

THEORETICAL MOTIVATION OF THE TECHNICAL DECISIONS OF DIVISION OF THE CORN MIXTURES

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The important component part to technologies of the processing grain is a clear it from admixtures. The commercially available machine for peelings grain and lines do not provide qualitative clear and sorting grain for one technological process.

So for qualitative processing the corn material increasing to efficiency of the operating the machines for peelings grain is an actual problem agricultural production.

The most appreciable improvement of the qualitative factors worker process of the machines for peelings grain with minimum material expenses possible to reach using in them technology with use the high velocities of the airstream in zone peelings and the following separation to factions full-fledged, forage grain and rubbish admixtures, as well as improvement their main worker organ.

The stratification of the corn material on lattice device (SING) of the entering the air channel (PSK) provides increasing a quality peelings grain. Coming from decision of the system of the differential equations of the moving the single particle on tilted lattice SING entering PSK is received expression for determination of the coordinate of the location component corn material on height on output from SING entering and arrival them in airstream PSK. Given expression allows on given constructive-technological parameter of the under development machine for peelings grain to motivate the best value of the factor of the alive section of the lattice SING entering PSK [1].

The determination of the optimum range of importances geometric parameter curvilinear air channel (PTK) of the pneumatic separator (PS) is organized from calculation of the angular velocities of the particles, stood from PSK and moving to ac-

count of the airstream on surfaces its internal wall, the numerical decision of the differential equation, got in arctic coordinate system [2].

At division light departure on factions in sedimentary camera (OK) process model of the moving the particle in narrow stream airstream is received in the manner of parametric equations. Modeling of the moving the particles on computer shows that qualitative division light departure and tap rubbish and forage faction in OK centrifugal type can be reached at location of the edge of the underbar wall compartment tap forage and rubbish faction in the field of importances of the coordinates: on horizontal axis 200...280 mms; on vertical axis 130...200 mms [3].

It is offered built-in in technological scheme closed small-dimensioned PS of the zhalyuziyny air cleaner (ZHV), which arrangement reduces the consumption of the metal on fabrication of the system peelings air. The system of the differential equations, describing paths of the moving the particles in outlet channel ZHV, is the numerical method Runge-Kutta solved by using. From analysis of the numerical decision follows that particles of the admixtures, entering in outlet channel ZHV with different initial condition, have a curvilinear form to paths, do not cross zhalyuziyny wall ZHV, than is provided efficiency of the branch them from airstream, getting through zhalyuziyny lattice in input channel of the diametrical ventilator small-dimensioned PS [4].

The stood airstreams light admixture are from device peelings air reasonable to conduct with a part of air from zone of the output channel of the diametrical ventilator directly. The model of the motion for different particles in zone of the output channel of the diametrical ventilator is received in the manner of parametric equations and is brought about one type, suitable for the numerical decision on computer [5].

The quality peelings corn material in PS in significant measure depends on accuracy of the installation to velocities of the airstream in PSK. For fluent regulation of the velocities of the air is offered thumb perforated damper, providing phased change the relative consumption of the air in zone of the technological process, over-

lapping of the communicating section of the channel to account of the tumbling and reduction of the factor its alive section gradual closing the width perforation. [6].

Thereby, offered analytical expressions and original methods on motivation constructive-technological parameter worker organ machines for peelings grain can be used scientific, design organization for development of the machines for peelings grain from admixtures with more efficient technological process.

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