IMPROVING THE DESIGN METHOD OF CLOTHING WITH A DEFINED UNIFORM FOR MILITARY PERSONNEL

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Annotation. *This article examines the improvement of design methodologies for standardized military uniforms intended for military personnel. The study focuses on enhancing the functional, ergonomic, protective, and aesthetic characteristics of military clothing while ensuring compliance with established uniform requirements and operational conditions. Special attention is given to the selection of modern materials, the optimization of garment construction, and the integration of innovative design technologies that improve comfort, durability, mobility, and performance. The research analyzes existing approaches to military uniform design and proposes recommendations for developing more efficient and user-oriented clothing systems. The findings contribute to the advancement of military apparel design by improving the balance between functionality, protection, and professional appearance.*

Keywords: *military uniform, clothing design, military personnel, ergonomic design, functional clothing, protective garments, textile materials, uniform standards, apparel engineering, military apparel.*

Taking into account both the fashion trend and the technical specifications, sketches of the proposed models have been developed. When developing the sketches, the silhouette shape of the product, the connections of the product shape, materials and structures, clarity and integrity of the composite solution, and the possibility of manufacturing them in one technological flow were taken into account. In accordance with the sketch of the projected clothing model, drawings of the model structure (MK) are being developed. To obtain the MK jacket, the method of constructive modeling is used. Constructive modeling is carried out according to the technical sketch of the model using the developed IMC [1].

Constructive modeling in mass production is used to reduce the development time of a new model of clothing, as it eliminates the repeated construction of the same type of products during the development of new models. It would seem that such a thing as a business suit absolutely does not accept any changes in its strict outlines and traditional approaches in various fields of work. This article examines the military-style clothing for stuffs.

New modern materials, product design and manufacturing technology are being improved. A comprehensive product quality management system is being implemented. Following it, the textile industry offers a variety of materials, the range of which continues to grow, due to the use of new types of raw materials. The quality of the material remains the main requirement. Not only comfort plays a role, but also wear resistance and strength of the material.

Along with the growth of society's needs in the military sphere, the increase in members' participation in it further increased the demand for service uniforms. Due to such factors as the anatomical structure of stuffs, freedom of movement, climatic and service conditions, uniform clothing must meet special requirements. Improving their comfort, freedom of movement, aesthetics of appearance and efficiency of service by improving the methods of designing uniforms in the military[2].

Important requirements in the design of the form:

Ergonomic design: ensuring freedom of movement;

Anatomical fit: shapes and sizes corresponding to the structure of the stuff's body;

Functionality: compatibility with multi-aspect service activities;

Hygienic requirements: air-permeable, moisture-absorbing fabrics;

Aesthetic appearance: stylish and potential design.

Analysis of existing problems:

Sample-based processing cases developed in uniform clothing designed for workers;

Difficult movement, tightening parts that have a bad effect on the nerve;

Non-compliance with local climate and service conditions;

High sweating and airtightness of fabrics.

Improving uniforms specifically in the military sphere not only increases their effectiveness in service, but also serves to protect their health, ensure mental stability, and increase their sense of pride through appearance. The forms developed on the basis of modern technology and materials facilitate the adaptation conditions of Service and occupy a large place in their professional activities.

Form preparation:

The main way to refine the design of clothing is a method of sequential processing of the fit of samples during their fitting on standard figures or mannequins. Therefore, fitting is an important, crucial step in the process of clarifying the design. When preparing the layout for fitting, the lines of the chest, waist, hips, middle (half-tilt) of the front, bottom of the product and sleeves are outlined on the details of the cut with crayons, estimate stitches or pencil, as well as balanced verticals in the direction of the warp threads near the borders of the armhole.

A mock-up prepared for fitting is put on the figure, shoulder pads are placed, and it is straightened. The model worn on the human figure is carefully examined, assessing the fit of the model, the length, width of the entire model and individual details. First,

the correctness of the design, shape and dimensions of the sleeve in length and width, and its position in the armhole are specified. Then the sleeve is evaporated. The product balance is being clarified. vertically. After correcting the balance, the silhouette of the product is refined, determined by the degree of its fit along the waistline and the amount of expansion along the bottom line [3].

As a result of a factor analysis of the data, it was revealed that the factors describing the convenience of a set of clothes as a whole (convenience of putting on and taking off clothes) and general factors describing the ability of military personnel to perform their professional duties while wearing this set of clothes have the greatest impact on the assessment of military personnel. The most significant influence, in terms of movement restriction, is exerted by factors characterizing movements in the shoulder and hip joints, as well as, to a lesser extent, the elbow and knee joints.

The scientific novelty of the work is as follows:

1) for the first time, a targeted development of field clothing in military personnel has been carried out, providing the required level of ergonomic rationality, taking into account the anthropomorphological features of female figures;

2) the most informatively significant parameters of mass-produced clothing are determined from the point of view of limiting the amplitudes of movements in large joints;

3) a geometric model and an algorithm for constructing detail scans in the initial (research) version of the three-dimensional computer-aided clothing design (TAPRO) system have been adapted for the construction of shoulder clothing of a straight silhouette;

An information and logical scheme for the ergonomic design of special-purpose clothing in a three-dimensional computer-aided clothing design (TAPRO) system has been developed, taking into account the angular biomechanical parameters of human movements. At the same time, the geometric model and the algorithm for constructing the details in the initial (research) version of the system are adapted to build ergonomically rational designs of shoulder clothing with a straight silhouette [4].

In order to ensure the universality of the process of designing special-purpose clothing, a methodological approach to the automated design of special clothing with a given level of ergonomic compliance has been developed, parameters determining the shape and size of the elements of a three-dimensional clothing model have been systematized, and recommendations for choosing their values have been developed.

LIST OF LITERATURE

1. Koblyakova E. B., Ivleva G. S., Romanov V. E. and others. Designing clothes with CAD elements. Moscow: Legprombytizdat, 1988. 463 p.

2. Dunaevskaya T. N., Koblyakova E. V., Ivleva G. S. Dimensional typology of the population with the basics of anatomy and morphology: Textbook for higher education. studies. establishments of legal industry. 2nd ed., supplement - M.: Leg. industry, 1980. -216 p.

3. Sukharev M. I., Boitsova A.M. Principles of engineering design of clothing. Moscow: Leg. pish. prom-st, 1981. - 272 p.

4. Kuznetsova N. D. Ways to increase the efficiency of the industrial clothing design process. Technology of light industry. 1982. - No. 6. - pp. 96-99.