ANALYSIS OF PHYSICAL MECHANICAL PROPERTIES OF PURPLE KNIT FABRICS KNITTED FROM SPUN COTTON NITRO YARN

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Abstract
This article is effective from local raw materials for use, feathered from spun cotton-nitron yarn Research works were carried out on the physical and mechanical properties of knitted fabric.

Keywords: knitwear, cotton-nitron, fluffy, air permeability, friction, deformation.

About 20,000 tons of nitrone are produced in the Republic of Uzbekistan per year fiber is made. In our country, acrylonitrile copolymer, nitrone obtained from methyl acrylate and itaconic acid has the ability to expand the field of application of polyacrylonitrile fiber. To produce it due to the increase in high demand for it. The question of increasing is being considered, for this it is hygienic it is necessary to increase the characteristics, which is children's clothes. allows to use it in the production of special clothes and to expand the range of knitwear made from a mixture of this fiber with cotton. [1-3].

It is known that knitted products made of pure cotton fibers have high hygienic properties, but they quickly wrinkle, change their shape after the first wash, and this negatively affects its appearance. One of the ways to solve this task is to modify the newly formed fiber with a solution of natural silk production waste. The obtained finished modified fiber will have the

hygienic and textile-technological properties of natural fiber. Polyacrylonitrile has high physico-mechanical properties, resistance to melting, heat resistance and resistance to the movement of microorganisms while maintaining fiber properties. In order to study the characteristics of pile knitting, nitron yarn with a linear density of 30 tex, spun cotton yarn with a linear density of 20 tex and spun cotton-nitron yarn with a linear density of 30 tex were selected. In order to study the effect of raw materials on the physical and mechanical properties of woolen knitted fabrics, samples were taken in 4 different options. The samples obtained differ from each other in the types of raw materials used in production.

Option 1 used spun cotton yarn with a linear density of 20 tex x 2 as the pile yarn and spun nitrone yarn with a linear density of 30 tex x 2 as the base yarn.

Option 2 in the production of woolen knitwear, spun nitrone yarn with a linear density of 30 tex x 2 is used as the pile yarn, and spun cotton with a linear density of 20 tex x 2 is used as the base yarn.

Options 3: In the production of woolen knitwear, spun cotton-nitron yarn with a linear density of 30 tex x 2 was used as the pile yarn, and spun cotton yarn with a linear density of 20 tex x 2 was used as the base yarn.

Options 4 used spun cotton yarn with a linear density of 20 tex x 2 as the pile yarn, and spun cotton-nitron yarn with a linear density of 30 tex x 2 as the base yarn. The physical and mechanical parameters of the samples are presented in Table 1.

Technological parameters and physico-mechanical properties of woolen knitted fabrics obtained from spun cotton-nitron yarn. 1-Table

POINTERS		OBTIONS			
		I	II	III	IV
Types of threads, linear density		Nitron 30 teks x2 38%	Cottone20 текс x2 23%	Cotton 20 teks x 2 24%	Cotton-nitron 30 teks x 2 34%
Surface density Ms (gr/m^2)		487.7	516.25	500.6	489.7
Thickness of fabric T (mm)		58.3	65.3	72.6	58.3
Volume density δ (mg/sm^3)		46.3	53.8	43.6	51.4
Breaking force P (H)	height	262.5	245.6	203.2	265.8
	width	190.3	146.1	137.5	214.2
Stretching to the junction L (%)	height	58.7	81.7	64.2	78.8
	width	190.3	154.4	122.2	108.0
Irreversible deformation $\varepsilon_н$ (%)	height	6.5	10.3	11.4	13.0
	width	28.8	33.8	32.6	19.3
Reversible deformation ε_o (%)	height	13.9	18.2	16.8	10.7
	width	17.2	26.4	21.8	15.1
Tissue entry K (%)	height	86.1	81.8	83.2	89.3
	width	82.8	73.6	78.2	84.9

In the results of the table, we can see that the spun cotton-nitron yarn sample is close to the same level as the spun nitrone yarn sample in terms of its tensile properties. It can be seen

that the increase in the percentage of deformation recovery had a very positive effect on the shape retention of the cotton-nitron sample. [4-6].

The sample obtained from the spun cotton-nitron thread is very different from the sample obtained from the spun cotton thread by its high shape retention properties. This was especially evident when using cotton-nitron yarn as the base yarn and cotton yarn as the pile yarn (option 4) in the development of woolen knitwear.

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