

MODEL CREATION AND PRODUCTION PREPARATION IN CAD

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Annotation: This article Clothing types are constantly and continuously updated. Every year, new models with a variety of shapes and styles are introduced into production in the light industry. Fabrics, which are the main starting material of clothing, are constantly changing not only in terms of structure, appearance and color variety, but also in terms of properties and fibers. Accordingly, the technology of clothing production is changing.

Key words: Model creation, construction, process, clothes, structure, costs, designing, automation, size, cooperation, plotter, production.

Introduction. Clothing production is carried out in several stages:

1. Model creation, construction and preparation of patterns;
2. Preparation and cutting of fabric for sewing (i.e. work in the preparation - cutting section);
3. Sewing and finishing of the item;

The initial stage of organizational and technical preparation of production is the creation of a clothing model.

A model is a sample of the style and shape of the garment to be made. The created model should differ from the main model by up to 30%, and the styles should differ from each other by 10-15%, based on the same design as the main model. The creation and design of models for mass production of clothes is carried out by fashion houses, experimental laboratories, and in some enterprises, by test and experimental workshops with highly qualified artists - modelers and designers under the leadership of the fashion house.

The process of creating a model consists of the following stages:

working on the fabric and developing a model sketch;

selecting fabric and additional decorative materials;

approving the model sketch by the artistic and technical council of the enterprise, consisting of engineering and technical personnel headed by the chief engineer;

cutting and sewing the item according to the sketch in cooperation with the artist-modeler and technological laboratory technicians;

reviewing the new model of clothing by the artistic and technical council and recommending it to the large artistic and technical council.

The composition of the large artistic and technical council includes: employees of the garment industry, fashion houses and trade organizations. Models that have passed the large artistic and technical council are recommended for mass production. Technical preparation for the production of models is carried out in the experimental workshop of the garment enterprise. Let's consider the traditional method of preparing models for production.

In sewing enterprises, the artist-modeler creates new models taking into account the current fashion trends and the requirements for the product. The artist-modeler performs the following tasks:

- studying the fashion trend;
- compiling a classification of a new model (type of intended fabric, recommended size and height of the model, etc.);
- drawing sketches of a new model and analyzing similar models;
- selecting the most suitable model and assessing the cost-effectiveness of the model

Tasks of the experimental workshop

The main task of the experimental workshop is to provide timely and high-quality preparation of models for production (creating new models, drawing up their design, preparing templates, preparing a copy of stencil layouts, developing technical documentation for the model, ensuring the rational use of fabrics, developing high-performance technology, sewing a new model sample and a test batch, testing new equipment and mechanization tools, testing and determining the properties of materials, and controlling the production process). To solve the task, the production process of the experimental workshop is formed depending on the type of equipment used in the workshop. All work in this workshop is divided into stages and is performed by the appropriate group:

Model-designer group; Pattern-maker group; Standardizer group; Technological group;

Fabric characterization laboratory;

All work in the workshop can be performed in the traditional way, that is, manually, without the use of computer technology, using computer-aided design systems (CAD) for sewing products. Designing items consists of the process of creating a clothing design. The design is a full-size drawing of the item, which shows the places of connection of details according to the cuts and sewing methods. The designer draws up the design of the item in a new model and sews a sample to check the design. During the sewing of the sample, changes are made to the design. If the model was created in a fashion house, then a sample of the model, all recommended sizes, and the technical documentation of the model are brought to the trial workshop of the sewing enterprise. In this case, the designer compares the sample and sizes with the technical documentation. In order to determine how correctly the sizes are made, a sample of the model is sewn. A second sample is sewn according to the changed design, and in this process, a standard design is approved for the design. Since the standard design is created according to the average size, the designer technician increases or decreases the other recommended sizes of this model.

The designers of the experimental shop determine how accurately the standard size was made and pass it on to the size preparation group in this shop.

There, three types of sizes are prepared:

- a) working gauges - used for cutting out details, making folds;
- b) auxiliary gauges - used to mark out the places of turns, pockets, buttons, seams, etc.;
- c) additional gauges - used to trim clothing details.

Working gauges are made in 5 sets. Two of them are used in the experimental workshop to determine the fabric consumption rate, one in the preparation workshop to prepare folds, and two in the cutting workshop to trim defective fabrics and trim the faded areas in the folds. Gauges are made of 0.9-1.2 mm hard cardboard. The cut of additional gauges is covered with tin-core. The most commonly used gauges can be made of duralumin or other metal tins. The sizes are cut on a universal sewing machine with a knife instead of a needle or on a special MRL machine that cuts sizes. The sizes are checked and their edges are rounded and stamped. The direction of the thread in the body and how much it can deviate from it are indicated for each size. Notches are made on the sizes so that the boundaries of the parts can be connected correctly. The model number, size, and height are written on all sizes. A list of sizes included in this set is written on the main part of the set of sizes. Working and auxiliary sizes are checked against the standard size once or twice a month. Standard sizes are also checked against the sizes specified in the recommendation once a quarter.

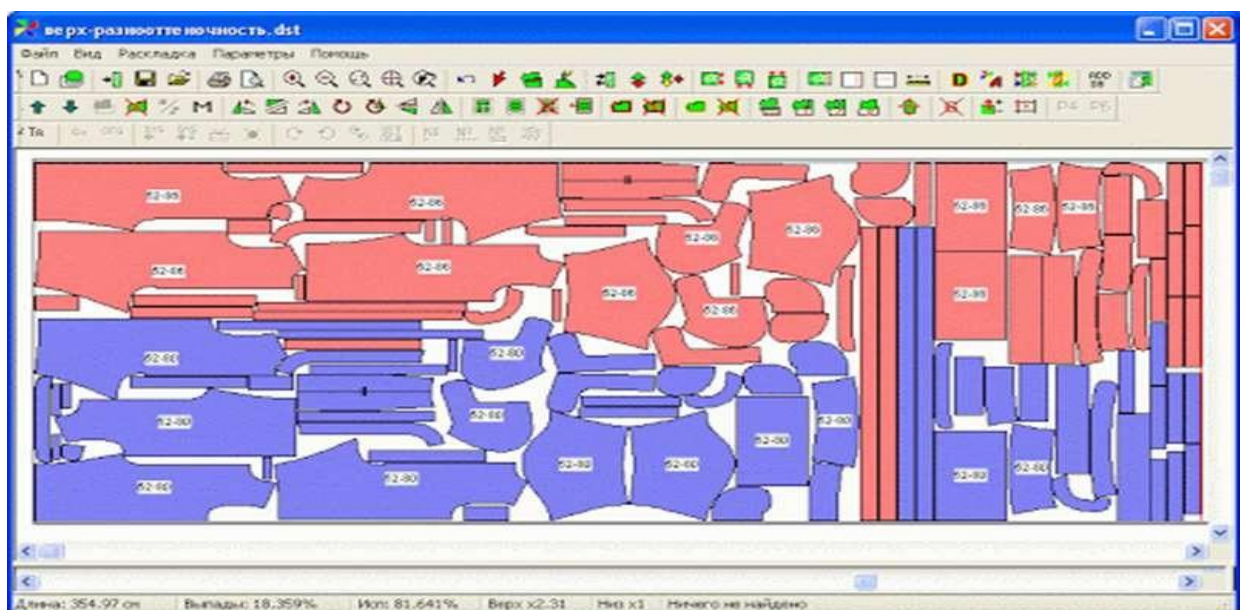


Figure 1. Placing parts on a computer in automatic and semi-automatic modes.

Conclusion. The procedure for placing patterns on pattern sheets

If the enterprise sews a large number of the same clothes, a pattern template is prepared. Patterning refers to the orderly placement of patterns on the upper layer of the fabric. Workplaces for placing patterns are provided with tables. The length of these tables is 6000-7000 mm, the width is 1600-1700 mm, and the height is 800-850 mm. A ruler is installed on the side of the table to measure the length of the pattern. On one side of the table is a device for unwinding a paper roll, and on the opposite side is a bracket for temporarily storing patterns. On the table, placements are made taking into account the requirements for making patterns. The completed placements are sent to the upper layer of the bed to the pattern making department or its copy to the cutting department.

A copy of the layouts is copied in a reduced or 1:1 scale manually, mechanized, on a camera, or using a PKU-3 electrographic device and used in the preparation of the draft.

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