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**THE RESEARCH OF METHODS TO IMPROVE THE
AESTHETIC QUALITIES OF FUR GARMENTS**

Purpose. *The improvement of fur garments competitiveness based on increasing of aesthetic properties.*

Methodology. *Literature-analytical methods and system-structural analysis are used for research.*

Results. *The classification of aesthetic quality indicators of fur garments is analyzed founded on the results of research. The ways of increasing the fur products quality level of due to the improvement of its aesthetic properties are suggested. The opportunity to expand the range of items, that made from natural fur, is obtained.*

Scientific novelty. *The systematization and justification of methods for improving the fur garments aesthetic properties is carried out.*

Practical value. *Recommendations have been developed and proposed to improve the aesthetic properties of fur products, which can be used for manufacturing items of natural fur at Ukrainian enterprises. The opportunity to expand the assortment of products from natural fur is obtained.*

Keywords: *fur garments, aesthetic qualities, the improvement of product quality level.*

Introduction. Meeting the consumer demand is the main task of modern enterprises. Demand as a need, supported by consumers' ability to pay, is a decisive factor in the formation of the industrial range [1]. Competitive advantages of fur clothing are growing at their fullest satisfaction of human needs that form the demand. One of the possible ways to affect the competitiveness of manufactured products is to offer new product on the market, which combines enhanced exploitation and additional aesthetic characteristics [2].

In the current social and economic conditions, the successful work of fur manufacturer enterprises is impossible without constant renewal of the product range. The high cost of fur clothing, modern pace of life requires a more thorough analysis of the product design and research of tools for improving their quality. One of the instruments to meet consumer demand for garments made of natural fur is increasing their aesthetic qualities - the use of new design and technological solutions, original features and finishes. A significant role in expanding the range of fur clothing play methods of processing and finishing of the source material – fur semi-finished material, modern methods of cutting and obtaining fur plates.

Objectives. Thus, the study of current trends increase the aesthetic of fur clothing and implementation of new technologies in production processes make it possible to expand the product range of fur products and enhance the competitiveness of garments made of natural fur. The given tasks could be solved by systematization and generalization of scientific and technical information.

Research results. Consumer properties of fur garments are caused by the natural properties of fur skins, technological operations of processing semi-finished products and tailor production operations. It is reasonable to review the classification of aesthetic quality indicators of fur clothing to improve the aesthetic level of products.

Aesthetic quality indicators of fur garments are divided into three groups (Fig. 1).

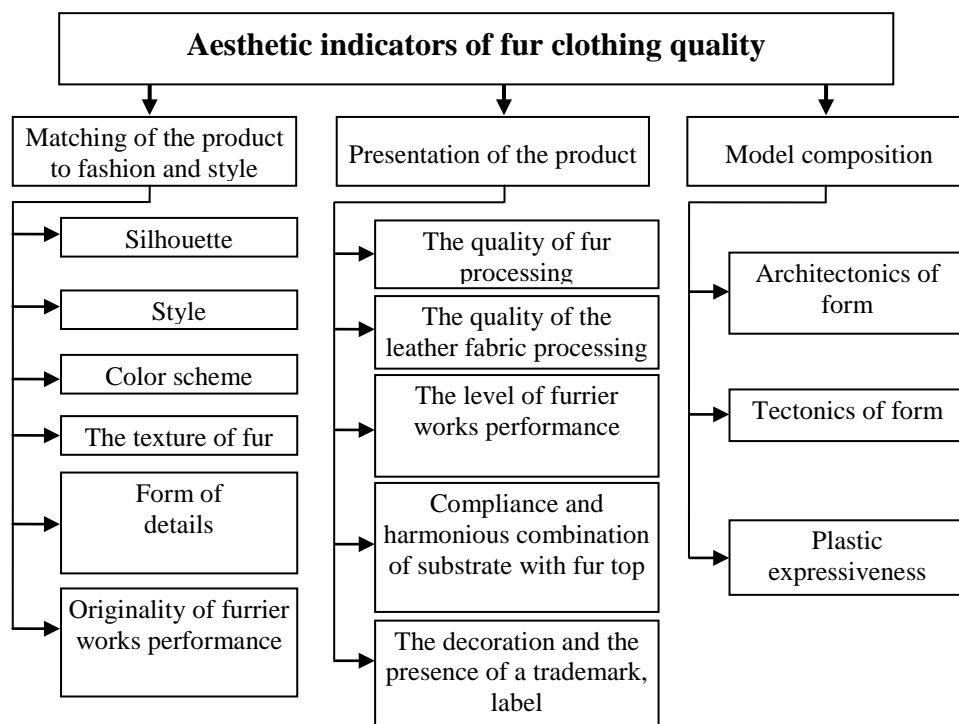


Fig. 1. Classification of the aesthetic quality indicators of fur clothing

Group aesthetic index, matching with fur fashion and modern style, consists of the following individual indicators: silhouette, cut, color, texture of the fur, shape details, originality of furrier works performance [3]. The aesthetic perception of fur products is directly related with the quality of fur trim and texture uniformity, color and other properties in selected product skins, as well as the quality and design of substrates, including originality, expressiveness and informative branded trademarks [4].

According to this group indicator of product presentation is determined by: quality of fur; quality of leather trim fabric; level of work execution; appropriateness and harmonious combination of substrate with a fur-top, quality of its processing; decoration and informativity of trademark, label. It should be noted, that in addition to the qualitative selection of skins the appropriate level of furrier works performance is characterized by: careful removal of defects and selection of inserts and consoles; thoroughness and accuracy of technological processing and available structural elements, joints, details (quality of stitches, seams, edges equality, symmetricity of parts and components, reliability of seams and parts, etc.).

Three individual indicators that define the architecture and tectonics shape as well as plastic expressiveness of the product can characterize group index of aesthetic model composition. Under architectonics we understand the integrity of forms, consistency and harmony of shapes and colors, similarity of parts and the whole, internal organizational structure of the product. Plastic severity is determined by the elegance of design elements, tectonics by logical and constructive relationship forms, structures and properties [4].

As the next step, quality improvement of the aesthetic fur product based on the qualitative parameters was proposed (Fig. 2). Firstly, it is creation of the silhouette shapes corresponding with time and fashion, as well as improving of constructive solution of the models.

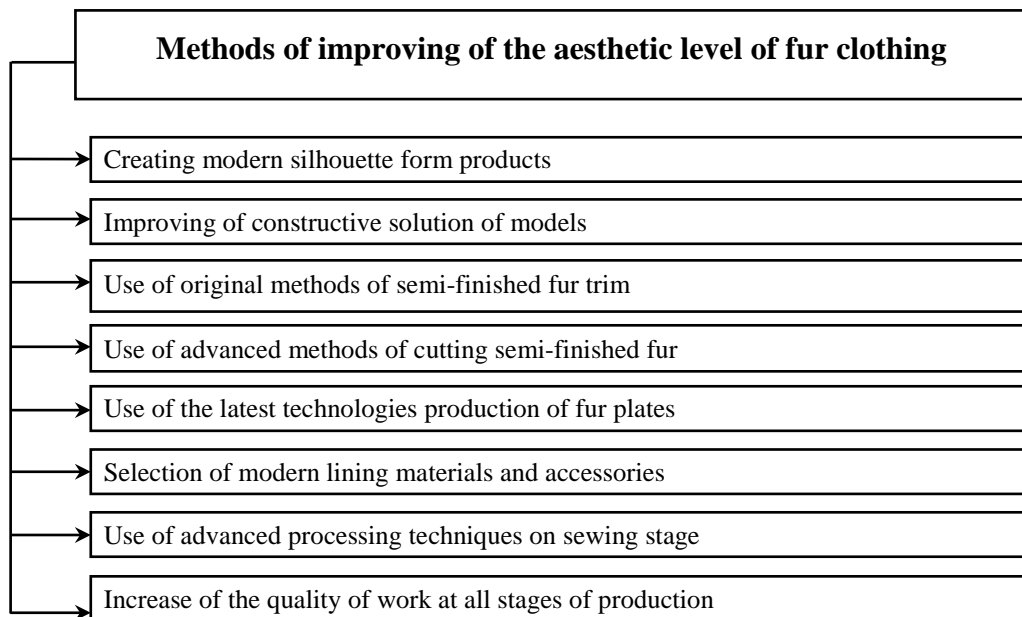


Fig. 2. **Methods of improving of the aesthetic level of fur clothing**

The extraordinary potential of fur gives designers the opportunity to bring fur products in avant-garde fashion (Fig. 3). Modern fashion dictates originality of constructive and decorative solutions, there is a tendency to new forms and volumes of natural fur apparel [5], which in turn causes the need to pay more attention to construction of the models. Indeed, design is a very responsible stage in the fur-clothing life cycle; it determines not only the quality level, but also economic efficiency of production and consumption. As shown in practice, analysis of scientific and technical sources, the most effective thing in new models developing is usage of the combinatorial principles, which are widespread in design [4; 6].

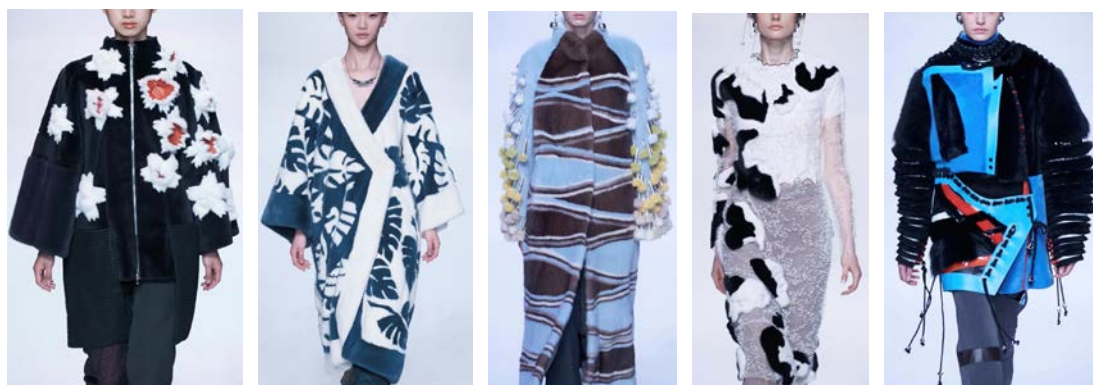


Fig. 3. **Modern constructive and decorative solutions [5]**

Fur is one of the costliest types of materials used in the garment industry. Cost of fur products on 80-90% consists of the cost of semi-finished fur [7]. Therefore, in the present conditions, special attention is dedicated to the methods of its refining. New high-quality processing

technologies for fur semi-finished products promote the expansion of the range of fashionable fur, which allow getting easy and plastic leather cloth of various colors. The final look of fur products largely depends on trimming processing of semi-finished fur, both at the stage of leather fabric finishing (printing, laser treatment, compression) and in the process of fur side (bleaching, dyeing, cutting, plucking, sheared).

Different effects of leather fabric (Fig. 4) are used for making bilateral clothing, scarves, rugs and much more. Modern technology allows print single color, multi-dye or tie-dye; any graphic look; apply a variety of monochromatic and polychromatic images on the leather fabric without altering the color of fur. Implementation of stamping is a new solution of adding 3D-effect to the leather side of the skins. With the help of laser engraving even photographic images can be put.

Technologies of dressing the fur side have become extraordinary variety (Fig. 5). Today cutting treatment of fur is done not only to provide the required length, but also for various artistic effects. Another focus is removal of thick fur and coarse guard hair using shearing or plucking technique.

Dyed fur lately is gaining more supporters. The use of dyes allows aligning tone of fur semi-finished and facilitating the work on selection of skins for the product. Apart from homogeneous staining, which was used in the past to conceal the vices, technologies for partial fur coloring which provide new precious shades and different effects stood out: fantasy (chaotic) painting - chaotic mixing of the skin surface of 3 to 20 colors; restore vertebral line; painting with gradation of colors - with smooth staining intensity in the direction from the head to the tail of skins; "snow top" - with various versions of coloring of fur tips and bases; screen dyeing - with application on the fur surface different images.

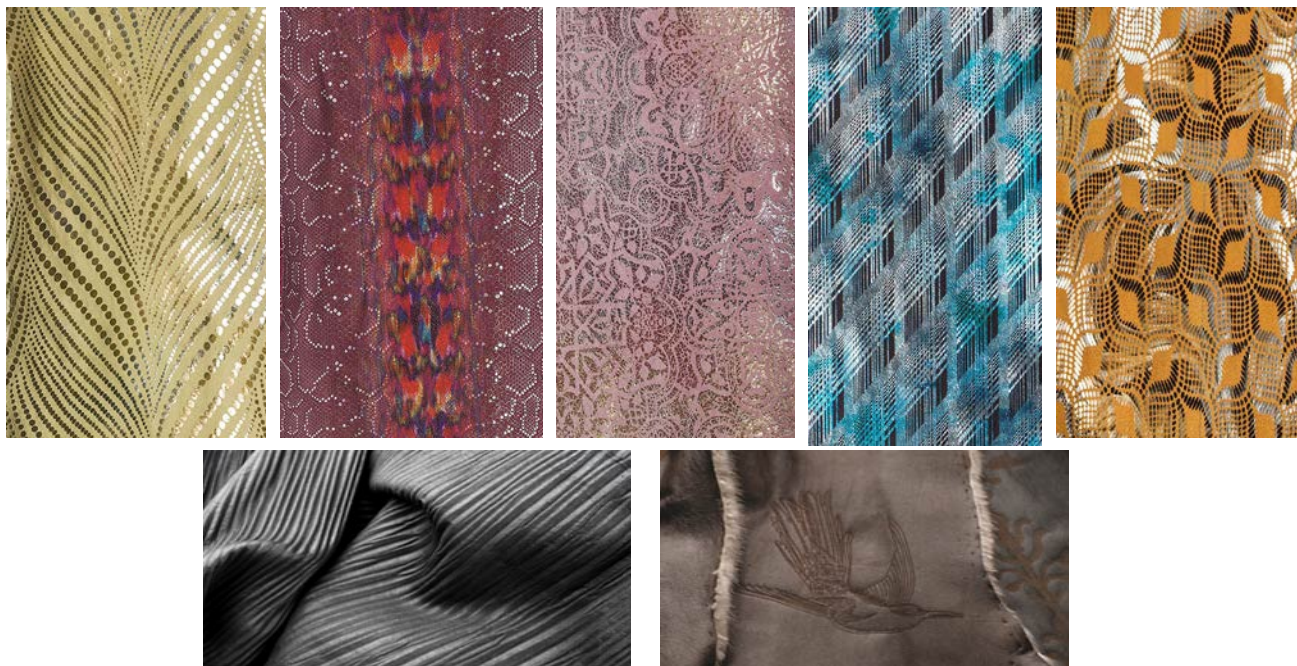


Fig. 4. Different effects of leather side [8-9]

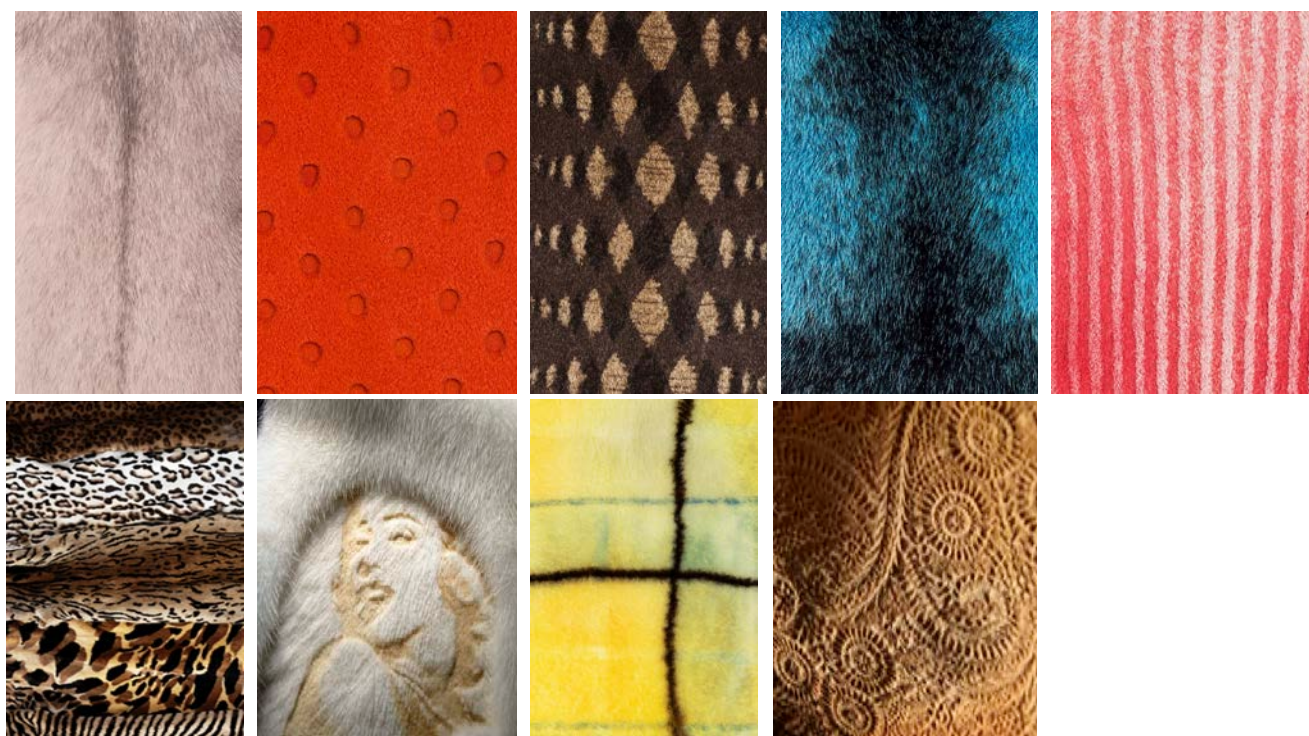
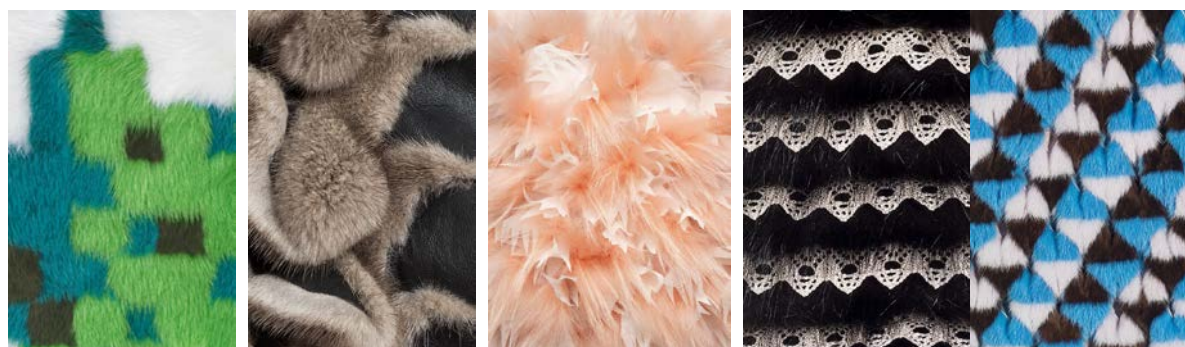


Fig. 5. Dressing the fur side [9-10]

Other point of interest is usage of new plasma technologies of fur semi-finished products trim, which allow purposefully change the structure of the material and improve the physical, mechanical and aesthetic characteristics. It is established that combination treatment with plasma adds additional complex of aesthetic properties (the original color, extra shine, color overflow effect etc.). It should be noted that plasma technologies are related to environmentally clear processes what is their advantage [11].

In general, an important step in improving the aesthetic qualities and the level of fur quality products is the selection of the appropriate method of skins cutting. Skins cutting is the most complex and time-consuming stage of fur products production [7]. One or more methods are used simultaneously. Sophisticated methods of skins cutting can change the shape, line size, density and direction of fur, fur pattern, and provide a better use of skins space (Fig. 6).



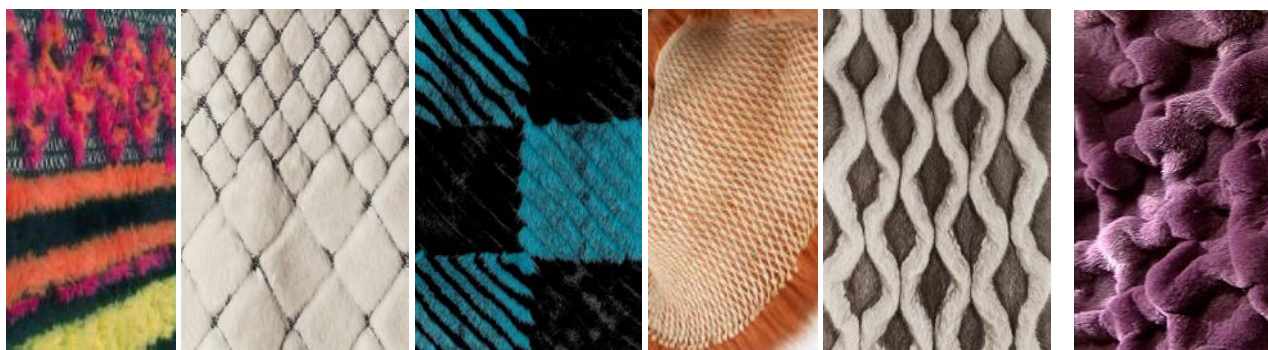


Fig. 6. Fur techniques [12-13]

They are used for all kinds of fur semis. The basis of the existing complex methods of cutting is a single principle when the skin is cut into pieces (strips, blades, etc.), which are then combined in certain combinations to get the desired effect. These include: bud, precipitation - the most technically complex, requiring skills; pointing that allows to lower volume and increase the area of skin by 80-90%, reduce the weight of the product; turning technique, which is used for making bilateral fur; partitioning, rollover etc. These techniques are not new, but in combination with the new technologies of fur processing, they become extremely modern. Modern methods of fur semis design are created based on innovation design centers such as «Saga Furs of Scandinavia» in Denmark. Unfortunately, currently there is poor understanding of the relationship of fur properties that define the aesthetic and technological possibilities of material; quality assessment of properties is not introduced which potentially could allow to predict the fur appearance at different ways of cutting [3]. As the cutting of semi fur is a necessary stage in design, examination of this relationship is an actual topic.

Modern technology contributes to the creation of the original fur products. Usage of knitting technique become widespread (Fig. 7): furrier pieces are cut into thin strips, after twisting we can get fur "thread" from which knit fur "jersey" is received. Clothes made of such yarns gives the feeling of weightlessness, softness, no sharp boundaries, "dry" designs and contrasting changes of color. From a knitted fur following products could be made: coats, jackets and hats, scarves, capes, boas, ponchos, stoles.



Fig. 7. Fur knitting [12-13]

Fur embroidery is promising area, which involves the use of textile mesh, which extends through the fur strip width of 4-5 mm, allegedly executed fur embroidery on fabric basis. As the basis, knitted or crocheted cloth is also used.

Weaving is a new technology in the fur industry. With woven into yarn remnants after cutting and plucking fur skins of fox and mink half-fur products are produced on the usual textile machinery, which are characterized by lightness, softness and practicality. In the process of binding both sides of the fur strip are inserted into one or more strands that serve as frame. This clamping system prevents stretching of canvas fur, distortion and twisting edges. Fur strips can be positioned at different angles to frame [4].

While expanding the range of fur products combining fur with other materials occupies a strong position, for example with leather, suede, fabric. Fur is combined with tweed, crepe, silk, lace cloths, knitted wool and various types of finishes.

Conclusions. Modern means of improving the aesthetic properties of fur clothing is extremely large and diverse. Without its analysis is not possible to meet consumer demand and production of competitive products.

Aesthetic quality of fur products was analyzed and systematized, based on which major ways of improvement of the aesthetic level and consumer appeal of fur products were discovered.

It was established that the application of semi-finished fur trim in combination with the usage of cutting methods has direct impact on the manufacturing process and the life of the fur clothing. Therefore, it is advisable to analyze the relationship of these methods of increase the aesthetic of fur with a change of physical and mechanical properties of semi-finished fur to create scientific bases of forecasting properties of fur in the technological and operational influences.

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**ДОСЛІДЖЕННЯ МЕТОДІВ ПІДВИЩЕННЯ ЕСТЕТИЧНИХ ВЛАСТИВОСТЕЙ
ШВЕЙНИХ ВИРОБІВ ІЗ НАТУРАЛЬНОГО ХУТРА
ЛОЗОВЕНКО С.Ю., БІЛОЦЬКА Л.Б.**

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Мета. Підвищення конкурентоспроможності швейних виробів із натурального хутра на основі вдосконалення їх естетичних властивостей.

Методика. Для проведення дослідження використовувались літературно-аналітичні методи, метод системно-структурного аналізу об'єкту дослідження.

Результати. На основі проведеного дослідження проаналізовано класифікацію естетичних показників якості хутряного одягу. Запропоновано шляхи підвищення рівня якості хутряної продукції за рахунок вдосконалення її естетичних властивостей. Отримано можливість розширення асортименту виробів, що виготовляються із натурального хутра.

Наукова новизна. Виконано систематизацію та обґрунтування методів підвищення естетичних властивостей хутряних виробів.

Практична значимість. Розроблено та запропоновано рекомендації по підвищенню естетичних властивостей хутряної продукції, що можуть бути використані при її проектуванні на підприємствах України. Отримано можливість розширення асортиментного ряду продукції із натурального хутра.

Ключові слова: швейні вироби з натурального хутра, естетичні властивості, підвищення рівня якості виробів

**ИССЛЕДОВАНИЕ МЕТОДОВ ПОВЫШЕНИЯ ЭСТЕТИЧЕСКИХ СВОЙСТВ
ШВЕЙНЫХ ИЗДЕЛИЙ ИЗ НАТУРАЛЬНОГО МЕХА
ЛОЗОВЕНКО С.Ю., БИЛОЦКАЯ Л.Б.**

Киевский национальный университет технологий и дизайна

Цель. Повышение конкурентоспособности швейных изделий из натурального меха на основе совершенствования их эстетических свойств.

Методика. Для проведения исследования использовались литературно-аналитические методы, метод системно-структурного анализа объекта исследования.

Результаты. На основе проведенного исследования проанализировано классификацию эстетических показателей качества меховой одежды. Предложены пути повышения уровня качества меховой продукции за счет совершенствования ее эстетических свойств. Получена возможность расширения ассортимента изделий, изготавливаемых из натурального меха.

Научная новизна. Выполнено систематизацию и обоснование методов повышения эстетических свойств меховых изделий.

Практическая значимость. Разработаны и предложены рекомендации по повышению эстетических свойств меховой продукции, которые могут быть использованы при ее проектировании на предприятиях Украины. Получена возможность расширения ассортиментного ряда продукции из натурального меха.

Ключевые слова: швейные изделия из натурального меха, эстетические свойства, повышение уровня качества изделий