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UDC 687.051.3

PROBLEM OF DESIGN OF PRODUCTS FROM SEWING WASTE AT THE ENTERPRISE

ПРОБЛЕМА ПРОЕКТИРОВАНИЯ ИЗДЕЛИЙ ИЗ ШВЕЙНЫХ ОТХОДОВ НА ПРЕДПРИЯТИИ

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Key words: sewing industry, waste processing, the location of the templates, cabbage.

Ключевые слова: швейная промышленность, переработка отходов, раскладка лекал, межлекальные выпады.

Abstract. The main purpose of recycling sewing waste at the enterprise is the rational use of materials and the creation of additional products from waste. This article examines the main problems and issues that each sewing enterprise faces. The necessity of improving the «The location of the templates» module during the development of goods from waste identified and justified. Based on the research, a software module developed to automate the process of accounting for wastes, which formed when cutting and developing products from them.

Аннотация. Основной целью переработки швейных отходов на предприятии является рациональное использование материалов и создания дополнительных изделий из отходов. В данной статье рассмотрены основные проблемы и вопросы, с которыми сталкивается каждое швейное предприятие. Выявлена и обоснована необходимость совершенствования модуля «Раскладка лекал» в процессе проектирования товаров из отходов. На основании исследований

разработан программный модуль для автоматизации процесса учета отходов, образующихся при раскрое и разработке изделий из них.

The possibilities of processing sewing wastes in additional products at light industry enterprises without the use of special equipment are relevant not only from the point of view of environmental protection, but also from the point of view of economic gain, since waste is a cheap raw material.

The results of monitoring organizations in the production of textiles identified a number of key issues when designing such products:
– group of goods, products that an enterprise can produce;
– demand of this product in the market of services (availability of consumers);
– the market segment in the quantitative indicator (the volume of necessary products);
– material costs of the technological process and the cost of products;
– labor intensity of designing additional products.

At present, there is no automation of the design and preparation of production process, taking into account the rational use of waste generated during cutting.

Therefore, the questions on the use of waste for the production of new competitive products are addressed individually at each sewing enterprise, but their processing is not effective for a number of reasons: the complicated recording and collection of waste, the large time consuming for cutting materials, increasing the labor input by additional joining parts of products, and also large material costs for the modernization of the technological process [1].

Basically, cabbage and end residues used to produce parts for smaller products, decorative items in the product as parts to improve the functionality of the product, for fastening a stack of parts cut. Also it is the realization of waste in recyclable materials, in retail and related industries, and the production of non-profile products in the framework of the side production [1, 2].

As a result of the analysis of automated design systems, the most important stage in the development of garments from waste identified - the module «The location of the templates».

According to the results of experimental calculations a time-consuming part in the process of the location of the templates is observed when performing operations of selecting and uploading a kit of parts in cabbage, which in turn leads to lower performance standards of the operator and productivity.

Based on the research, a software module has been created that will automate the process of accounting for waste generated during cutting and designing products from them [2,3].

The software provides the allocation of plots of cabbage between the parts of the layout that are needed for further processing, parametric analysis of selected sites, using three-dimensional modeling analytic geometry, putting some of the template sets products information stock (databases).

The information stock is a database of an assortment of goods for clothing and household purposes, which can made from waste. The list of assortment of projected products from waste preliminarily formed by the economic and marketing

departments of the enterprise, taking into account the demand for household goods (slippers, hats, children's toys, finishing elements for products, cloths for animals).

Thanks to this stock, the companies have an opportunity to cooperate in the production of products and processing of waste, and create a separate database, which is available only for this user of the software module.

Application of the developed program at the enterprises of light industry will allow to:

– reduce the percentage of attacks between templates by 2-5%;

– reduce the volume of waste utilization;

– ensure the economic distribution of material resources;

– expand the range of household products from waste;

– increase the level of automation of the processes of designing clothes and rational use of raw materials;

– improve environment;

– create new jobs at sewing and non-profit enterprises for the manufacture of goods.

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A NEW SEED COTTON REGENERATOR

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Key words: seed cotton, cleaner, regenerator, waste, large trash, small trash, flying of seed cotton, regenerative effect.

Abstract. The article considers the problems of improving the quality of cotton fiber by developing a new design of cotton regenerator that provides more efficient and qualitative regeneration and cleaning of seed cotton from cleaner's waste of cleaners.