



TECHNOLOGY FOR THE PRODUCTION OF PAPER COMPOSITES FOR DIFFERENT AREAS FROM FIBER WASTE

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Article history:		Abstract:
Received: 28 th February 2021		Paulownia wood pulp, shredded pulp waste and waste paper were ground in a laboratory on a centrifugal mill to produce composite paper pulp. In laboratory conditions, samples of various paper casts and their compositions were obtained.
Accepted: 11 th March 2021		
Published: 24 th March 2021		
Keywords: paper, breaking length, paulownia wood, degree of grind, auxiliary substances, cellulose, cellulose ethers, degree of polymerization, degree of substitution, ash content, temperature, humidity		

Microcrystalline cellulose (MKTs) from cellulose obtained by chemical processing of various fibrous wastes of the ginning industry and industrial enterprises and plants containing cellulose, as well as for various industries (various packaging, furniture and furniture packaging, roofing paper, writing paper, household paper) to create the basis for innovative technology for the production of paper composites and its application in the industry, as a result of which current issues such as improving the environmental impact of fibrous waste, ie reduction, are among the areas where innovative technology needs to be addressed.

According to statistics, the demand for writing and offset paper in Central Asian countries is more than 420,000 tons per year. The demand for writing and printing paper in our country is 120,000 tons per year, and this demand is mainly met by imports. At present, the world's leading countries, including China, Japan, Turkey, India, Korea, Pakistan, Romania, Portugal, Egypt, Cuba, USA, Argentina, Brazil, Mexico, use cellulose from non-woody plant species and cellular waste from industrial enterprises. are getting in the way. The Chinese government is leading the way. It supplies 65-75% of its domestic market with cellulose and paper and paper products based on it.

It is known that the demand for paper and paper products in our country is enormous. In order to overcome this shortage, there is a need to create innovative technologies for the production of paper and paper products, to accelerate the production system several times.

Paper production is one of the largest industries in the world economy. Currently, the industry produces more than 1,000 types of paper with different properties. Paper and paper products can be thin, thick, electrically conductive, electrically protective, waterproof, thin, durable, coarse, vapor, various gas, oil-resistant. Mineral fillers, adhesives and other substances are added to the paper mass to give the paper the required properties.

Further improvement of technology for the production of high-quality composite paper products and the introduction of innovative technologies based on scientific research into industrial production will ensure the full operation of existing paper and paper products enterprises in the country and the country's demand for paper products.

From the pulp of Pavlonia wood, pulp of waste wood and waste paper in the laboratory, in the centrifugal type of the mill, a composite paper mass was prepared. Samples of various paper castings and their compositions were obtained under laboratory conditions.

The table shows the physical and mechanical characteristics of paper samples taken in bulk at different fineness.

50% of the waste falls on the share of cellulose obtained on the basis of fiber waste.

Table 1
Properties of paper castings

Fibrous semi-finished products names	Grinding degree 0 SHR	Harvesting intensity, n	Harvesting length, m	Weight of casts, kg
1	2	3	4	5
Cellulose from Pavlonia wood:				
1	2	3	4	5
Unbleached	40	60	3654	91
	45	55	3379	86
	58	70	5600	90
Bleached	45	53	3395	90
	50	58	6146	89
	62	61	7200	90
Composition of litters	KM-1	KM-2	KM-3	KM-4
25/75				
50/50	38	26	2200	90
75/25	40	29	3020	93
0/100	45	35	3400	93
	42	44	4050	92

One of the promising steps in this area was the sampling of cellulose and composite paper on the basis of fibrous wastes of the ginning industry in the laboratory. The quality of cellulose and its products obtained in the laboratory was determined and indicated compliance with the requirements of regulatory documents.

Thus, the fact that ruberoid paper is obtained in production will lead to the further development of various paper composites on the basis of waste from the cotton and textile industries.

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