ASSESSMENT OF THE QUALITY OF NATURAL FIBRE FIRE SEEDS

Yaxshigul Ismatillaevna Sirozhiddinova

Doctoral candidate at the Tashkent Institute

of Textile and Light Industry

Sanovar Atoevna Hamrayeva

Professor of the Tashkent Institute

of Textile and Light Industry

Kamola Faxriddinovna Toshqulova

Student of the Tashkent Institute

of Textile and Light Industry

Annotation. The article reports that one of the main tasks of the textile industry is to develop a method of "sizing" yarn to improve fire-resistant, in the production of composite refractory fabrics. In order to improve the above characteristics to meet the needs and tastes of firefighters, it is stated that production of high quality yarn and fabric is possible not only by mixing cotton fiber, but also by incorporating chrysotile with cotton fiber into the asbestos fiber mix.

Keywords. cotton and chrysotile fibers, warp and weft yarns, special clothing, flammability properties, increase the flammability properties of yarn by the method of oxidation

The world has made some progress in developing, improving technology and improving the properties of refractory textile fabrics in various ways. When studying the state of production and the results of research in this area, the need to improve fire-technical classifications of refractory textile fabrics used for special cases, fire-retardant coatings, fire barriers that do not meet the accepted standard requirements is noted. Therefore, one of the important tasks remains to create refractory materials that meet the requirements by studying the flammability, distribution over the surface of the new recommended refractory fabrics, conjugation ability and physical and mechanical properties of textile materials treated with flame retardant.[1-2-3]

As is known, refractory fabrics have a feature, while fibrous materials and a fireproof person are evaluated by the specifics of health and safety protection [4-5]. In addition to the fact that the issued fire-resistant textile threads and fabrics are clear, it is necessary to ensure that the special clothes of fire fighters have air conductivity and convenience in accordance with the actions of the fire service. According to the results of studying the requirements for special clothes of fire extinguishers, the production of refractories and fabrics in order to improve the above properties is as convenient as possible not only by absorbing chemical protective coatings into the surface of the fabric, but also by mixing chrysotile fiber with cotton fiber.

In order to mix chrysotile fiber with cotton fiber and keep the hanging ends of cotton fiber from the fire, performing a theoretical analysis of the quantitative part of the recycling process creates opportunities for achieving the set goals in scientific work. The results of the tests were evaluated according to the Stewdent criterion after a study of the refractoriness of yarn and fabric obtained from a mixture of cotton fiber with natural asbestos fiber "chrysotile."

In the process of production and use of service clothing for fire extinguishers, textile personnel have both air conductivity and comprehensive convenience, and in the performance of their tasks, resistance to fire ensures their

safety. When the yarns are insulated in texture, a smooth coating is formed on the surface of the impregnated lime, which should not leave itself under the influence of water pressure used in the fire, and the water should be low.

When the fire properties of the recommended refractory fabric are detected, the following results are obtained. Refractory fabrics have specific features, while fibrous materials and a fireproof person are evaluated by the specifics of health and safety protection [6]. In addition to the fact that the issued fire fighting textile threads and fabrics are clear, it is necessary to ensure that the special clothes of fire fighters have air conductivity and convenience in accordance with the actions of the fire service. Based on the results of studying the requirements for fire extinguishers' workwear, it is possible to obtain refractories and fabrics in order to improve the above properties not only by absorbing chemical protective coatings into the fabric surface, but also by mixing chrysotile fiber with cotton fiber.

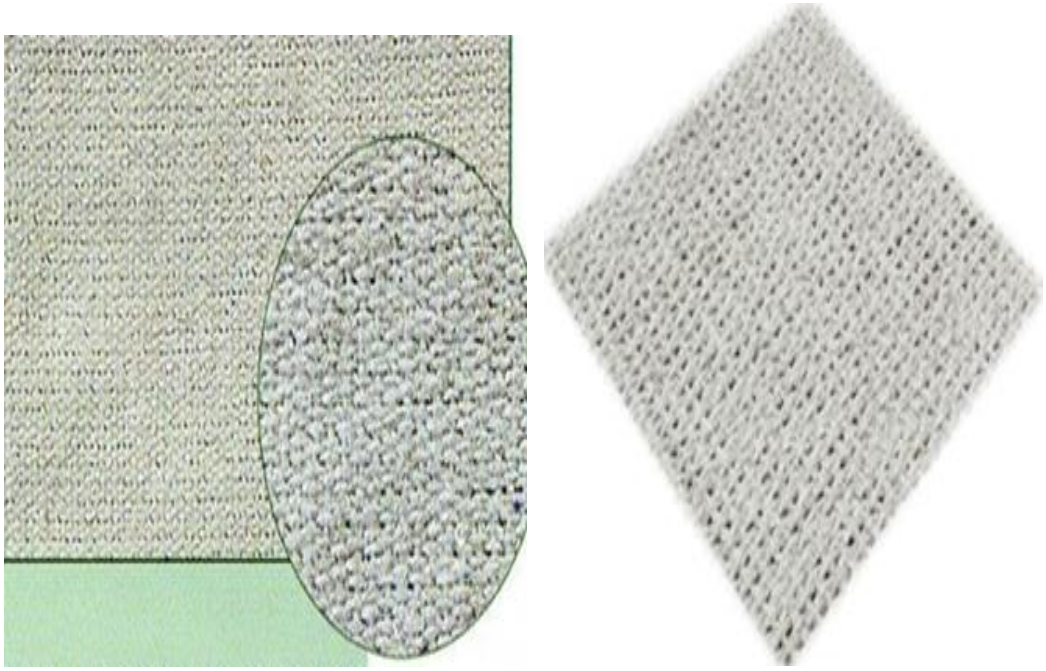

Figure 1.2 Creation of refractory fabric for special clothes of firefighters.

The results shown in the table showed that the combustion rate of the three percent blend yarns was different. Most importantly, the combustion time of the rope yarn in this sample showed a short time in all versions compared to the base. The reason is that the warp threads are framed by the basal method, and the rope

threads, gently wrapped butterflies, were used in a copper boiler with a slope of 30-40 minutes (Figures 2-3). These results indicate that extending the tightening time of the ropes results in a reduction in the burning time.

Ignition rates of mixed composition in different percentages

	Pointer Name	unit of measurement	T =189teks	UzDst 2321:2011 requirements
	line density	teks	189	140 and higher
	Linear density stress	%	0,2	+2,0 -2,5
	Interruption force	cN	2339,63	-
	Удлинение при переключении	%	13,09	-
	Coefficient of variation by interruption force	-	3,37	13,8
	Relative rupture force	cN/teks	7875,97	1412, and higher
	splash	Bur/m	264,00	-
	Input Variation Factor	-	7,0	-
	Surfacing factor	-	27,4	57
	quality characteristic	-	3,14	0,8
	humidity	%	7,6	8,0

Based on the experience, the following conclusion was obtained; When exposed to the tissue obtained for the experimental test, it was observed that the entire tissue did not burn. Due to the fact that the effect of the texture on the flame is up to 30 seconds and less than half the darkness in the treatment of this texture with the composition, in order to determine the nature of the refractory in

comparable values, it is considered a texture processed on the basis of the above definition.

The recommended refractory fabric meets all requirements for refractory properties. In the business environment, the storage of loose tissue has been extended, toxic phenomena in the texture for natural "sizing" products are not observed and allergic phenomena in workers are not excluded.

Figure 3. The dependence of the strands on the blur time.

For a warp and duck processed option

$$U_{1=}1{,}05*t+1{,}45$$

When processing warp yarns

$$U_{2=}ax^2+bx+c$$

For an experimental test tissue sample

$$U_{3=}1{,}875t+34{,}4$$

In this case, the t-time coefficients, a, b, c-regression I of the experimental test tissue sample

Based on the obtained experiments, the effect of the composition on materials was studied in order to make protective agents against refractory fabrics. During the experiment, it was found that when the mixture used to increase the refractoriness of the fabric was subjected to "sizing" on the body and rope threads of the fabric, basal and sealing, depending on the suffocation of the fabric, the degree of its effect differed. The textile two systems are a textile product formed from pattern yarns, and the first system lying on the rolling of the fabric consists of a body, and the second system consists of arch yarns.

The study of physical and mechanical fire and technical properties of refractory textile materials obtained on the basis of natural chrysotile fiber and cotton fiber, conducting experimental tests for their improvement has a special complexity. The main factor is the abundance of factors that influence the fire-retardation of textiles, their interconnectedness and uncertainty of the boundaries of change. Therefore, in most cases, the action occurs sequentially. The experiments were carried out in three repetitions. The results of the experiment were treated with mathematics in the following order [7-8].

- Excluding values that differ dramatically in the results of the experiment;

- Determination of random, quantitative nature of measurements: mean value, variance or limitation of mean square, and definitions of regression equations and their coefficients: determination and analysis of adequacy of obtained equation.

Excluding the values of incoming and outgoing factors that differ sharply in the results of the experiment is carried out in the following order.

mean {V¯} and dispersion S2 {y}

$$\bar{V} = \frac{1}{m} \sum_{i=1}^{m} \overline{V_i} \qquad (1)$$

$$S^2_{\{V\}} = \frac{1}{m-1} \sum_{i=1}^{m} (V_i - \overline{V})^2 \qquad (2)$$

In this case, the return of the m-experience, the cost determined on the experience of the Vi-input factor, V¯-O'rtacha value. Then, the experimental value of the Smirnova-Grabs criterion, very different from Vi max, is determined by the following formula.

$$\mathbf{V_{r\ max}} = (\mathbf{V_{r\ max}} \frac{\overline{V}}{S_{\{V\}}} \sqrt{\frac{m}{m-1}} \qquad (3)$$

Minimum cost of Vr mines has been established, the results of which vary greatly from experience

$$\mathbf{V_{r\ min}} = \frac{(\overline{V} - \mathbf{Vi\ min})}{S_{\{V\}}} \sqrt{\frac{m}{m-1}} \cdot \qquad (4)$$

Then, certain values of Vr max and Vr min are compared with the critical value of the criterion. To determine the type of regression equation, a graph V = f (x) is plotted.

When determining the coefficients of the regression equation, the small squares method is used. Parameters of oscillation coefficient (y = α_0+α_1 x) and non-linear discharge coefficients (y = α_0+α_1 x + α _ (2) x2) are determined

Equation Coefficient Values

Equation Level	coefficients		
	α_0	α_1	α_2
linear	$X_1 \sum V\,i$	$\alpha_2 \sum uVi$	-
Not linear	$\alpha_3 \sum V\,i$ $- \alpha_4 u \sum_i^2 Vi$	$\alpha_2 \sum uVi$	$\alpha_5 \sum_i^2 V\,i$ $- \alpha_4 u \sum_i^2 Vi$

coefficients depending on the number of defects checked are taken from a special table - a new factor replacing i-x

If the number of checks is (n = 2R + 1),

$$\mathbf{u}=\frac{x-K_{R+1}}{h} \qquad (5)$$

Number of checks per pair (n = 2R)

$$\mathbf{u=(2(x-x\_r))/h} \qquad (6)$$

Step of h-factors here

$$F_r=\frac{S^2}{S^2}\frac{(2)\ \{V\}}{(1)\ \{V\}} \qquad (7)$$

In this case, S} 2 (1) {V} is the average despersion,

Dispersions characterizing the degree of absorption of average values of 2.

As a result of comparing the estimated cost of the obtained F_r with the FT value, the hypothesis of adequacy of the obtained model was revealed in the table.

The value of the coefficients of the regression equations is determined by the estimated cost of the Stewdent test by the following formula:

$$t_r\{\alpha_i\}=\frac{|\alpha_i|}{S_{\{\alpha_i\}}} \qquad (8)$$

At the same time - S_ (α _ i}) - an indicator evaluating the average quadratic restriction of the regression coefficient α_i.

As a result of comparing the student criterion with the estimated cost, the significance of the coefficients α_0, α_ (1,) and α_2 [9-10] is determined.

Conclusion

According to the results of the study, it was found that chrysotile-fibrous mixtures meet the requirements of the fabric produced for the clothes of fire extinguishing personnel, as well as the properties of the refractory and air intake

increase, and the force of comparative interruption decreases. The analysis showed that the requirements for fire fighters are fully fulfilled.

Despite the high interest in refractory fabrics, little information is provided in the literature and Internet data on methods and technologies for producing refractory fabrics.

The aim is to develop a universal papardisation method that provides life for fibers of composite textile materials containing a refractory dressing, as well as separable substances (chrysotile powder, polyacriamide) with the decomposition of gases that do not burn at combustion temperature and are not burned between air and material.

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