

Research and Analysis Results of Obtaining Facade Liquid Wall Flower Papers from Fractionated Fibrous Waste

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On the basis of the scientific research conducted on the development of the technology of obtaining facade liquid wallpaper on the basis of fibrous waste of enterprises producing carpets and carpet products, its comparison with existing analogues in the world is considered characteristic.

The development of technology for obtaining various products, including facade liquid wall paper, as a result of complex processing of fiber waste from carpet and rug production enterprises, is explained by the creation of an innovative environment in the construction industry. The analysis of the literature showed that the practical works in the world experience are almost not finished, that is, the practical works that should be done in order to master the technology of obtaining facade liquid wallpaper by complex processing of fibrous waste of enterprises producing carpets and carpet products are not as shown.

Throwing flowers on a woven carpet depends on the color of the threads and comes from the craft and passion of the weaver. Russian scientist A. Davidov said about carpet weaving: "During the archaeological excavations in Khorezm, carpets with a history of a thousand years before Christ were found, which testified to the existence of the art of carpet and carpet weaving since ancient times".

Currently, the production of carpets and carpet products in the Samarkand region alone is 27.2% of the textile industry. The number of enterprises producing carpets and carpet products in the region is 24, these enterprises are 12 in Samarkand city, 6 in Urgut district, 3 in Payariq district, 2 in Samarkand district and 1 in Okdarya district.

The production capacity of the enterprises is 42,006 thousand square meters, in practice 37,913 thousand square meters of carpets and carpet products are produced. Today, 3661 employees are working in the industry.

In 2021, the plan for exports of light industrial products is 95 million dollars, of which 40.6 percent or 38.7 million dollars will be carpets and carpet products.

Such enterprises are increasing every year in the republic.

The expansion of the production of carpets and carpet products requires complex processing of fiber waste.

It is known that the composition of carpet products is composed of fiber composites that combine different fractions and functional groups. They are made up of polyacrylamide fiber, synthetic and polyester fibers and the like. On the basis of the research, the technology of obtaining facade liquid wall paper based on fiber waste of carpet production enterprises with this composite content has been mastered and introduced into production is considered one of the important activities.

Preparation of fiber waste of enterprises producing carpets and carpet products for complex processing - fractionation research stages have been mastered, based on which facade liquid wall paper and types of paper, as well as composite technical KMTs in the initial stages of the process of obtaining brands, polyacrylamide fiber, synthetic and polyester fibers and so on. The dissolution of wastes with different composition in solvents was studied. Because there is a need to use different types of glues to obtain facade liquid wallpaper. These glues are acrylic-based emulsion glues.

The scientific significance of the research results is explained by showing the scientific basis of complex processing of fibrous waste of enterprises producing carpets and carpet products, separating them into different fractions and creating the technology of obtaining organic materials and composite products.

The practical significance of the results of the research is that as a result of complex processing of fiber waste, facade liquid wall flower paper, as well as paper and paper types, are used for the production of basic and intermediate products for the construction and paper production industries.

On the basis of the scientific results obtained on the development of the technology of obtaining composite materials for various industries by reprocessing the fiber waste of enterprises producing carpets and carpet products:

Preparation of carpet and carpet product manufacturing enterprises fiber waste for complex processing - fractionation research stages were mastered, and based on it, facade liquid wall flower paper and types of paper, as well as the technology of composite technical KMTs stamps were put into practice at "INNOVATIVE CHEMICAL TECHNOLOGIES" LLC.

The history of carpet weaving goes back a long time, and since those times, people have been making their own industrial products with their own hands. Because there were no production enterprises in those days. Therefore, the necessary equipment for every house - carpets, felts, blankets and pillows - was the product of the people's hands.

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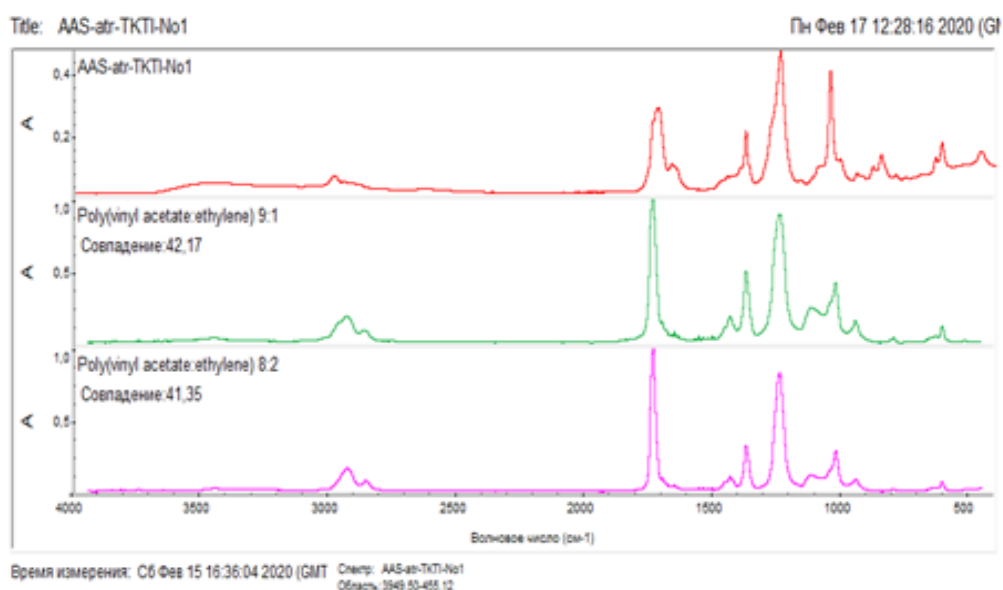
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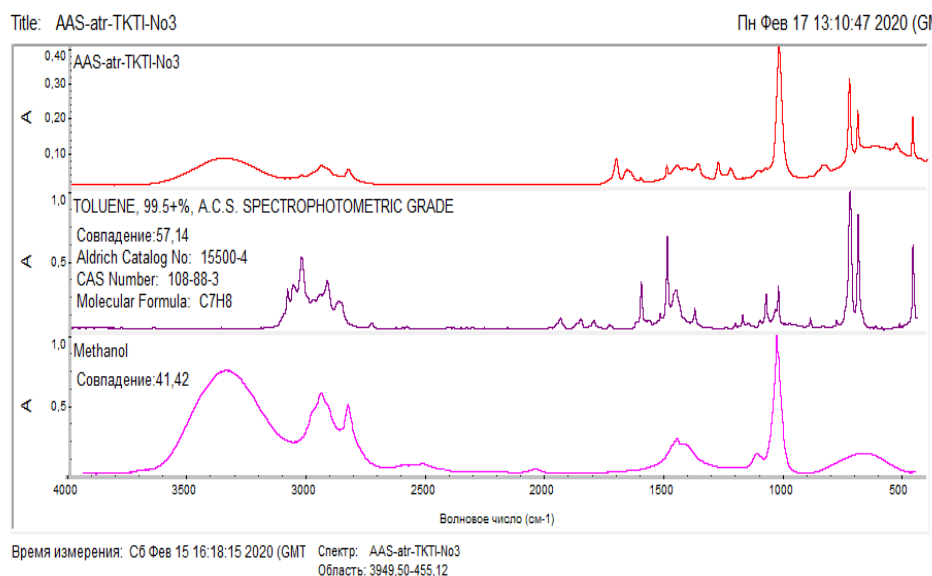
Preparation of fiber waste of enterprises producing carpets and carpet products for complex processing - fractionation research stages have been mastered, based on which facade liquid wall paper and types of paper, as well as composite technical KMTs in the initial stages of the process of obtaining brands, polyacrylamide fiber, synthetic and polyester fibers and so on. The dissolution of wastes with different composition in solvents was studied. Because there is a need to use different types of glues to obtain facade liquid wallpaper. These glues are considered as acrylic-based emulsion glues.

Solvents for polyester fibers are concentrated sulfuric acid and some organic solvents (mono-, di-, trichloroacetic acid; meta- and tricresol; orthochlorophenol; hexafluoroisopropanol, etc.) is counted.

Below you can see the state of fiber waste dissolved in a solution of concentrated sulfuric acid.



Pic-5. Appearance of dissolved fibrous waste in X-ray spectrogram in solution



Pic-6. Appearance of dissolved fibrous waste in X-ray spectrogram in solution

After the signing of the decision of the head of state on June 26, 2020 "On measures for the development of the field of hand-woven carpets in the Republic", wide opportunities were created for the development of the field. Preparation of fiber waste of enterprises producing carpets and carpet products for complex processing - fractionation research stages were mastered, and based on it, the technology of obtaining facade liquid wall flower paper and types of paper, as well as composite technical KMTs stamps was put into practice at "INNOVATIVE CHEMICAL TECHNOLOGIES" LLC ("Gissarneftgaz " Reference No. 729-01/12 dated May 12, 2023 of the Uzbekistan-Swiss joint venture). As a result, the facade made it possible to obtain liquid wallpaper and types of paper, as well as composite technical KMTs stamps.

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