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PROBLEMS IN THE MANUFACTURE OF GARMENTS IN THE KNITWEAR INDUSTRY

Abstract: *The weight of knitted garments is constantly increasing. This is due to the high service life and cost-effectiveness of knitwear. The steady growth of the production of chemical fibres, especially synthetic yarns, and the rapid development of knitting production techniques have greatly contributed to the development of the knitting industry. This article discusses the problems of the development of the knitwear industry in Uzbekistan.*

Key words: *knitted products, woven fabric, constructive solution, chemical fibres, synthetic yarns.*

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Introduction

We know from history that the production of knitwear was known centuries ago in historical literature. During excavations of the Egyptian pyramids, various knitted products were found there. From about the 5th century, hand-knitting was introduced in the Arab countries, and from the 11th century, the production of knitwear entered Europe. Knitted workshops were set up in England, France, Germany and the Czech Republic. During this period, socks, scarves and hats were mainly woven using spitz. The first knitting machine was created by William Lee in 1589, making this machine a novelty of universal significance in the history of knitting production. The Republic of Uzbekistan is moving forward on the path of independent life to a bright future. Over the past period, several practical steps have been taken to strengthen our independence politically and economically. - The use of equipment

is the reconstruction of existing enterprises, raising the quality of products to world standards [1-6].

Fulfilment of these tasks depends primarily on the training of highly qualified personnel. At the same time, it requires a radically new approach to the production of quality finished products.

Materials and methods

One of the ways to create the competitiveness of finished products is to produce high-quality and affordable knitwear. The scientific approach to the expansion of the range of finished products requires the development of design and technology based on the analysis of the concept of raw materials – knitwear [7-11]. At the same time, the creation of ready-made products that meet the requirements of the market, which can be quickly applied to production using local raw materials, provides high efficiency. The enterprises of the knitting industry produce knitted fabrics, including technical fabrics, socks,

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accessories, underwear and outerwear, gloves, hats, scarves and products used in industry and medicine. Yarns made of cotton, wool and chemical fibres are widely used in the production of knitwear. The weight of knitted garments is constantly increasing [12-15]. This is due to the high service life and cost-effectiveness of knitwear. The steady growth of the production of chemical fibres, especially synthetic yarns, and the rapid development of knitting production techniques have greatly contributed to the development of the knitting industry.

The main directions of development of techniques and technology of knitting production are the creation of automated continuous lines for the production of linen and socks; accelerating production processes by replacing equipment with more efficient ones; continuous processing of canvases using organic solvents; specialization of enterprises in the production of various products.

In the process of design and modelling of knitwear, important features of elongation, flexibility, elasticity, as well as technological processing are taken into account. The design and technological solution of knitwear depends on the degree of elongation of the fabric. Knitted fabrics are classified into groups according to the degree of elongation and tendency to deformation, as well as taking into account the nature of the raw material. According to the classification, knitted fabrics are divided into 3 groups: the first group includes low-elongated knitted fabrics, the second group includes fabrics with medium elongation, and the third group includes easily elongated fabrics [9-13]. This information is the main tool in the design of knitwear. The value of the weaving additive, which takes into account the elongation of the knitted fabric, is given in the documents and standards related to the general technical conditions applicable at the enterprise. The constructive solution of details in the construction of low-elongation, shape-retaining knitted fabric is similar to the constructive solution of products made of woven fabrics. Due to the elasticity of the fabric in the design of the knitted fabric piece, which has a large elongation, the piece sticks to the body because it is stretched to a certain extent.

The design takes into account the appearance, structure, properties and function of the fabric. Straight, sticky, and trapezoidal extended silhouettes are common in knitwear. The deformation properties of the knit are taken into account in determining the weave attachment be obtained along the breast line. Its value is smaller than that of fabrics. At present, for the range of knitted items, the total shedding value has been determined based on practical experiments. $P_g = 1-4$ cm for jumpers according to the fashion direction; jackets tip 2-5; 4-6 cm for jackets. From the easily stretchable canvas, the addition of underwear is taken to be 0, or it can be a negative number because the required expansion of the details of the item during

operation is provided by the stretching of the canvas. Most of the total attachment (50-55%), which is distributed between the construction sections as follows, is allocated to the width of the rear and front sections, and 25-30% to the width of the rear and front sections, respectively. When constructing the design of knitted goods, $P_{m,n}$ to the thickness of the fabric and the insertion fee P_{pos} for the formation of the required volume is considered. $P_{m,n} = 0$ for knitted fabrics with a thickness of 0.3 cm belonging to the first and second elongation groups, $P_{m,n} = 1.5$ cm if the thickness of the fabric exceeds 0.3 cm. In addition to the thickness of the canvas, it is distributed as follows: 0.3 $P_{m,n}$ -back section; 0.3 $P_{m,n}$. 0.4 $P_{m,n}$ -front piece. According to the method of construction of knitted goods, the additional value of the thickness of the fabric is taken into account in determining the vertical lines of the base net in the basic design drawing.

Knitted fabrics with high elongation are provided by inserting a three-dimensional shape from the fabric, instead of twists along the shoulders, side seams and shoulder seams. Its value is determined by the quality of the knitted fabric and the design of the product.

The location of the vertical lines of the base net is calculated by the following additions: $P_{l.sh}$, which takes into account the line of the shovels (in practical calculations, 1 cm is taken); P_{obsh} , a general shedding appendage along the chest line; in addition to the thickness of the canvas- $P_{m,n}$; to the width of the back piece - P_s ; P_p in addition to the width of the anterior segment, the breast vitreous is reduced to 1 cm.

The process of processing knitted goods consists of the steps of attaching the parts in a certain sequence, finishing them and the final wet-heat treatment. The choice of processing methods depends on the design of the product, the characteristics of the knitted fabric, equipment and devices, technological mode and parameters. Knitwear is given a moisture heat treatment under the influence of moisture, heat and pressure for a certain period of time. Under the influence of moisture and heat, knitwear is subject to various deformations quickly. Therefore, after the knitwear has been given a moisture heat treatment, a cooling and drying process is carried out. Taking into account the elongation of knitted fabrics, clothes and coupons, moisture heat treatment is provided at a certain temperature: wool knitwear 130-135 °C, cotton and lion fibre knitwear up to 120, viscose fibre knitwear up to 120 ... 130, acetate fibre knitwear 95 ... 100 °C, polyester fibre knitwear 60 ... 70 °C.

Conclusion

When the wet heat treatment exceeds the above norm, the knitwear may lose colour and strength. Knitwear should be processed under a small ($0.49 * 10^4$ to $4.9 * 10^4$) pressure effect. Otherwise, with increasing pressure, there is a loss of relief and width and the appearance of shiny spots on the surface of the

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canvas. We can conclude from this article that several problems in the production of knitted goods need to be solved and ways are shown.

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