FEATURES OF PNEUMOMECHANICAL YARN SPINNING TECHNOLOGY

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Abstract
This article provides information on non-spinning methods of spinning in spinning processes. The advantages and disadvantages of the technology of spindleless spinning are analyzed.

Key words: fiber, yarn, spinning, spinning methods, rotor, camera, tape, linear density.

In recent years, the development of the textile, sewing-knitting, leather-shoe and fur industries of the light industry in the Republic, expansion of the types and assortment of manufactured finished products, as well as comprehensive support of the investment and export activities of the branch enterprises. comprehensive measures are being implemented.
The measures taken allow to create capacities for processing more than 80 percent of cotton fiber and more than 45 percent of yarn produced in the Republic, as well as to increase the export volume of finished products to 1.6 billion US dollars. gave
Spinning methods without a spindle include spinning methods that are performed without the spindle, which is one of the main working organs in the spinning process.
The number of cooking zones can be divided into groups depending on whether the cooking and wrapping processes are carried out sequentially or simultaneously. In the main group of methods, regardless of the type of effect and the variety of yarn-forming devices [1,2,3,4,5], from one-zone cooking that is not combined with the yarn cooking process, Fig. 1 presents the classification of spinless spinning methods.
The following technological processes are carried out in these spinning methods: discretization of the supplied product in order to obtain a stream of discrete fibers; transportation of discrete fibers to the product forming zone in order to form a stream of discrete fibers; baking the product to form a thread; thread winding [6,7,8].
The cooking and beating processes are separated into the following methods: chamber pneumomechanical, rotor, pneumatic, aeromechanical, hydraulic, electrostatic, one-condenser and two-condenser (friction) spinning methods [9,10,11,12].
The most common among the single-zone cooking zone, non-spinning spinning methods is the pneumatic-mechanical spinning method with a chamber.

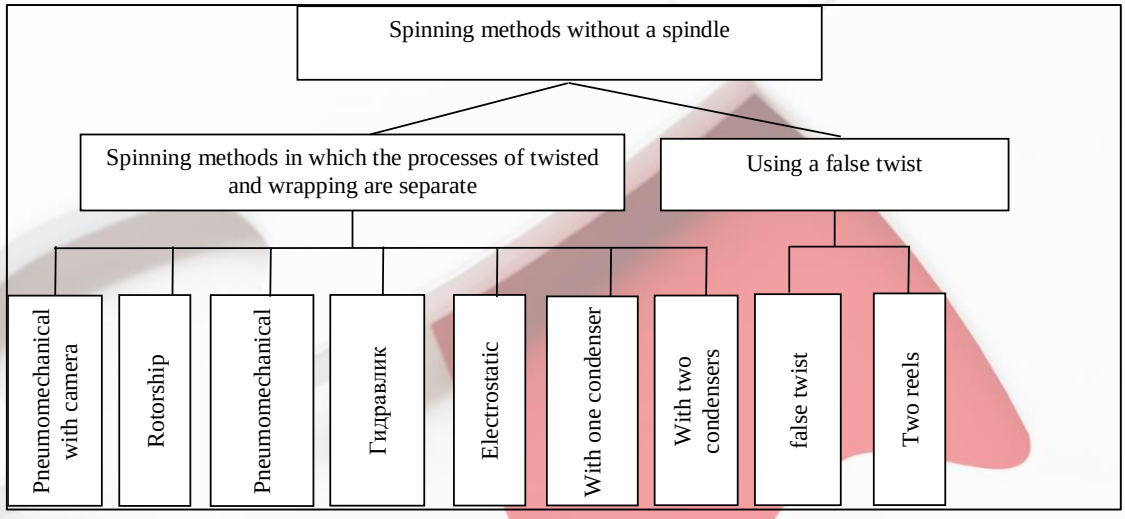

Figure 1. Classification of spinless spinning methods

In modern chamber pneumomechanical spinning machines, the discretization process can be carried out in discretization devices with different designs depending on the length of the fibers. For fibers shorter than 65 mm, the discretizer shall have a spring-loaded cylinder securing device. Discrete fibers are transported through the confucor with the help of the current. In the method of pneumomechanical spinning with a chamber, as a result of the process of cyclic addition of a discrete flow of fibers, a loop-like fiber strip is formed in the cavity of the spinning chamber [3.4.5].

The rotation of the camera causes the fiber tape to twist and form a thread. This method is widely used in the textile industry to ensure a wider and higher quality yarn production than many other spinning methods.

In conclusion, we can quickly say that the advantages of threadless spinning methods are their high productivity, and the range of products produced by these methods is expanding.

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