FEATURES OF TARGETED DESIGN FOR WOMEN`S CLOTHING

Nargiza Djurayevna Abdurakhmanova
Tashkent Institute of Tekstilya
Light Industry Department of "Costume Design"
Khalida Khafizovna Kamilova
Professor, Doctor of Technical Sciences
Tashkent Institute Textile and light industry

Abstract: Clothes based on objective methods for visualizing the appearance of consumers and information integration of process stages, from the standpoint of information support of the product life cycle; to develop structural - functional and informational models of the process of targeted AP clothing using a combinatorial.

Key words: design, consumer figures, anthropomorphological, technology, "person-clothes", development of a classification.

For achievement this goal, it was necessary to solve the following tasks: to analyze new information technologies used in the design of complex objects in various industries in order to use their fundamental principles in the automated design of clothing; develop the conceptual foundations of the process of targeted computer-aided design (AP).

Clothes based on objective methods for visualizing the appearance of consumers and information integration of process stages, from the standpoint of information support of the product life cycle; to develop structural - functional and informational models of the process of targeted AP clothing using a combinatorial (modular) principle in the formation of a through design route; explore the possibilities of using digital photographic images of customers visualized on a computer to develop a non-contact method [1].

For determining the dimensional characteristics and anthropomorphological features of the external shape of consumer figures; improve the classification of female figures in order to take into account more detailed anthropomorphological information about their external form (including the plasticity of the surface and the relative position of the parts bodies), when choosing preferred models and developing the design of product parts to ensure high quality fit of products on the figures of individual consumers; to analyze the dependence of the features of an object (clothes model) on the subject of design (the external appearance of the consumer) [2].

In the "person-clothes" system to develop methodological support and the knowledge base of the expert system, in order to objectify the choice of artistic and constructive features (HCS) for the formation of harmonious models of female clothes; to develop a database of graphic elements and a computer technology for creating electronic sketches of models adaptable to proportional features of the external form of specific figures, in the environment of universal graphic editors; identify the relationship between the elements of the visual image of the model [3].

The anthropomorphological features of the customer's figure with the design parameters of the parts for adequate design of the silhouette shape and model features of the product; to carry out structuring and formalization of the functions of constructive modeling of clothes in order to automate repetitive complexes of transformations when creating new models of clothes; develop a system for assessing the quality of designed models, taking into account the external appearance of consumers based on the visualization of the "person-clothes" system.

For allowing to predict the quality indicators of the developed model at the stage of preliminary design; develop a formalized way to represent the appearance of a clothing model, containing key information for performing various stages of the process and controlling the formation of the route of its design; to develop a technique for targeted computer design of clothing based on the visualization of the customer's appearance and local design solutions for the most difficult to formalize stages of the process, providing the synthesis (layout) of the resulting system of end-to-end AP clothing; to carry out production approbation of the results of work and calculation of economic efficiency [4].

Research methods. The dissertation uses the main provisions of system-structural analysis, methods of structural synthesis of design solutions, theoretical provisions of CAD, the theory of creating databases and knowledge bases, contact and non-contact methods for studying figures and clothes, methods of expert assessments, the laws of visual illusions and visual perception, a heuristic approach to the modeling of processes that are difficult to formalize, statistical methods for processing the results of an experiment, methods for classifying and coding, algorithmization and programming, as well as theoretical and practical achievements in the field of clothing design [5].

The object of research was the process of designing women's clothing of a suit and dress range, which has a wide variety of compositional and constructive solutions and is most dependent on the appearance and anthropomorphological features of the customer's figure [6].

The scientific novelty of the results of the work lies in the fact that in it: the principles of targeted design of clothing are scientifically substantiated and the scientific concept of purposeful design of products with maximum taking into account

the characteristics of the external appearance of consumers; a methodology for end-to-end automated clothing design based on the information approach and visualization method has been developed, which allows designing high-quality, competitive products to form a harmonious external image of consumers; developed, within the framework of the overall strategy of a systematic approach to design, conceptual, structural-functional and information models of the process of targeted AP clothing.

For providing its information integration in the conditions of virtual enterprises; a non-contact method for determining the initial information about the subject and object of design based on their computer visualization has been developed, which allows obtaining more accurate and objective information about the external shape of the body of individual consumers and the patterns of designing shaping elements in the torso area to ensure adequate design of the silhouette shape of the model and ergonomic conformity of products to figures consumers; methodological and informational providing an expert system (ES) for choosing preferred models depending on the features of the external appearance and anthropomorphological features of consumer figures; developed a system for assessing the quality of the visual image of the model (in the "person-clothing" system).

For predicting its quality indicators at the stage of preliminary design, taking into account the external appearance of the customer; a formalized method for presenting information about a product has been developed, which provides the possibility of parallel design at the stages of design and technological preparation of production; structuring and formalization of the functions of constructive modeling of clothing to automate complex transformations in the development of new clothing models; a new method for constructing the design of product parts based on the visualization of its graphic image has been developed; structural models of structural and decorative details have been developed and a universal methodology for designing collars has been developed [7].

The practical significance of the work lies in: the development of an extended classification of female figures, which allows, on the basis of quantitative data describing the anthropomorphological features of their external form, to make an unambiguous identification of the type of an individual figure; development of a knowledge base and an ES program to create harmonious clothing models, taking into account the external the appearance of the consumer; creation of a database of graphic elements for the formation of an electronic sketch of the designed model of the product and the technology of dressing [3].

The photographic image of the customer; development of a classification system and a method of intelligent coding for a formalized presentation of information about the appearance of a clothing model, which controls the formation of a product

design route and the compilation of a specification of parts; development of information support for automated search in the database of models and designs of prototypes when creating new clothing models; the formation of the most frequently performed complexes of transformations according to the functions of constructive modeling of clothing, with the help of which the creation of macros for graphic CAD systems is ensured; developing methods of targeted clothing design based on the visualization of the customer's appearance and software for local design solutions for its implementation [2].

Reliability of the conducted researches. The reliability of scientific provisions, conclusions and recommendations is due to the use of correct theoretical prerequisites for setting problems and modern methods for solving them, the adequacy of the developed theoretical models to the observed patterns, confirmed by the high convergence of calculated and experimental data, analysis of the experimental results, approbation of the results obtained and their positive assessment in industry.

References:

1. Mirtalipova, N. K., Yunuskhodjayeva, K. M., & Kamilova, K. H. (2019). The role of attributes in special types of clothing. *International Journal of Recent Technology and Engineering*, *8*(3), 2460-2463.

2. Yunuskhodjaeva, H. M. (2022, September). Analysis of The Formation of Initial Information And Evaluation of A Constructive Solution in Terms of Ergonomic Parameter. In *Conference Zone* (pp. 58-60).

3. Abdurakhmanova, N. D., Yunuskhojaeva, H. M., & Mirtolipova, N. K. (2022). Development of a package of materials for women's uniforms of law enforcement agencies. Academicia: An International Multidisciplinary Research Journal, 12(5), 80-83.

4. Mutalova, M. A., Abdurakhmanova, N. A., & Abdurasulova, Z. K. (2021). The Study Of The Selection Of Lead-Copper Concentrate By The Sulfite Method. The American Journal of Applied sciences, 3(3), 13-21.

5. Kamilova, X. X., Rakhmatullaeva, U. S., & Raksimkulova, S. (2021). Analysis and place of artistic elements in the surkhandarya costume.

6. Vakhidova, U. A., Ibragimova, Z. I., & Apakhodjaeva, T. U. (2020, December). Estimation of the temperature and humidity kinetics during the passage of vaporous moisture through textile materials. In *IOP Conference Series: Earth and Environmental Science* (Vol. 614, No. 1, p. 012024). IOP Publishing.