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TECHNOLOGICAL DEFECTS IN CLOTHING AND METHODS FOR ELIMINATING THEM

Mamatqulova Qunduzxon Umarovna
Assistant Kokand State University

ABSTRACT

This article describes technological defects that occur in the manufacture of clothing and several proposals for their elimination. In addition, the article provides information on the design calculations used in clothing design, the structure of the human body, the properties of the fabrics that make up the clothing package, and other factors.

KEYWORDS

Constructive, technological, clothing, figure, modeling, defect.

Introduction

The design calculations used in clothing design are based on limited information about the structure of the human body, the properties of the fabrics that make up the clothing package, and other factors. The construction of a reasonable distribution of the human body is so complex that the costs of collecting this information are much higher than designing models using simple methods and then testing them on samples. Therefore, currently, the preparation of a sample of a new model is a necessary part of the design.

Making changes to the design requires knowing the causes of defects and choosing effective measures to eliminate them. Therefore, the designer must be able to identify the external signs of various defects, ways to analyze them, find the causes of defects and methods to eliminate them in finished clothing. In order for the garment to be flawless, control is strengthened at all stages of the technological process.

There are many causes of flaws. They manifest themselves as tension, wrinkles, unnecessary folds, and skewing, which disrupt the fit and balance of clothing on the figure. In order to more easily identify and eliminate clothing flaws, their classification has been developed.

Defects in clothing are divided into groups of constructive, technological and modeling defects.

Structural defects. It arises from the fact that the size and shape of the clothing do not match the shape of the figure. They are manifested in the form of horizontal, vertical, oblique folds, wrinkles, imbalances in the corner folds, and dynamic inconsistencies in the clothing.

Technological defects. It is manifested when the shape of the structural lines is distorted due to incorrect cutting of the parts, incorrect joints of the parts to be joined, and the joining notches are

pushed. If the cut of the parts is not inserted enough or is not stretched enough when joining, the seams are crooked, and the lining and lining parts that make up the package do not match each other in shape and direction of the body thread, defects in sewing technology appear.
The distortion of the shape formation method is evident in the wet-heat processing.

Modeling defects. It occurs as a result of technical modeling errors that lead to a violation of the basic design feature..
Constructive defects are divided into six groups:
1. Horizontal folds occur as a result of the narrowness of the detail in the horizontal direction or the length in the vertical direction.
2. Vertical folds are formed as a result of the width of the detail in the horizontal direction or the shortness in the vertical direction.
3. Oblique folds are formed as a result of the smallness of the detail in the diagonal direction, under the influence of forces of different directions in narrow places.
4. The cause of corner wrinkles is the mismatch of the curvature of the contours of the attached details when forming a shape. Due to the lack of convexity, the detail is drawn into the interior, and a looseness is observed around the contour. If the degree of concaveness is insufficient, the interior of the detail becomes loose, and the edges are pulled.
5. Balance disorders occur due to the unequal length of the attached details or their installation at an angle to each other during assembly. This type of defect disrupts the balance of the garment, causing it to spiral.
6. Dynamic incompatibility defects are manifested in human movement.

WAYS TO ELIMINATE CONSTRUCTIVE DEFECTS
Horizontal planks. Defects in this group arise as a result of two types of design errors. The narrowness of the detail creates a set of tense planks or horizontal folds. The excessive length of the detail leads to soft free horizontal planks. When correctly identifying this defect and choosing a method for eliminating it, it is taken into account that in tense planks the tensile force is in the direction of the planks, and in soft planks the compressive force is perpendicular to them.

Empty horizontal planks under the collar of the back piece. The loose horizontal seams under the collar are caused by the excess length of the back piece and are more noticeable when the collar is sewn. The depth of the seam gathered from the excess back piece indicates how much the collar bone and shoulder line are lowered.

Horizontal tension bars in the upper part of the back. A set of tension bars can also break the material structure under the influence of tensile forces directed from the head of the shoulder bone to the middle of the back. The cause of this defect may be the lack of a low centerline of the back, excessive carving at the level of the shoulder blades, a narrow shoulder part of the part and a low shoulder slope. To eliminate the defect, the back is expanded at the level of the bars.

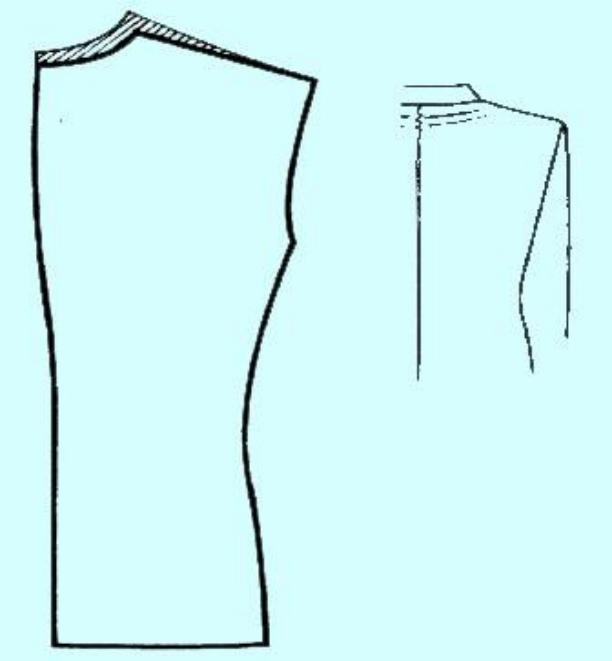

Figure 1. Empty horizontal planks under the collar of the back piece

Vertical planks. Soft vertical planks form in areas where the part is too wide. If some areas of the part are not long enough, tight planks or bundles of wrinkles form. The forces that cause the defect are located in the direction of the planks in narrow or short parts, and in areas where the part is too wide, they are located perpendicular to the planks.

CLOTHING DEFECTS AND METHODS TO ELIMINATE THEM

Clothing has reached its present perfection through complex stages. It appeared in the early stages of human development as a means of protection against the effects of climate. Its further development continues in accordance with the forces of production.

Under the influence of many factors, various deviations in the shape and size of mass-produced clothing may occur. However, these deviations cannot reduce the quality of the finished garment below the level of the model's standard sample.

It is known that the quality of the finished product depends on the quality of the design. Therefore, the model-standard must be of high quality in all respects. The lines of the collar, hem, back, hem, and seams must be perfectly executed and expressive. The appearance of the garment should be wrinkle-free, smooth, well-ironed, and the volumetric areas should have the designed shape.

Linear deviations are characterized quantitatively, but surface defects become apparent when they are seen.

Summary

The occurrence of technological defects in the production process of clothing negatively affects the quality of the product and may not meet consumer requirements. Such defects are mainly sewing errors, poor quality of the material, size defects, rapid color changes and other defects in technological processes. To identify and eliminate these defects, it is necessary to strengthen the quality control

system, introduce advanced technologies, train a qualified workforce and constantly improve the production process. Also, the quality of clothing can be improved by selecting high-quality materials and establishing strict control at each stage of production. As a result, such measures improve the durability, functionality and aesthetic appearance of the products being manufactured, increase consumer satisfaction and allow creating competitive products in the market.

References

1. Pulatova S.U.”Kiyimni konstruksiyalash asoslari”. T., 2001.
2. Pulatova S.U. “Ayollar yengil kuylagini konstruksiyalash”. T.,2001
3. .Abdullayeva Q.M. Tikuvchilik buyumlarini konstruksiyalash va modellashtirish asoslari. T.2008.
4. .G.K.Xasanboyeva, O.I. Krimova, “Kiyim modelini ishlash va konstruksiyasini tayyorlash”. Toshkent, “Oqituvchi”, 1990
5. Komilova X.X., Hasanboyeva H.K. Tikuv buyumlarini konstruksiyalash., Toshkent. “Moliya” - 2003.
6. Нурматов, Сардорбек Хасанбой Ўғли, et al. "БАРБОТАЖЛИ АБСОРБЦИЯ ҚУРИЛМАСИДА ГАЗ ЁСТИҒИНИ ТАДҚИҚ ҚИЛИШ УСУЛИ." *Строительство и образование* 4.5-6 (2023): 287-295.
7. Akhmadjonovich, Ergashev Nasimbek, Isomidinov Azizjon Salomidinovich, and Ovloyorov Xaydarali Aliyorovich. "Experimental determination of the industrial application and determination efficiency of fluid gases cleaning apparatus by contact element method." *American Journal of Technology and Applied Sciences* 7 (2022): 72-78.
8. Davronbekov, Abdurasul, et al. "Systematic analysis of process intensification in heat exchange products." *Scientific progress* 2.1 (2021): 694-698.
9. O‘G‘Li, Xomidov Xushnudbek Rapiqjon, et al. "Konus setkali chang tozalovchi qurilma uchun chang namunalarining dispers tarkibi taxlili." *Al-Farg’oniy avlodlari* 1.4 (2023): 66-69.
10. Siddiqov, Rasuljon, et al. "Optimizing the accuracy of an industrial robot: A model for improving positional accuracy." E3S Web of Conferences. Vol. 583. EDP Sciences, 2024.
11. Salomidinovich, Isomidinov Azizjon, and Xomidov Xushnudbek Rapiqjon O‘G‘Li. "SHISHA TOLA VA TEFLON ASOSIDA TAYYORLANGAN FILTR MATOSINING QARSHILIK KOEFFITSIYENTINI ANIQLASH." Строительство и образование 4.1 (2025): 201-209.