ANALYSIS OF EQUATIONS OF MOTION OF MATERIAL PARTICLES ON RADIAL SHOULDER OF ROTATING DRUM

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Abstract. *The solutions of differential equations that define the centrifugal movement of material particles on radial blade variants with different drum are specified.*

Device for mixing based on the spinning reels finds more and more acceptance in the development of biotechnological fermentation processes, and therefore improving the efficiency of their work by justifying the methods of determining the parameters of the particle motion in the radial blade in a rotating drum, which will allow you to set rational values of angular velocity and structural parameters of spinning reels, requires further improvement.

Given the solution of the differential equations that determine the parameters of motion of material particles in the radial blade with different variants of drum rotation.

The obtained solution of the differential equations that determine the parameters of motion of material particles in the radial blade with different variants of rotation of the drum are identical and differ only the initial values of the rotation angles of the displacement between the horizontal and vertical axes at π/2.

Key words: ***drum, radial blade, movement of particles***