

Abstract

The master's dissertation contains 104 pages, 58 illustrations, 49 tables, 2 additional and 23 sources of literature.

Relevance of theme. To date, proper dispensing of bulk materials is an important task for many industries. All solutions that are now available do not allow this issue to be solved for any type of bulk material, regardless of shape and weight.

Relationship of work with scientific programs, plans, themes. Experimental and theoretical studies on the topic of the dissertation were conducted at the Department of Instrumentation NTUU KPI `Igor Sikorsky.

The purpose and tasks of the study. The purpose of this dissertation is to develop the most optimal method for determining the parameters of the flow of bulk materials, using various solid bodies of flow.

The object of research is the flow of loose material.

Subject of research. Determination of the parameters of the process of interaction of the bulk material and the bodies of the flow.

Research methods. Methods of mathematical modeling and experimental research were used in this work.

Scientific novelty of the obtained results.

- metrological aspects of the process of leakage of bulk material from the hopper opening;
- metrological aspects of the process of interaction between the flow of bulk material and solids.

The practical value of the results. The result obtained, which can be used to create the means for measuring the leakage of loose material.

Approbation of the results of the dissertation. XI Scientific and Practical Conference of Students and Postgraduates "A Look at the Future of Instrumentation".

Publications. According to the results of the research, 2 articles were published on the following topics:

- "Determination of the flow parameters of bulk materials at the expense of the hopper";
- "Determination of the parameters of the interaction of the flow of bulk material and solids".

Key words: bulk material, body of flow around, hopper, mass flow.