

## **THE INFLUENCE OF CONSTRUCTIVE AND FUNCTIONAL PARAMETRES OF THE BRUSHING MACHINE ON CLEANING OPERATION OF WHEAT SEEDS FOR GRINDING**

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### **Abstract**

Wheat brushing is a technological operation part of the grain seed grinding process, which aims to remove dust and adhering impurities to the surface of the wheat kernels as well as their brushes. By brushing the seeds gain a smooth and glossy surface, and the ash content is reduced by minimum 0.01%. In order to optimize the operating process a brushing installation – IPG - was designed and developed. The purpose of this study was to evaluate the effect of some functional and constructive parameters (speed of the rotor with brushes, the suction air flow rate, tapered shell type and the product feed rate) over the physical characteristics of grain seeds. The experimental results conducted using wheat kernels led to the conclusion that the percentage of broken seeds was influenced by rotor speed, product feed rate, the shape and size of the perforated shell holes of the brushing instalation drum; variations of the percentage of broken seeds up to 1.3% were recorded, depending on the constructive-functional parametres of the machine. A number of 144 experimental variants were studied in the research, the lowest percentage of broken grains being recorded at the maximum feeding rate of 600 kg/h. The optimum variants were established based on the analysis of the results referring to the percentage of broken kernels.

**Key words:** wheat cleaning, brushing machine, conditioning

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