

Section 1. INDUSTRIAL TECHNOLOGIES AND EQUIPMENT

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MODERN DIGITAL PRINTING ON LINEN GOODS

СОВРЕМЕННАЯ ЦИФРОВАЯ ПЕЧАТЬ НА ЛЬНЯНЫХ ИЗДЕЛИЯХ

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ABSTRACT

LINEN, DIGITAL PRINTING, FASHION TRENDS, PRINTS, PATTERNS, GEOMETRY, PLANT MOTIFS

The aim of the work is to design modern drawings for digital printing on linen fabrics of the Orsha Linen Mill. The enterprise has high-tech printing equipment in its arsenal. Printing is done on the Italian digital inkjet printer of «Reggiani» company. In modern market conditions, it is advisable to produce fabrics in small batches with a wide variety of patterns. The consumer demands more and more personalization and frequent change of assortment, and also ecological compatibility. Technologies for the production of raw materials and materials in the textile industry are also improving, moving towards digital printing on fabrics made from natural fibers.

АННОТАЦИЯ

ЛЕН, ЦИФРОВАЯ ПЕЧАТЬ, МОДНЫЕ ТЕНДЕНЦИИ, ПРИНТЫ, УЗОРЫ, ГЕОМЕТРИЯ, РАСТИТЕЛЬНЫЕ МОТИВЫ

Целью работы является проектирование современных рисунков для цифровой печати на льняных тканях Оршанского льнокомбината. Предприятие имеет в своем арсенале высокотехнологичное оборудование для печати. Печать производится на итальянском цифровом струйном принтере фирмы Reggiani. В современных рыночных условиях целесообразно выпускать ткани малыми партиями с большим разнообразием рисунков. Потребитель требует все большей персонализации и частой смены ассортимента, а также экологичности. Совершенствуются и технологии производства сырья и материалов в текстильной отрасли, шагая в сторону цифровой печати на тканях из натуральных волокон.

Linen products differ not only in their refinement and beauty, but also in their hygienically important properties. They are hygroscopic and air-permeable, have high strength, withstanding multiple washing, while retaining their original size and color. They can be boiled, ironed with a hot iron, i.e. it is good to disinfect.

The main way to obtain images on fabrics is traditionally the screen printing, or, as it is also called, silk-screen printing. Currently, as a result of the development of digital printing methods, screen printing technology has developed strong competitors. The use of large-format printers (plotters) is especially advantageous when printing small-circulation works, since these devices do not require time and money to manufacture a printing plate.

The technique of digital printing allows you to accurately transfer the desired image to the surface without intermediate media, provides the ability to multi-color application, reflects all the small details of the picture, making it realistic and clear. This technique allows to apply drawings to the linen different in their saturation, size and color scheme.

Initially, digital printing was used in the production of soft advertising banners and signboards, but with the development of the printing technology itself, new market segments were mastered: textiles, clothing, home textiles, hipped and automotive awnings etc.

In modern market conditions, it is advisable to produce fabrics in small batches with a wide variety of patterns. Of course, in order to stay in the trend, it's important to know not only fashionable styles, fabrics and their color palette, but also the drawings, which have become more and more often in the focal point of the fashion world. A print can become the highlight of any outfit, if it harmoniously fits into the common features of the image and chosen clothes, it can also destroy the style when it is out of date. This implies the importance of understanding what designers designate for future fashionable seasons. The designer should know about the most important seasonal trends when designing a fabric pattern. Knowing the latest trends in the rapidly developing design industry, determining which colors, motifs and patterns will be in vogue allows to ensure the competitiveness of the produced fabrics.

In Belarus, the production of linen fabrics is presented by the Orsha Linen Mill. Today the main assortment of the finished products of the mill is made up of tablecloths, napkins, towels, sets of table linen, souvenir kits; bed linen: sheets, pillowcases, duvet covers, bed linen sets; blankets: half-linen jacquard multicolored and more. Linen tablecloths, embroidered table and tea sets, linen cloth of different density and texture - all this has already become a visiting card not only of the linen mill, but of our country as a whole.

The main task of the research work is the development of trendy competitive drawings for digital printing on linen fabric with the use of modern computer technologies produced at the Orsha Linen Mill. A collection of mono-spanning fabrics 150 cm wide for digital printing on linen was developed.

At the moment, very popular prints on the themes of botanical garden, pop art, batik, also marine themes, psychedelic drawings, imitation of watercolors, the printed pattern on the texture are in great demand.

Flower print is the constant of any fashion season. In 2018 the flower theme also actively manifested itself. Fans of flora on their own clothes can easily find the best option with a suitable scale of colors and a successful color scheme.

Such geometric forms as a circle, a square, a triangle, etc. have the simplest elementary structure. The fact that the human eye captures them without any difficulties is the reason why for so long the attention to the geometric ornament has been paid to by the most diverse peoples.

As an example, the print «Antiworlds». Elements are located evenly on the entire surface of the rapport, which creates calm in the perception of the pattern, despite the dynamic lines of the background. The simplicity of the composition is ensured by the quantitative relationships of the elements in shape and size, their contour outlines, the direction of the movements, the rhythmic organization of the components and their mutual balance, the limited and laconic character of the expressive means.

The developed design of sketches of fabrics corresponds to modern tendencies, takes into account ergonomics and technological features of production. Figures of fabrics and piece products do not have a dense filling of the dye, which can lead to a significant increase in the cost of production. Sketches are made taking into account the existing capabilities of the digital machine, namely: enhanced color reproduction and printing resolution. The collection of sketches takes into account modern tendencies in the field of textiles and consumer preferences of buyers related to the market segment of the plant.

The use of modern computer technologies in the textile industry determines the renewal in the approach to the graphic presentation in the design projects of fabrics and piece goods for a more complete realization of the resource of modern technical and technological capabilities of the new equipment of the enterprise, taking into account the analysis of current trends in the world market and consumer demand in the market segment, occupied by the plant.

Undoubtedly, the research pursues the goal of the promotion of products from the flax, Belarusian national heritage, in the textile market. The given assortment combines in itself ecological compatibility and modern information technologies.

Digital printing eliminates a number of technological operations for coloring and printing and shortens the period of preparation for the production, thereby adding to it an additional competitive advantage in rapidly changing fashion cycles. In addition, digital printing on textiles is a more ecological process, requiring less energy and water and leaving a minimal amount of waste compared to the traditional industrial printing process.

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