

DEVELOPMENT OF A PACKAGE OF MATERIALS FOR WOMEN'S UNIFORM POWER STRUCTURES

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ANNOTATION

Analysis of the situation in the field of designing clothing for special departments has shown a lot of research and inventions to protect against harmful factors by the Special units of the Ministry of Internal Affairs.

Keywords: fashion design, special clothing, heat-shielding properties, developed package

INTRODUCTION

In the work of I.V. Molkova, a method of forming a composite package of clothing for soldiers of special-purpose units for protection from low temperatures is presented. The package under consideration contains a combined polyurethane foam insulation with air cells distributed in it, thereby reducing the weight of the product. Places of thread connections in products are hydrophobized, which in turn increases the heat-shielding properties.

In the work of E. Yu. Bakhtina, guidelines are presented for designing clothing with a given level of dynamic compliance (shoulder clothing designed in a three-dimensional computer-aided design system; belt - based on planar modification of the original part templates).

The work of D.N. Sorokina is devoted to the study of heat-accumulating materials for the manufacture of clothing. A mathematical model of the process of heat exchange in the "man-clothes-environment" system with the material under study has been developed, with the help of which the mass of the material required for various operating conditions is determined. A study of the thermophysical properties of heat-accumulating materials has been carried out and special clothing has been designed.

In the work of Lebedeva E.O. the theoretical substantiation of the effect of wind on a package of clothes with volumetric incoherent heaters is presented, studies have been carried out to determine the deformation of heat-protective clothing packages when blowing with an air stream, the effect of aerodynamic deformation of the investigated clothing packages on the reduction of thermal resistance has been studied, a mathematical model of the heat exchange process in the system "man- heat-protective clothing - environment ", taking into account the wind load on the clothing package, the design of the special clothing package with incoherent volumetric insulation with increased resistance to wind has been developed. The analysis of the information received, showed that there is a large number of studies aimed at studying and developing special-purpose products that protect against harmful environmental factors and maintain an optimal microclimate for the clothing space. However, the employees of the special-

purpose detachment in extreme conditions perform special functional duties that combine not only combat training, but also mountaineering skills, therefore, a special approach to the design of heat-protective clothing of this type is required, taking into account not only the operating conditions, but also the features of the actions of the fighters. along with consumer preferences. In the Central Experimental Design Base (TsOKB) of the Ministry of Defense in the Moscow Region, work is underway to design equipment for the Russian army. The exposition at the TsOKB presents five different sets of clothing for special forces. The kits shown are made of modern materials with improved properties. Demi-season clothing is made of moisture-resistant materials, winter clothing is made of GORE-TEX® materials. Thinsulate is used as insulation, and the lining is made of Polartec materials. The developed set of equipment also includes a backpack, harnesses, ropes, five types of hooks, a descender device, etc. Thus, it should be noted that the current winter suit of the special forces officers has a number of the following disadvantages:

- Significant weight (3,495 kg, jacket 2,030 kg, semi-overalls 1,465 kg);
- The lack of ventilation elements that allow you to regulate a suitable microclimate, which must be taken into account especially when designing clothing for mountain conditions;
- The lack of elements that ensure the fit along the bottom of the semi-overalls;
- The presence on the front of the jacket of large patch pockets with buttons, which can lead to injury to a person or mechanical damage to the materials of the product when it snagsstones or other obstacles when moving;
- The lack of elements that provide volume in the elbow, knee, creating a more ergonomic design.

CONCLUSION

Thus, the analysis of the assortment of clothes of the special forces of the Ministry of Internal Affairs and the Armed Forces of the Russian Federation showed that the existing equipment does not fully take into account all the features of the work of the employees of the special forces in mountainous conditions. A feature of the process of designing clothes for employees of a special-purpose squad is to study requirements not only for special clothing for protection from the cold, but also requirements for the clothing of climbers.

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