

## Sewing Technology And Energy Saving Technologies In Automatic Design Problems

Vafaeva Zamira Sevindikovna,

Bukhara Engineering and Technological Institute (Uzbekistan)

---

\*\*\*

### ABSTRACT

In this article,, the technology of sewing production and the application of energy-saving technologies in automatic design, information about the problems.

**Keywords:** thread winding, bobbin, bobbin case, bobbin winders, vertical hook, thread spools, ring, frame, flywheel, latch mechanism.

### Introduction

Speaking today about the technology of production of garments, first of all, it should be noted that in recent years our country has reached a balance in the economic and social spheres, rapidly developing through modernization and diversification. At the same time, it is important to develop techniques and technologies in the light industry, to improve the quality of manufactured clothing. Modern production technology consists of more than three hundred technological operations that require the use of various universal and special machine tools, automatic and semi-automatic machines, presses, small-sized mechanized and automated tools.

However, in the process of wet-heat treatment of clothes (fabrics called bulgar), their penetration into the iron, leakage (pombarch), shine of the ironed surface, distortion of the shape of the product and a decrease in its quality. All this requires solving problems aimed at creating new

technological equipment with the maximum use of wet-heat treatment of the material. The solution of these problems requires a theoretical study of the relationship between the shaping working bodies of semi-finished products and the processed equipment, as well as the improvement of technology and equipment for the processes of wet heat treatment.

For example: When ironing a semi-finished product from a material, if you put a small notched board under the material, the material will not break and there will be no leaks, experiment to solve the problem of placing the device on a hand iron;

Before making a semi-finished product, the material is completely ironed, and then cut or sizes are reduced for longer, because the material enters the iron in order to conduct experiments to solve this problem;

*a deeper study of the working bodies of equipment for wet heat treatment is required;*

Since Uzbekistan gained independence, many positive changes have taken place in our country. Light industry enterprises are among these changes. However, in the case of Bukhara Oblast alone, the shortage of light industry enterprises and the closure of domestic garment factories are also problems. The 21st century is considered the century of knitting. Clothing of the 21st century, in addition to protection from the effects of the external environment, requires the preservation of

shape, comfort, aesthetic beauty, the choice of knitted patterns depending on the function of the clothing. Today, knitwear of various textures is produced. But along with the development of knitted fabrics of different colors and modern textures, the task of finding and searching for improved ways of constructing the design of various products, taking into account complex knitting properties, remains a problem.

In general, there are still problems with sewing, equipment and, of course, qualified specialists. The vibration activity of sewing machines, their damage for the birth of a healthy child can also be considered a problem, and I would like to say the following about the measures to prevent them. At a time when economic development is developing rapidly, harmful vibration in new, highly efficient machines, widely used in the garment industry, violates the laws of motion of machines, mechanisms and control systems planned by the designer, creates instability of the work process, and not only causes it to fail. or completely damage the entire system. Its harmful effect on people standing near the source or in direct contact with it, especially pregnant women, has been shown.

Therefore, it is very important that a woman, especially a pregnant woman, suffers from physiological and functional disorders as a result of tremors. Well, first of all, let's answer the question, what is vibration and how does it arise. Creation of light industrial machines with high productivity, increased speed and other performance characteristics will inevitably lead to an increase and expansion of the spectrum of vibroacoustic fields. As a result of vibration, dynamic stresses in structural elements (kinematic pairs of mechanisms, hinges, etc.) increase, which leads to a decrease in the bearing properties of

parts, the formation of cracks and their fatigue wear. Vibration effects can cause overheating of the structure, changing the internal and external structure of materials, as well as the conditions of friction and propagation on the test surfaces of machine parts.

In cybernetics, input-output devices are used to solve various problems when entering graphic data into a computer. Graphics I / O devices are graphical displays that are the backbone of interactive graphics systems.

The input of graphic information on the displays is carried out with the help of an optical pen, graphic tablet, coordinate potentiometers and other working bodies for data input. One of the most widely used I / O devices today is the optical pen. The graphic output device is the most widely used graphic design in the computer-aided design system. Graphic drawing devices are digital and come in two types: roller-drawing devices and tablet-drawing devices.

In devices for drawing tablet graphics, the recording body moves in two mutually perpendicular directions relative to the stationary tablet. In roll-to-roll drawing apparatuses, the recording body moves only in the horizontal direction, while the guide drum moves the paper in the vertical direction. A heuristic approach to clothing design in automated design systems is based on human experience and mental activity. All cybernetic studies of intellectual activity can be described as a tree of processes moving from "general to particular".

G- curved line separated from curved sections -  
(g<sub>1</sub>, g<sub>2</sub>, g<sub>3</sub>, .... g<sub>k</sub>)

Each curve can be represented by the following formula:

$$G = g_1 + g_2 + \dots g_k;$$

Here:

G - generalized contour of curvilinear distribution  
 $g_1, g_2, \dots, g_k$  - curved sections

The process of changing the spread contour is carried out by changing the G curve to the G1 curve using the f function:

$$f(G) = G_1;$$

The variation of each section of the distribution can be expressed as follows:

$$f(G) = f_1(g_1) + f_2(g_2) + \dots f_k(g_k);$$

Here:

f - change function;

The expression  $f(G) = G_1$  is a general mathematical model of the process of changing geometric data in the manufacture of clothing, and it shows the continuous process of the G curve relative to the G1 curve.

### Conclusion

Simply put, to graphically represent a generalized reversal path, the outlines of all garment parts can be drawn using a continuous, curved line drawn with a pencil. In this case, of course, the pen can go through some points and lines several times.

When moving from one part to another, connecting straps are formed. Now you can get one detail from this drawing, for example a back detail. To do this, the unnecessary part of the path is transformed into a small point by scaling. This point is located at any corner point of the rear section, retains all the design features of its original appearance, and the opposite, that is, when enlarged, it returns to its original form. The proposed method of automated design of clothing saves manual labor, time and effort.

### References

1. Vilkov, P.V. Development of a stand for winding yarn into bobbins [Text] / P.V. Vilkov, A.N. Litvinsky //
2. Young Scientists - Development of Textile and Light Industry (Search - 2000), April 24 - 26, 2000: abstracts. interuniversity, scientific and technical. Conf. - Ivanovo: IGTA, 2000. - S. 129-130.
3. Experimental study of the yarn winding mechanism with an electrified winding drum
4. V.F. Glazunov, 124 V.P. Shishkin, P.V. Vilkov, A.N. Litvinsky
5. Izv. universities. Technology of the textile industry.— 2001.— No. 3.— P. 91—95.
6. Vilkov, P.V. Improving the energy characteristics of the winding drum [Text] P.V. Vilkov, V.F. Glazunov.
7. Young scientists - to the development of textile and light industry (Search - 2004), April 20-22, 2004: abstracts. interuniversity. scientific and technical conf. - Ivanovo: IGTA, 2004. - S. 92-93.
8. Glazunov, V.F. Investigation of the tension of the thread in the process of rewinding it with an electrified winding drum [Text]