A THEORETICAL ANALYSIS OF FORESTRY AND WOODPROCESSING MACHINES WITH SCREW DEVICES

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ABSTRACT

Forestry and wood processing machines with screw conveyors and screw presses for wood chips and forest seeds have wide application in forestry and wood-processing industry. Utilization of the screw devices is due to some advantages they ensure at executing the technological processes, such as unceasing of the process, high productivity, low levels of noise, dustless work, etc. The design of the screws is in accordance with determination of their main kinematic and dynamic parameters. a great number of the elaborated constructions was realized based on practical experience. The relatively complicated transportation of products into the screw mechanisms makes it difficult to express the process by mathematical means. This fact defines the problems with deducing of analytical relationships for determination the main parameters of these mechanisms. In the present work some basic cinematics and structural parameters of the screw devices for processing and transportation forest seeds and wood chips are deduced and proposed.

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