toes of pantyhose and seamless stockings right on the knitting machine, obviating the need for doing so in a subsequent seaming operation. There are a number of on-the-machine toe closing systems. Among the more popular methods are Dura-Vent and Rosette.

CLOSED TOE, DURA-VENT--A system whereby the toe is closed during the knitting cycle by twisting a wrapping yarn on the underside of the dial cap. The telltale mark of this method is a small open area in the center of the closed toe.

CLOSED TOE, ROSETTE -- Method of toe closing developed by Scott & Williams. In essence, the toe is closed by a 360 degree twisting of the

fabric as it is held between the knitting needles and transfer elements. Outstanding characteristic of this type of closed toe is the small bead that, in wear, fits snugly into the opening next to the large toe. After knitting, the toe has to be "popped" to produce the rosette configuration.

CONTOUR CONTROL--See Form-fit.

CONTROL CHAINS--Chains employed on flat-bed and circular equipment of the cylinder and dial type to control machine movements, changes in stitch, pattern length, color and shape. There are different types of chains employed to exercise these controls, and on both flat-bed and circular rib machinery more than one chain is usually used. Basically, however, all these chains fall into two categories: [1] Chains to control the mechanical movement of the patterning unit; [2] chains governing actual construction of the fabric.

In a flat-bed links and links machine there may be as many as seven chains, of which three are directly associated with the perforated metal card patterning unit--moving the jacquard bar, turning the jacquard cards, and collecting the jacks. The other four chains may relate to stitch setting, color changes and racking of the needlebeds. Each

of the links in each of these chains executes a different operation. For example, in the chain which controls the stitch setting the first link may determine whether the stitches will be set close, medium, firm or tight.

COTTON'S PATENT MACHINE--A straight-bar multi-section spring needle machine on which full-fashioned sweaters, hosiery and underwear are produced. The name is derived from the inventor, William Cotton of Lough-borough, England. The machine possesses a single set of needles and produces a jersey structure. [See Full-Fashioned Knitting; Loop Transfer; Full-fashioning; Widening; Narrowing.]

COTTON'S PATENT RIB MACHINE--A full-fashioned knitting machine equipped with two angularly opposed sets of spring beard needles. The machine is used for the manufacture of rib trims for full-fashioned sweaters. The horizontally-positioned needles are known as the "machine needles" and the vertically placed ones are called the "frame needles." Stationary hookless knockingover bits are employed.

COULIER MOTION--Reciprocating motion which provides motive force for operation of slur cams and friction boxes on the Cotton's Patent full-fashioned knitting machine.