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Studying the Process of Grain Heap Cleaning in a Horizontal Channel with Vertical Air Flow

Abstract: The present paper studies the process of cleaning the grain heap in a horizontal channel with the vertical air flow; the optimal parameters of the cleaning system have been determined (air flow rate, rate of crop material feed into the channel, etc.) to achieve the maximum efficiency in separation of the grains from the impurities. Computational modeling methods and experimental studies have been used to carry out the research. Modeling enables studying the influence of various parameters on the cleaning process, whereas the experiments confirm the theoretical results obtained.