INVESTIGATION OF BUTTER PRODUCTION PROCESS FOR THE IMPROVEMENT OF PERIODIC BUTTER MANUFACTURERS

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The rationale for choosing one of the methods for making butter depends on a number of factors, among which are: raw materials, production, financial capacity of the enterprise, availability of production areas, forecasted assortment of butter, market research of the market of sale, etc.

The advantage of machines of periodic action is the absence of a need for a constant and stable flow of cream in comparison with the makers of continuous action and oil formers. Ability to regulate the composition of butter and its properties and to obtain butter with high thermal resistance.

The process of production of butter to improve its quality and ensure the uniform distribution of cream during processing throughout the volume of the working capacity of the manufacturer and to obtain effective contact of the working bodies throughout the surface of the processed product.

On the basis of conducted research, a physical model was created at scale 1:5 and a simulation of the cream processing process was conducted.

The analytical substantiation of the process of creaming up of cream with a fat content of 35% and on the basis of computer modeling of the improvement of the design of steelworkers of periodic action is carried out.

After the given design and technological parameters for the study, we use the software complex FlovVision, which allows an experimental study of the movement of the cream in the working capacity during the formation of oil grain.

In an improved machine, we propose the installation of eight rectangular metal guide plates fixed in the inner volume of the capacities along the entire length with the intensifying elements in the form of spheres fixed on metal ropes perpendicular to the guide plates.

Due to the installation of guide plates and elements in the form of spheres there is an intensive distribution of cream on the volume of working capacity, which excludes the formation of stagnant zones of the processed product, which allows to intensify the process of processing, improve the quality of the finished product and reduce energy costs.

Keywords: transformation of cream, mechanize, drum, process modeling.