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ПІДПРИЄМНИЦЬКІ АСПЕКТИ ДИЗАЙН- ДІЯЛЬНОСТІ

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THE USE OF ZERO WASTE PRINCIPLE IN THE DESIGN OF MODERN CLOTHES

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The problem of textile waste as a negative factor of the fashion industry influence on the environment is considered. The main directions of the greening of design and production of clothes are determined. Based on the author's print, the modern collection of women's clothes is developed according to the zero waste principle.

Keywords: zero waste production, zero waste, zero waste cutting, eco-clothes, sustainable fashion, development of the collection, textile waste.

INTRODUCTION

The state of the environment is a global problem of our days, the solution of which is of concern to the world community. One of the issues



that need to be addressed first is the reduction of waste and its recycling. According to the United States Environmental Protection Agency [1], the share of textile waste landfilled throughout the country is about 8 % of total solid waste and is amounted to 11.2 million tons per year. In China, it exceeds 20 million tons. The acceleration of the process of supplying fashion products to the stores and the change of the consumers` attitude to the clothes as such that are “of one use” – both factors contribute to the waste generation. To reduce the negative impact of the garment industry, the enterprises began to green its processes. The introduction and implementation of zero waste production technologies is one of such directions.

PROBLEM DEFINITION

The purpose of the work is to develop a collection of women`s eco-clothes according to the zero waste principle.

RESULTS OF THE RESEARCH AND THEIR DISCUSSIONS

“Zero waste” is an eco-friendly lifestyle that becomes more and more popular in the world. Its supporters seek to generate as little waste as possible and send everything that is generated for reuse or recycling. In the fashion industry, the zero waste approach can be applied in different ways: as a principle of designing and preventing of waste generation at the stage of product designing and production; to apply the re-use to the finished product – to hand over the product from one owner to another; or to the products that were not sold and thus handed over for altering or to the commission stores instead of been landfilled or burned in the furnace.

Standard production of clothes requires 10 – 20 % of excess material to compensate for the differences in patterns, edges of rolls or defects, and up to 15 % for cutting cases [2]. All of this is potentially textile waste, much of which can be avoided by setting the appropriate goals at the stage of the product design. The “zero waste” principle of design is characterized by the minimal amount or complete absence of generation of textile waste in the process of clothes production.

The zero waste cutting is not a new concept – kimono, sari, chiton and many other traditional folk clothes are examples of such an approach. Its main idea is that the patterns should be placed like puzzles, occupying the entire area of the material [3]. In such a way zero waste design eliminates or minimizes the generation of textile waste, which is generated at the production stage, but does not relate to waste generated during the use of the ready-made clothes. For many modern designers, the use of the zero waste principle of cutting is not only a demonstration of an environmentally friendly position but also an opportunity to experiment with the shape and content of the product – for example, Timo Rissanen, Zero Waste Daniel, Farrah Floyd, and others.

Having analyzed the modern fashion trends and “zero waste” principle, a collection of women`s clothes with an individual author`s print has been developed according to the zero waste principle (Fig. 1).



An individual author's print has become the source of inspiration for the collection (Fig. 2). The method of cutting out the models of clothes with the minimum amount of waste is proposed. The developed collection is presented at the Redress Design Awards 2020 international competition [4].



Fig.1. The collection of women`s eco-clothes
«Scarlet prince»

CONCLUSIONS

The basic principles of use of “zero waste” production in the design of the clothes are determined. The author's collection of women's clothes “Scarlet prince” is designed on the basis of the creative search, the analysis of modern tendencies and fashion trends, and using the zero waste method of cutting.



Fig. 2. The source of inspiration for the collection

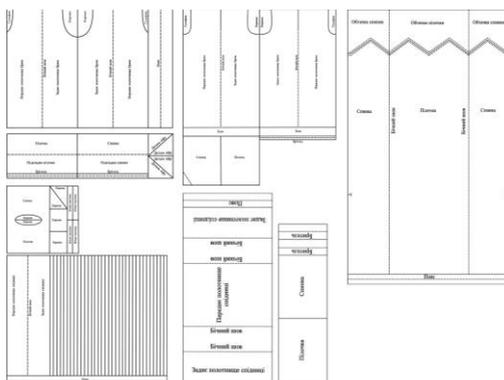


Fig. 3. Design, based on the zero waste principle of production



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ВИКОРИСТАННЯ ПРИНЦИПУ ZERO WASTE В ДИЗАЙНІ СУЧАСНОГО ОДЯГУ

Розглянуто проблему текстильних відходів як негативного фактору впливу модної індустрії на навколишнє середовище. Визначено основні напрями екологізації дизайну і виробництва одягу. На основі авторського принта розроблено актуальну колекцію жіночого одягу за принципом zero waste.

Ключові слова: *безвідхідне виробництво, zero waste, безвідхідний крій, еко-одяг, стала мода, розробка колекції, текстильні відходи.*