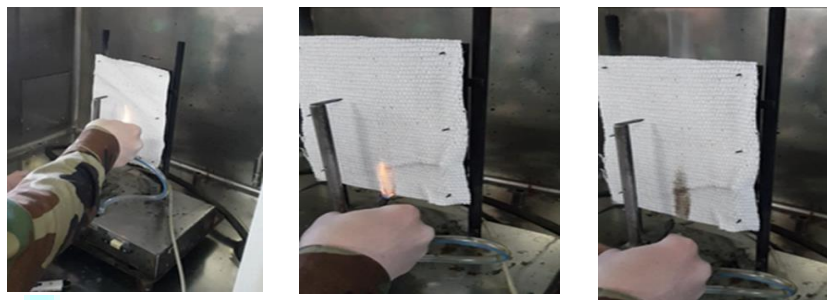


The following terms apply in this standard:

1. Residual combustion time - the time during which long-term burning of the material continues after removal of the fire source.
2. Deep burning - tissue burning for more than 5 s.
3. Well burn - burning of material after completion of fire action or extinguishing of fire source.
4. Ignition of fire - the batam material burns, which mainly covers the sample and without violating the main sample.

Experiment Execution Process



1- experience

2- experience

3- experience

In laboratory conditions, OTV equipment is used to determine tissue refractory, test work and express research. According to the test results, textile materials are divided into highly flammable and highly flammable fabrics.. Fire retardant textile materials shall be subjected to accelerated hydrolysis, testing before and after hydrolysis. Accelerated hydrolysis is carried out as follows: the displacement of a sample of material is tested on an experimental basis. The physical and mechanical properties of the fabric must be stable due to the need for chemical cleaning of certain types of textile materials at the request of the owners of the industry.

Before testing, a layer of cotton fabric with a thickness of 10 mm (nestokima) is laid in the base of the sample. The cotton wool is conditioned with the samples.

The test instrument is heated with gas for 2 minutes prior to testing. The sample tissue is attached to the frame so that the lower part of the sample leaves the lower pin by 5 mm. The sample is set in a horizontal position 40 mm above the lower edge of the sample and set at a distance of 17 mm to the sample. Time of fire impact on the sample - 4 s.

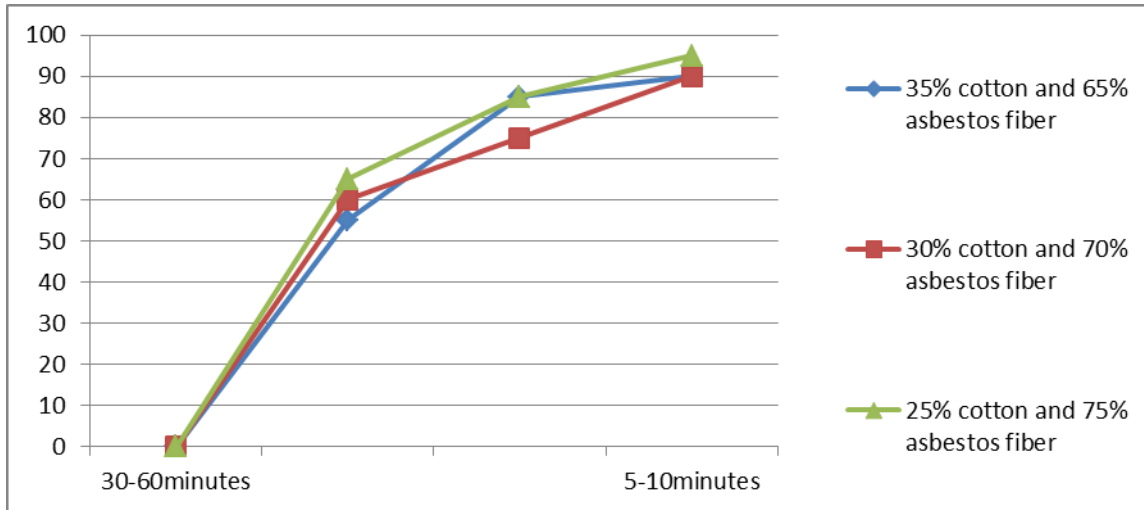
In the absence of stable ignition, a new sample is tested. Fire exposure time increases to 15 s.

In the absence of stable ignition of the sample, it is necessary to change the place of fire: set the fire at 60 ° horizontally and place it directly on the bottom of the sample in accordance with. The time of fire impact on the new sample is 5 s.

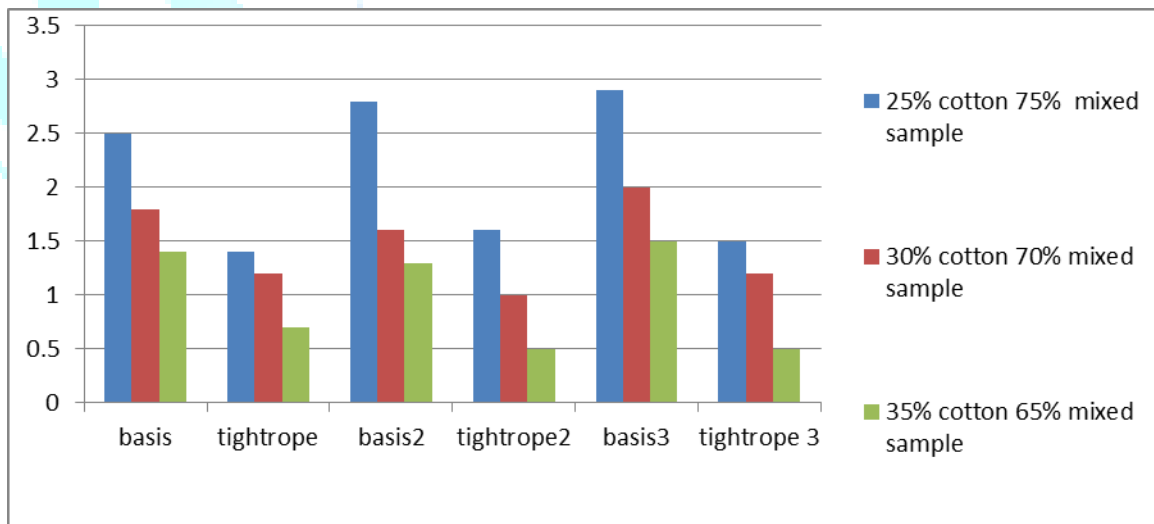
Number of experiments	Burning time, s		Remote field length, mm				Independent burning time, s	Final result
	By base	By tightrope	By base		By tightrope			
1	5	5	85	20	75	20	5-7-15	does not burn
2	7	7	90	20	80	20	5-7-15	does not burn
3	15	15	95	20	85	20	5-7-15	does not burn

Analysis of experimental test results

General technical requirements for workwear "Fabrics for special clothes. Main technical characteristics. Methods and Methods "in Clause 7-21 of the 11209-2014 Standard of the Interstate Standard GOST" Determination of Refractory Properties of Textile Materials and Requirements for Them "



From the obtained experience, it can be seen that during tissue combustion there is a high dependence of acrylic emulsion on the amount of poisonous substance in the component composition. When the fabric burns more than the amount of aryl emulsion, the amount of toxic smoke emitted from it increases, but the fabric does not burn, thereby increasing the bathing time.



Based on the results of testing the yarns made for the above refractory fabric, a diagram was built for the pelvis and rope. In this range 30% it can be seen that the burning time of the cotton 70% chrysotile fiber yarn decreased by 33.3%, and the 25% of cotton 75% chrysotile fiber decreased by 48.2%. According to the results of analysis of rope threads, it was found that 35% of cotton compared to 65% of the threads of the chrysotile fiber arch 30% of cotton 70% of the burning time of the threads of the arch with a chrysotile mixture decreased by 31.3%, 25% of cotton - by 75%.

Conclusion; Based on the results of the study, it was found that chrysotile-fibrous mixtures meet the requirements of the fabric produced for clothing of fire-extinguishing workers, as well as the properties of the refractory and air intake are increased, the strength of the comparative interruption is reduced. The analysis showed that the requirements for firefighters are met in full. Despite the high vulnerability to refractory fabrics, the literature and Internet data practically do not provide information on methods and technologies for the production of refractory fabrics. The development of a universal method of finishing composite textile materials containing a refractory dressing (chrysotile powder, polyacrylamide) from fibers, as well as non-combustible between air and material during combustion of a substance with decomposition of non-burning gases at combustion temperature, the output is advisable.

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