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## TECHNICAL PROCESS OF KNITWEAR MANUFACTURING

**Abstract:** Knitted items consist of a single thread. Knitted products are also made in the following ways: Semi-regular continuous Cutting method consists of cutting the knitted fabric, ie. cut out the details of the items according to the patterns from it and connect them on the sewing machine, giving them the desired shape. According to this method, most of the linen and top products, as well as glove products are made. This method of production is characterized by significant waste of knitted fabric, up to 18-23% when cutting linen and 25-28% when cutting high-end products. This technology is used for low-cost products in mass production and domestic knitting.

**Key words:** fabric, knitwear, knitwear, knitwear, natural, synthetic.

**Language:** English

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### Introduction

Technical process of knitted goods production. Technological process Manufacture of knitted goods Unlike knitting, fabric, we mean a fabric or a whole product, which is the structure of loops connected to each other. The distinctive features of knitwear are stretch and elasticity, so it is not specific to the fabric. Different fibers are used as raw materials in the production of knitwear: wool, cotton, silk, synthetics and their various combinations. There are three ways to make knitwear. The first method is called a piece, in which the knitted items are made from a single piece of knitted fabric. This method is used in cheap mass production and sewing of clothes. The second method is called partial cutting: first, knitted "coupons" of the desired size are created and then they are sewn together. Thus, the best compatibility is achieved. And the latter method has a name that corresponds to the technology of production of the product in this method, which is woven in one way.

The product is made of whole knitwear, if there are individual pieces, they are woven along the contour and sewn with chain stitch. The last two methods are especially popular in the production of exclusive items and custom items. There is a group classification of knitted products depending on the class of equipment. The equipment class is determined by the number of needles per 1 inch of the knitting machine. Linen knitwear for group 4 (grades 16-24), sweaters, pants and skirts for group 3 (grades 10-14), coats, jackets and vests for group 2 (grades 5-8) and 1- group (group 2), grades 5 - 3) should include hand-knitting and shaped products. As you can see, the density of the product also changes with the growth of the class. Production of knitted goods consists of the following sequence of actions: pre-preparation of yarn; weaving, washing, drying, steaming, cutting coupons; assembly and pre-ironing of the product; manual processing and ironing of the product; product quality control. Quality execution of each stage of the production of

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knitwear allows you to create quality items. Failure to complete or miss at least one of the steps provided may adversely affect product quality, which will reduce wear time. But the quality of things is determined very quickly - after the first wash. No matter what, you need to arrange for proper care for them to prevent them from stretching early and forming granules. Knitted products containing wool yarn should only be washed by hand. Such products should be carefully squeezed, rubbed and not stretched, it is enough to squeeze soapy water several times in clean water. All other knitwear can be machine washed, but in the right mode of delicate washing, it will turn off the savings and set the temperature to 40 degrees. Drying of equipment should also be done delicately: on a dry, horizontal surface, in the shade at room temperature. In fact, knitted items do not require ironing, it must be carefully steamed from the wrong side at temperatures up to 100 degrees. But keep in mind that the less you iron the knitted items, the longer they will last. Also, do not store knitted items in loops as they may stretch and take on a slightly different shape. In the game: 25 pages, 3 tables, 1 scheme. Keywords: technological process, yarn, fabric, weaving, cutting, part, sewing, product, quality. The purpose of the work is to study the basic processes that take place in the production of knitted goods. He studied and described the technology of production of knitted goods. It also provides information on the equipment used in the production process of the products and emphasizes the basic requirements for the quality of the finished product. 3 1. Description of the theoretical basis of the technological process of production of knitted goods. 4 2. Raw materials used in the production process. Requirements for its quality. 6 3. Technology of production of knitted goods. 10 4. Information on the equipment used in the process Manufacture of knitted goods. 15 4.1. The equipment used in the process is knitting fabric. 15 What an old horse! On uydēt za 7 dney, natoshchak pey krepkiy obychnyy ... 4.2. The equipment used in the process is sewing products. 16 4.3. Auxiliary equipment. 17 5. Requirements for the quality of the finished product Products and methods of its management. 18 6. Acceptance, testing, storage standards and performance of goods. 21 Summary 24 List of used literature. 25 Introduction Various materials are used to produce garments, which are divided into the main parts of the top and lining details; used to create frames, solid shapes, reinforcing parts; thermal insulation; connection; hardware and decoration. The main materials used are fabric, knitted fabric, woven, film and layered materials of various fiber composition and structure, artificial fur and leather. The industry mainly produces garments from fabrics and knitted fabrics. According to the composition of raw materials, they are divided into cotton, wool, silk, linen fabric and coat, suit, shirt, chemical, linen and lining according to their purpose.

The appearance of these materials, hygienic properties, resistance to various influences make different demands. Thus, the material used for the details of the top of the coat must have a beautiful appearance, be sufficiently resistant to abrasion and bending loads; primer - good abrasion resistance, hygroscopicity, vapor and air permeability. Knitwear includes products obtained from yarn (threads) by machine or hand knitting. Some knitted garments are sewn entirely on typewriters (socks, stockings, scarves, kittens, etc.), others - underwear, most of the top knitted garments, gloves - sewn from fabric woven on looms (knitwear). According to the purpose of the products, the knitwear industry is divided into the following types of production: knitwear and underwear, socks, gloves, technical clothing and medical devices. Knitted items are characterized by high elasticity and flexibility, which allows you to create a feeling of lightness and comfort. 1. Description of the theoretical basis of the technological process of production of knitted goods. Knitted fabric is called a fabric or a product obtained by weaving, so any knitted material is a system of loops connected in the longitudinal and transverse directions. The knitted fabric consists of two perpendicularly intersected yarn systems. Longitudinal yarns are called welding and cross yarns are called weaving. The main element of a knitted garment is the paste. This is a spatial curve, the shape of which affects the properties of the canvas. The shape of the threads varies: round, wide, narrowed, elongated. Height distinguishes normal-sized, shortened, and enlarged loops. The higher the loop and the more the yarn is flattened, the brighter the canvas will look as a result of the light-focused reflection. Loops connected horizontally to each other form loop rows, vertically, loop columns. The distance between two adjacent loop centers or the same points along the line of the loop row is called the loop phase. Knitwear is divided into yarn and knitted garments.

In a binding knitting yarn, each yarn forms one loop in the loop row and moves on to the next row. In culinary knitwear, each yarn forms a row of one loop in a row. One thread is enough to form a single loop of knitted garments. As a rule, the number of threads should be large, because there are hooks in the row of loops, to form the threads of crusty knitted garments. Cooking and beating patterns can be single or double. Single knitwear is produced on machines with a single needle box, and double knitwear is produced on two needle machines. According to the classification, all woven weaves are divided into basic weaves (having the simplest structure) and derivatives (a combination of the same basic weaves that are similar to each other, thus a ring of another weave) the columns are placed between the loop seams of a single weave). On the basis of each class of these groups it is possible to form patterned and combined weaves (weave

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consisting of weaves of several classes). You will need two yarn systems (yarn and knitting) to get the fabric in its simplest condition. Knitted items can be knitted entirely from a single thread. Knitted products can also be prepared in the following ways: Cutting Semi-regular Permanent Cutting method consists of cutting a knitted fabric, ie. cut out the details of the items according to the patterns from it and connect them on the sewing machine, giving them the desired shape. According to this method, most of the linen and top products, as well as glove products are made. This method of production is characterized by significant waste of knitted fabric, up to 18-23% when cutting linen and 25-28% when cutting high-end products. This technology is used for low-cost products in mass production and domestic knitting. The positive thing for this method is the ability to produce different models and high-efficiency knitting machine products. The semi-regular method differs from the previous one in that the knitted fabric is woven on a round knitting machine in the form of tube coupons. The coupons are separated using a series of loops that separate them from each other, so that the bottom edge of the coupon has a series of single-piece, loop loops that do not require stitching. Consumption of knitted fabric in the product with the semi-regular production method is 3-5% less than the cutting method due to the fact that side seams and the bottom of the product are not allowed to be sewn; in addition, there will be less time to process cutting and sewing by 8-10%.

What is the name of tight knitwear. Description of fabrics

The main feature of knitted clothing is the ability to perfectly fit this figure. This is achieved by using a special method of weaving yarns - knitting. Today, in everyone's closet you can find patterned items - this material is very popular. Women, men, children, casual, weekend and home clothes sewn from soft fabrics will not leave anyone indifferent. What are knitwear?

Definition and properties of knitted goods

If you stretch your favorite t-shirt a bit and look at the light, you can see the columns from the smallest street that make up the structure of the fabric. A distinctive feature of this knitwear is the knitted fabric. Is it stretched or not? Necessary. But what does it depend on?

The fact is that the knitted fabric is obtained not on the loom, but on special knitting looms. Translated from the French, "knitted garment" simply means "knitting". It is a loose structure that gives the materials flexibility. But we believe that textile fabrics are woven using socks and knitting yarns. Then the

question is very logical: knitwear - fabric or not? The answer is mixed. In a general sense, this applies to rolls of textile fabrics in fabric stores - yes. But when it comes to things that are immediately fully produced on knitting needles, it is no longer a fabric, but products (curls, pullovers, blouses, vests, shirts). They are also called "knitted garments". Our goal is to consider the properties of textile materials, so we focus on knitted fabrics.

To understand how a product is created, look at how its seams are processed. If they are sewn, it means that these pieces are cut from a knitted fabric, and if the pieces are simply sewn, all the loops at the edges are closed, then the whole product is woven. Most often, winter clothes are sewn from thick threads.

Therefore, if the garment is cut from a knitted floor (it consists of several layers of fabric), there is a high risk that the cut details will be bent, which means that the finished product may not be of very high quality. Such swelling is almost imperceptible, but after wear and a few washes it becomes clear.

Types of knitted clothes

"Knitted fabric" varieties have yielded a lot. You can classify them according to different features:

appearance;

method of weaving yarns;

Depending on the fiber content, woven materials such as ordinary textiles can be divided into the following categories.

natural;

artificial;

synthetic;

mixed (combined).

However, when most of us think of knitwear, thin underwear or bulky knitted winter sweaters come to mind. Accordingly, the expected composition of the raw material is cotton or wool. But this is not always the case. The composition and proportions of the types of fibers in knitted materials are as varied as in ordinary textiles. True, natural-listed silk is less common here. The first is very rough, the second is more expensive. But man-made and synthetic fibers play the same role: they help reduce the cost of a material or give it the properties it lacks.

It is impossible to accurately describe the appearance of such things. Yes, most of us are accustomed to the fact that this thin breathable fabric is as thick as a t-shirt, for example, or as soft as your favorite knitted blouse. However, this is not the diversity of textures. Knitted materials can also be as shiny as silk, booklets, or even pile and lace. It all depends on how the fabric is woven, which fibers are used, and how it is processed later.

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## References:

- (n.d.). Retrieved from <https://n.ziyouz.com/kutubxona/category/11-o-zbekiston-milliy-ensiklopediyasi?download=2379:o-zbekiston-milliy-ensiklopediyasi-u-harfi>
- Kamilova, H., & Damroeva, H. K. (2003). "Structures of sewing products" *Sewing design: Textbook for bachelors in the field of "Technology of light industry products"*. (p.348). Tashkent: "Finance" Publishing House.
- (n.d.). *Educational-methodical collection on the module of methodology of organization and conduct of circuits in the direction of artistic creation of children's centers "barkamol avlod"*. LE Yunusov - Head of the Department of "Applied Sciences and Methods of Extracurricular Education" Regional Center for Retraining and Advanced Training of Public Education under the Tashkent State Pedagogical University named after Nizami, etc.
- Muhammedov, M. M. (1992). *Social'no-jeconomicheskie problemy material'nogo stimulirovanija v torgovle* (Doctoral dissertation).
- Aslanova, D. H., Sattarova, Z. I., & Alimova, M. T. (2016). Regional'nyj turistskij klaster kak instrument povyshenija jeffektivnosti jekonomiki regiona. *Nauchnyj rezul'tat. Jekonomicheskie issledovanija*, 2(1 (7)).
- Toirxonovna, A. M., Obloqulovich, U. T., & Tuychiev, I. I. (2020). Institutional Framework for the Development of the Tourism Market. *Indonesian Journal of Law and Economics Review*, 8, 10-21070.
- Toirxonovna, A. M. (2016). LM, Analysis of trends and forecasting the development of the international tourism market. *SAARJ Journal on Banking & Insurance Research*, 5(1), 50-70.
- Muhammedov, M. M. (2008). Zanjatost', uroven' zhizni i gosudarstvennoe regulirovanie rynka truda.
- Alimova, M. T., Nasimov, A. R., & Rakhmonov, S. S. (2020). The methodology of the formation of tourist clusters: the example of the regions of Uzbekistan. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 14462-14475.
- Muhammedov, M. M. (n.d.). *Sokrashhenie chislennosti trudovyh migrantov i predlozhenija po povodu dal'nejshego iskorenenija trudovoj migracii*.
- Alimova, M. T., Obloqulovich, U. T., & Rakhmonov, S. S. (2020). Asystematic approach to the developmen to the regional tourism market. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 14252-14261.
- Muhammedov, M. M., & Turabekov, S. Sh. (2017). Ÿzbekistonda iktisodij Ÿsish sur#atlarini zhadallashtirishning jangi imkonijatlari. *Jekonomika i finansy (Uzbekistan)*, (3), 26-32.
- Aslanova, D. X., & Alimova, M. T. (2020). Methodology for the identification of tourist clusters: the example of the regions of uzbekistan. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 14820-14833.