STRUCTURAL AND TECHNOLOGICAL FEATURES OF THE FEMORAL PLATFORM

VESELA Julia[1], OSTAPENKO Nataliia[1], RUBANKA Alla[1], EZHOVA Olga[1], LUTSKER Tetiana[1],
1Kyiv National University of Technologies and Design, Kyiv, Ukraine
*Corresponding author: VESELA Julia: e-mail juliavesela@ukr.net

Abstract: *The aim of the research: To analyze and generalize modern types of thigh platforms, to characterize their main types, and to reveal the structural and technological features of such products. Methodology. The methods of system-structural and comparative analysis were used to solve the tasks. Results: The assortment of modern types of unloading platforms on the wall does not fully meet the operating conditions, has low ergonomics, does not take into account structural and technological features depending on the selected materials and furniture, etc. Conclusions: Based on the analysis of the assortment of modern unloading systems of domestic and foreign manufacturers, their elements were separated and systematized according to their functional characteristics. It was determined that the design of the platform on the thigh with the predicted ergonomic characteristics is achieved by a purposeful and justified combination of the structural and compositional components of the product structure.*

Key words: *unloading system, systematization, shape-forming elements, serviceman, femoral platform*

1. INTRODUCTION

It is known [1] that a platform on the thigh is an element of military equipment designed to accommodate additional equipment that must be available during the performance of official duties (Figure 1). It is irreplaceable in combat conditions, does not make it difficult for servicemen to move through difficult terrain due to the large amount of ammunition. There are three types of platforms - anatomical, "coyote" and with a holster, which have two adjustable fasteners, fixed in the upper part of the leg and on the belt.

2. EXPERIMENTAL PART

The main product's structural and technological solutions of the include means of adjustment and adaptation, methods of attaching bags, platforms to the waist and hips, and the type of fasteners. They are made with adjustment elements on the waist and thigh, allowing you to adjust it according to the size, height and volume.

3. RESULTS

To change the volume and length of the product, use a buckle regulator and a textile fastener, to change the width - a textile fastener [2]. Fixation of the platform to the belt is carried out by special loops or fastex fasteners, which allows you to quickly remove and put on the platform if necessary. The

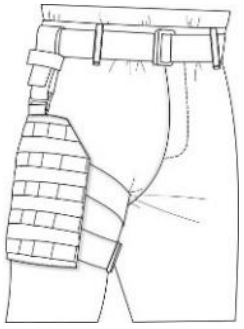

Figure 1: Femoral platform

platform is attached to the thigh with a belt and fastex fastener. The methods of attaching the platform to the thigh are presented in Figure 2.

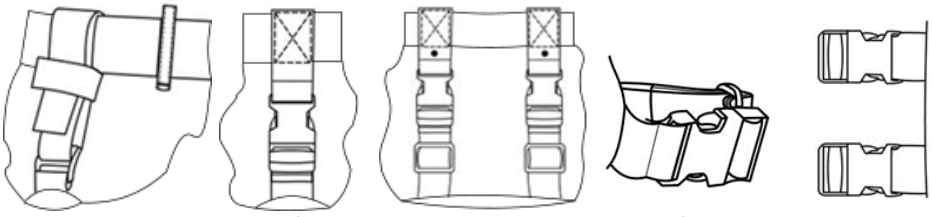

Figure 2: Ways of fastening the platform to the waist (a - c) and hips (d, e) using: a - upper loop; b – one belt and fastex fastener; c – two belts and fastex fasteners; d – adjustable strap-locker; e - two belts and fastex fasteners

Cordura or nylon are used as the main materials for the production of a thigh platform. It is known [3] that Cordura is a material with water-repellent impregnation, with a polyurethane coating and resistant to mechanical influences. Nylon made of polyamide fibers is resistant to mechanical loads and chemicals, easy to care for, and durable. Polyamide fibers can be with elastane.

The inner side of the platform on the thigh is completely processed on the plane with a mesh thin jersey, made of polyester or polyamide with elastin.

The main structural and technological solutions of the platform on the thigh are means of adjustment and adaptation, methods of attaching the bottoms, methods of attaching the platform to the waist and hips, and the type of fasteners.

Discussion. The work is devoted to the structural and technological features of the hip platform and requires further clarification of information regarding its shape, configuration, location, means and methods of connecting elements with the main parts.

4. CONCLUSIONS

The popularity of the hip platform for military personnel is proven. Based on the analysis of the varieties of such products, the structural and technological characteristics of these products are described. The methods of fastening the platform on the belt and in the upper part of the leg are graphically presented and disclosed.

5. REFERENCES

1. MOLLEURL Thigh Platform. [Electronic resource]: https://tacticool.com.ua/nabedrennie_platformi
2. Tactical platform on the thigh P-01. [Electronic resource]: https://mil.com.ua/p959818498-nabedrennaya-taktycheskaya-platforma.html
3. DSTU 4271:2003 Textile materials with coating. Methods of determining characteristics during tearing [Valid from 01.07.2005], 15 p.
4. Rubanka A.I., Ostapenko N.V. Experimental studies on determining the breaking strength of protective clothing materials for emergency rescue operations. Scientific developments of youth at the current stage: abstracts of reports of the XVI All-Ukrainian scientific conference of young scientists and students (April 27-28, 2017) K.: KNUTD, 2017. T.1.S. 113-114.