



ANALYSIS OF HYGROSCOPICITY CHARACTERISTICS OF MATERIALS USED IN SEWING SPECIAL CLOTHES

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Annotation: : *In this article, physical hygroscopicity characteristics of their derivatives from materials used for special work clothes in various industries have been identified and analyzed.*

Key words: *special clothing, moisture, hygroscopicity, air permeability, vapor permeability, waterproof, capillarity.*

АНАЛИЗ ГИГРОСКОПИЧЕСКИХ СВОЙСТВ МАТЕРИАЛОВ, ПРИМЕНЯЕМЫХ ДЛЯ ПОШИВА СПЕЦОДЕЖДЫ

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Аннотация: *В данной статье были определены и проанализированы характеристики физической гигроскопичности их производных из материалов, используемых для специальной рабочей одежды в различных отраслях промышленности.*

Ключевые слова: *специальная одежда, влага, гигроскопичность, воздухопроницаемость, паропроницаемость, водонепроницаемость, капиллярность.*

MAXSUS KIYIMLARNI TIKISHDA QO'LLANILADIGAN MATERIALLARNING GIGROSKOPIKLIK HUSUSIYATLARI TAXLILI

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Annotatsiya: *Ushbu maqolada turli sohadagi maxsus ish kiyimlari uchun foydalaniladigan materiallardan olingan na'munalarini fizik gigroskopiklik hususiyatlari aniqlangan va taxlil qilingan.*

Kalit so'zlar. *Maxsus kiyim, namlik, gigroskopikligi, havo o'tkazuvchanligi, bug' o'tkazuvchanligi, suv o'tkazmasligi, kapillarlik.*

Prior to the design of special clothing, the working conditions of workers are studied in detail, and technical requirements are drawn up based on them. Data on factors of development in the study of working conditions of workers and the impact of ULR on the person, the weight of the work performed, the dynamics of the movement of workers, the plan of Labor and rest, the duration of the exploitation of clothes, climatic conditions and aesthetic requirements for the clothes being designed are collected. Fabrics that are suitable for working conditions, hygienic aesthetic and operational requirements, expressed in technical prohibitions, are selected.

In order to maximize the adaptation of special clothing to protective, hygienic, ergonomic and operational functions, various lace elements are used. Protective constructive elements include belts, belts, shears and other slip details. The wear of clothes intended for high-temperature conditions should be invisible, the number of laying details and sutures should be reduced as much as possible.

The physical (hygienic) properties of the gaskets include hygroscopicity, air permeability, vapor permeability, water permeability, ductility, dust permeability, electrical conductivity, optical, heat preservation and other properties. The requirements for their physical properties are determined by the function of the gaskets and depend on their fiber composition, structure and finish. These properties are important in maintaining human health.

Physical properties can be divided into the following groups:

1. The property of fabrics depends on the ability to absorb.
2. The properties of the fabrics themselves depend on the ability to conduct air, water, steam, etc.
3. Features that characterize the attitude of fabrics to the influence of different temperatures.
4. Optical properties of fabrics.
5. Electrical conductivity of fabrics.

Textile fabrics vary in mass, dimensions, strength, birkity and other properties of various substances, which are in the liquid, gas or vapor state. In times of production and use of articles from textile fabrics, they are always under the influence of water or steam. There are several features that characterize the ability of fabrics to absorb water or steam. These include moisture content of fabrics, hygroscopicity, water absorbency (capillarity), water absorption, etc. Hygroscopicity determines the wet absorption property of the material from the environment (air). When assessing the



hygroscopicity properties of textile materials, most often their actual moisture characteristics are used.

For special weft fabrics, hygroscopicity is very important. In such gaskets, the hygroscopicity of flax fiber gaskets will be the highest. Yarn fabrics, natural silk fabrics, as well as hygroscopicity of viscose fabrics are also good. The hygroscopicity of synthetic, triacetate gases is low, only the hygroscopicity of the vinol gaseous is similar to that of the gaseous. Hygroscopicity of the coating decreases as a result of impregnation of the water-repellent solution, coating of film and rubber layer, treatment with non-washable applets. Water absorbency (capillarity) - is assessed by the height of the raised water on a sample immersed in water at one end for an hour.

The ability of the fabrics to conduct air, water, gas, steam, dust, smoke liquids, radiaktiv rays from themselves is called conductivity. Air permeability is the air permeability property of the material; depends on its fiber content, density and make-up. Sparse gaskets conduct air well, dense gaskets, water-repellent solutions are impregnated, rubber gaskets do not completely pass or poorly conduct air.







Vapor permeability is the property of gasification to transfer water vapor, which is separated from the human body. Water vapor passes through the pores of the gas, as well as on the account of hygroscopicity of materials. The gauze absorbs moisture from the air under the clothes and transfers it to the surrounding environment. Wool gaskets conduct water vapor slowly and better adjust the air temperature under clothing than other gaskets.

Waterproofing is a feature of the gaskets resistance to water leakage. Waterproofing is especially important for special gasses (brezents, palates, parosines), raincoat gasses, coat and suit wool gasses. Waterproofing will depend on the fiber content, density and make-up of the coating.

In order to increase the waterproofing of the gaskets and make it waterproof, it is given waterproofing and waterproof protective coatings. These properties choose the material depending on which special clothing is worn in the Kanda conditions. Hygroscopic properties of textile fabrics have a tendency to absorb and extract water and water vapor from them.

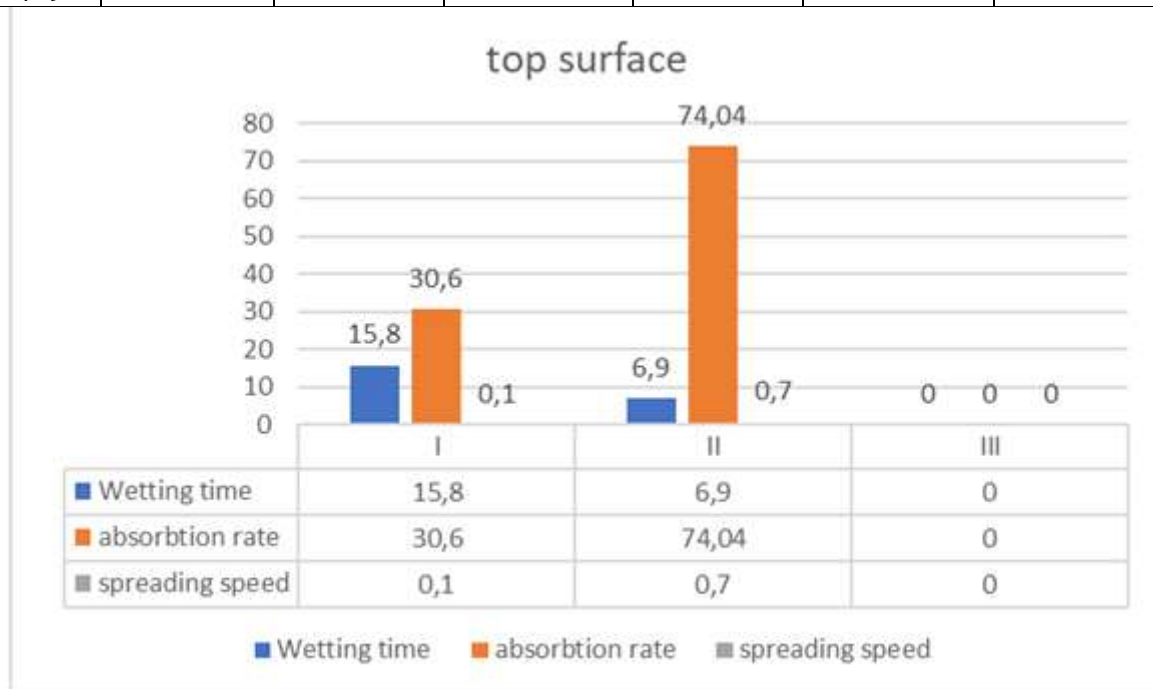
We took three samples of fabric used in the manufacture of special clothes to determine the water permeability, wetting time, to what extent it absorbs water, as well as the rate of water dispersion on the surface of the fabric, and checked them using a equipment called FY200, which measures the material moisture.

We can see the results obtained in Table 1.

	Top surface			Button surface		
	I	II	III	I	II	III
						
Wetting time	15,818	6,926	0	28,381	0	0
Absorbtion rate (%)	30,6884	74,048	0	28,278	0	0



Max watted (mm)	5,0	5,0	0	5,0	0	0
Spreading speed(m/s)	0,1086	0,7028	0	80,1746	0	0



According to the table, the first shelf absorbs 15,818% of water to itself during the 30,6684 second time, the second shelf absorbs 6,926% of water during the 74,048 %, and the third shelf is found to be an absolutely waterproof fabric.

Conclusion

Analyzing the results obtained from the table, we can conclude that the third one does not water itself more than the first and second one. So it turns out that special clothes made of this pattern can be recommended for workers of santechnika.

LIST OF USED LITERATURE:

1. Kukin G.N., Soloviev A.N. "Textile materials science
2. Buzov B.A., Modestova T.A. "Materials science of sewing production" M.1986.
3. Maltseva E.P. "Sewing materials science" M.1986.
4. Zhiraev Z.B., Kadiraliev D.R. "Material Science" T. "TACIS", 2001.
5. Ochilov T. and the head. "Testing of textile materials" T, 2005.
6. Sevostyanov A.G., Osmin N.A. et al. "Mechanical technology of textile materials" M. "Legprombytizdat", 1989.