

Selection of Symbolic Signs in National Dresses, Justification and their Physical-Mechanical Characteristics

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Annotation: In this article, the symbolic symbols used in national costumes are woven on weaving machines, their areas of application, and the physical and mechanical properties of the obtained fabric are analyzed with the help of tables and graphic diagrams.

Key words: Bending, stretching, torsional deformation, acrylic, thread, jacquard fabric.

The mechanical properties of gasification materials show their response to various forces. These forces are different, they can be large or small, and they can be affected once or repeatedly. As a result, bending, stretching, and twisting deformations appear in the materials. In sewing materials, warping deformation is often formed. Mechanical properties include tensile strength, elongation at break, work done at break, relative tensile strength, etc. These properties are used to show the maximum mechanical potential and quality of the material. Four-cornered samples of 50X200mm are made from the materials to identify them. These properties are determined separately for the width and length in the direction of the body and the frame. It depends on the structure and linear density of the threads, beating, density, and type of finishing. Fabrics made of synthetic fibres are durable. The group of physical properties includes hygroscopicity, air and vapor permeability, dust absorption, electrification, optical and heat preservation properties of materials used in sewing. Almost all of these are the ability of clothing to protect the human body from the sun and air, heat and cold, precipitation, dust and other surrounding environments, timely removal of excess moisture, steam and gases from the space under the clothing, and here describes the maintenance of the necessary climate for the movement of the human body, that is, the hygiene of clothes.

Some of the advantages of acrylic yarn include:



You can buy acrylic yarn at most yarn stores, especially big box stores. It is also widely available online. Due to the wide production of these threads, they often offer a variety of colours for many colours.

While acrylic yarn prices vary greatly depending on a number of factors, as a general rule, they tend to be suitable for wool, cotton, and other staple fibres. This manganese fibre tends to last longer than many other materials, so it can be a good choice if you want to make something durable. Also, note that this varies from thread to thread.

You should read the yarn label to find out for sure if acrylic can be washed and machine dried, but most of the time it is. This is great for people who want something simple.

Many people believe that they are allergic to wool and other animal fibers. If so, a treatment material such as acrylic may be a good allergenic choice.

Table 1

Samples of knitted fabric	
Option I	Option II
	
A set of women's clothes with "Pomegranate flower" embroidery.	Pomegranate flower pattern on knitted top for women.

We managed to develop a pomegranate flower pattern on knitted fabric made of acrylic yarn in laboratory conditions. Each ornament has its own meaning, and in the composition of the costume we created, the pomegranate flower is considered to be a symbol of good fortune, good luck, wealth, and an abundance of hair in the valley. A Pomegranate flower pattern on a knitted top intended for women is presented in option II.

I should also point out that as time progresses, the pomegranate flower is stitched with sterilization. Pepper - protection from the evil eye, all kinds of evil, spicy food, this pattern is printed on caps, and many archaeologists interpret this pattern as the "embryo" development of the child in the mother's womb, that is, the porcelain flower, which means "life" depending on the colour has different meanings: white - peace and purity, red carnation - sincere love, and pink indicate friendship or mother's love.

The new upper jersey is produced in a combination of blue, red and cream colors. Because it is woven from 100% acrylic yarn, it has good air permeability, heat retention, frost resistance, shape retention and color fastness properties. From this idea, our main goal is to develop a collection of clothes suitable for the Uzbek culture using patterns embroidered on knitted fabrics that can meet the needs of the population.

In order to study the effect of different raw materials and acrylic and polyester thread on the properties of knitted fabrics, the physical and mechanical properties of knitted samples were determined experimentally. In order to identify options with high physical and mechanical properties among the obtained knitted fabrics, research was conducted and the results were compared. Test results are presented in Table 1.

The double-layer jacquard fabric used for the base yarn in the I-variant of the knitted fabric has the highest air permeability index (95 cm³/cm²sec). The air permeability of the acrylic knitted fabric of option II (40.53 cm³/cm²sec), in which the spun acrylic thread was used as the base thread.

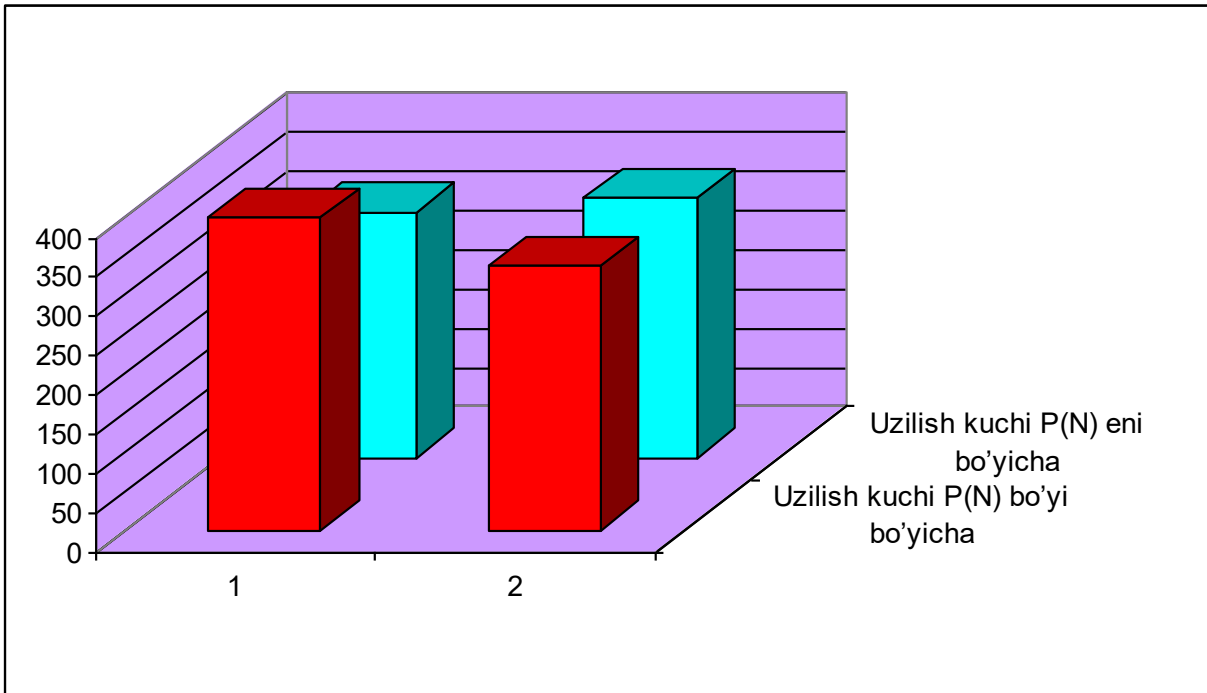
If the air permeability of the I-variant sample is 80.2% less than that of the II-variant sample. The surface density of the wool knitted samples in the I and II options is 2,930 gr/m² in the I option, and 2,729 gr/m² in the II option, but the surface density in the I option is 0.201 higher. The use of spun acrylic and polyester yarns with high volume content of the knitted fabric leads to a high surface filling index.

Physico-mechanical properties of knitted fabric

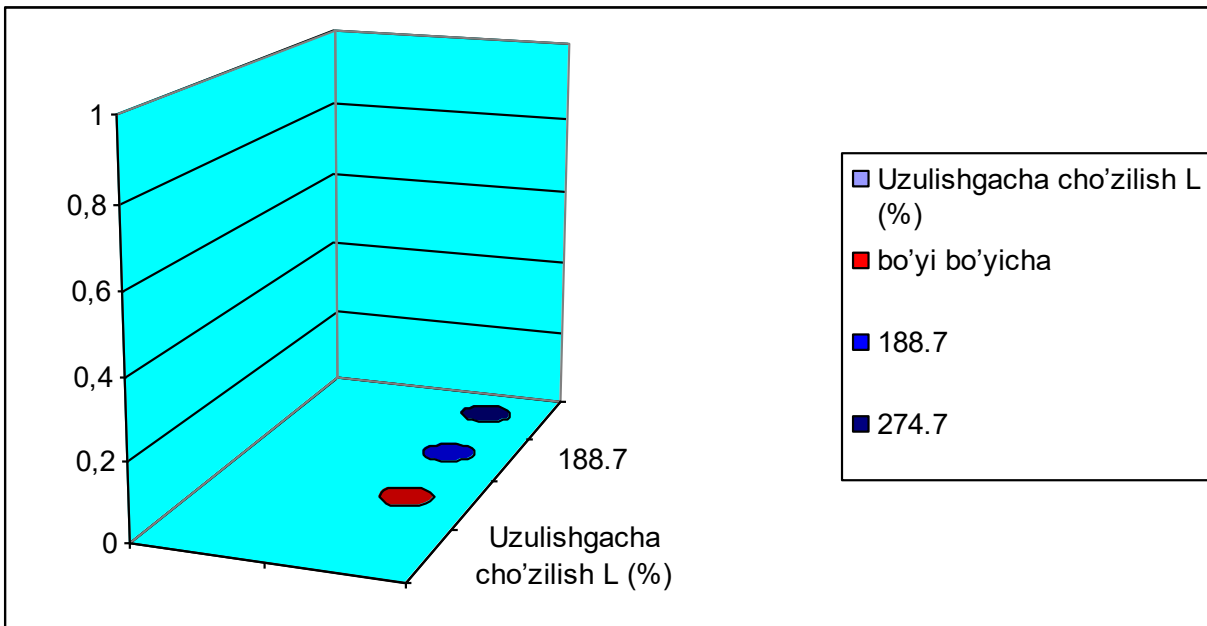
Table 2

Indicators	Options		According to the standard
	I	II	
Type of thread, line density	Pan 35 tex x2		
The % of yarns in the fabric	Acrylic 100%	Polyester 100%	
Surface density of knitted fabric Ms (gr/m ²)	2.930	2.729	
Knitting thickness T (mm)	1.81	0.84	
Bulk density d (mg/cm ³)	1.61	3.24	
Air permeability V (cm ³ /cm ² ·sec)	40.53	95	At least 40,40 -100 for outerwear GOST 31410-2009
Tensile force P(N)	by height	398	338
	By width	313	332
Elongation to break L (%)	by height	188.7	274.7
	By width	195.2	386.8
Irreversible deformation (%)	by height	91.4	89
	By width	81	11
Rebound deformation (%)	by height	8.6	8
	By width	19	92
Friction resistance I(minute/rev)			30-60 od-y 61-120 strong GOST 16486

As mentioned above, we determined the physical and mechanical properties of knitted fabrics and conducted an experiment in the laboratory. The results show that the tensile strength of the fabric woven from acrylic fabric in option I is 398 P(N) along the length, and 338 P(N) in the fabric of option II, and 313 P in the width of option I. (N), and in option II, 332 P(N) were determined. It can be seen that the tensile strength diagram shows that the sample of option I is 60 P(N) more than that of II, and the width of the fabric of option II is 19 P(N) more than that of option I.

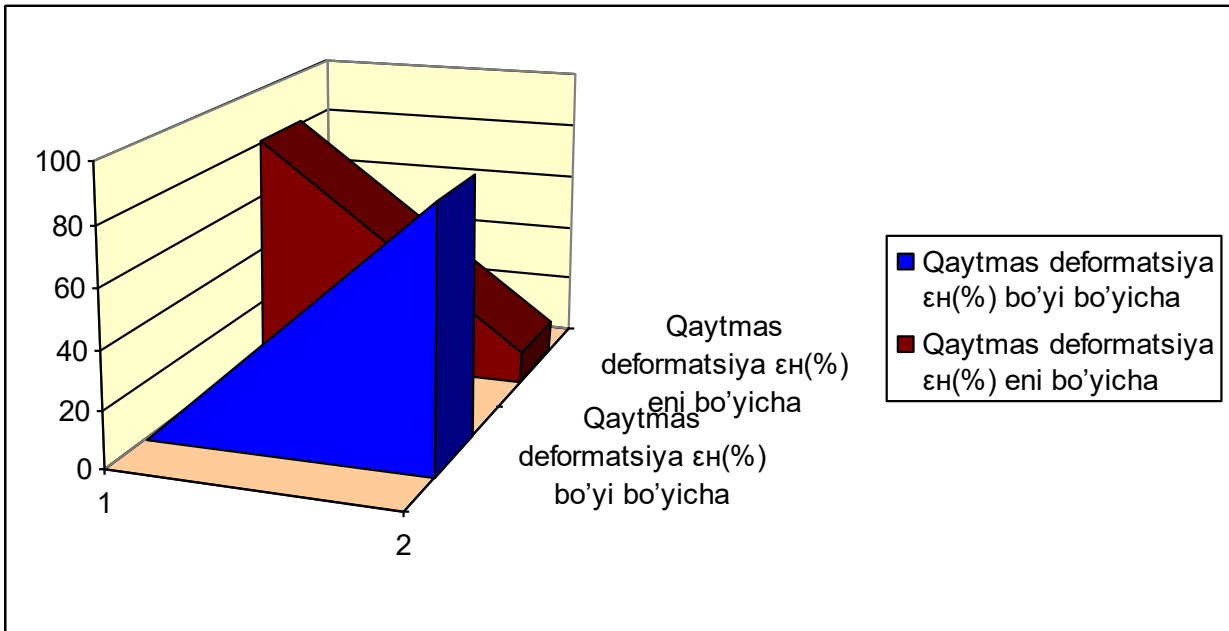


Scheme 1. Tensile strength diagram.



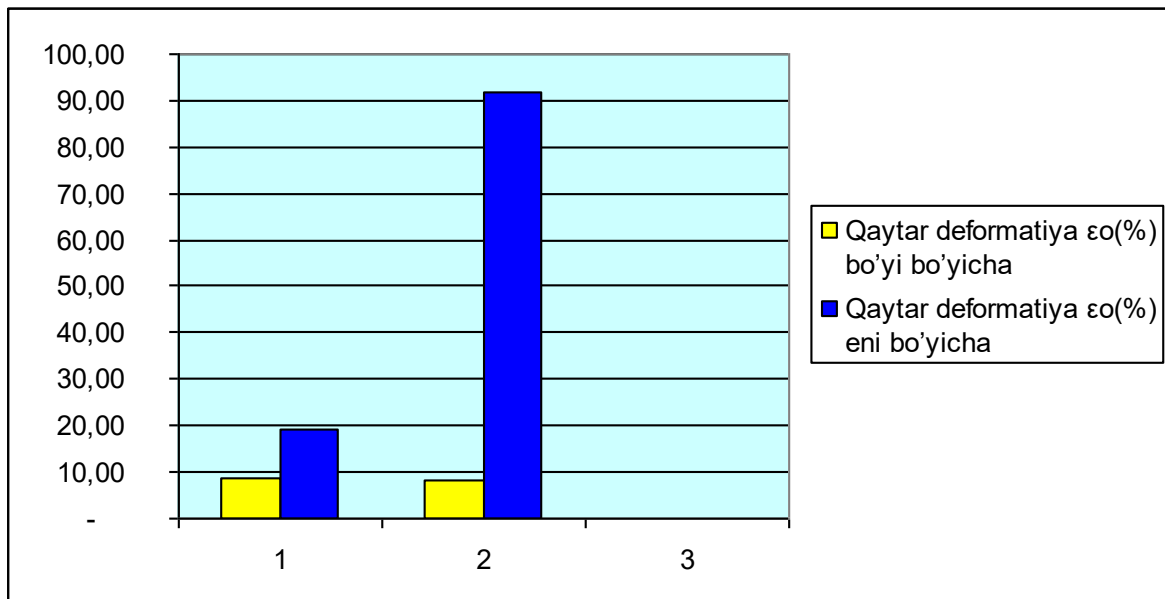
Scheme 2. Elongation to break L (%)

As for the tensile strength before breaking, the result of option II differs from option I by 86 L in length, and by 191.6 L more in width.



Scheme 3. Irreversible deformation (%)

The result of the experiment on irreversible deformation was 91.4% in option I, and 86% in option II, and the difference between the two experiments was found to be 5.4% more in option I.



Scheme 4. Rebound deformation (%)

We found that the result of option 1 is 0.8% more effective in return deformation, and option II is 73% more effective than the option I in terms of width.

Summary

In conclusion, it can be said that in the article, the symbols used in national costumes were woven on weaving machines, and the physical and mechanical properties of the obtained fabric were analyzed with the help of tables and graphic diagrams. According to the results of the analysis, the effectiveness of both options is high, and their design is in harmony with the dress.

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