

**DEVELOPMENT OF MODEL OF PLANT FOR MEASURING DISPERSIVITY OF MATERIAL IN ENERGY-CARRIER FLOW BASED ON REGRESSION ANALYSIS**

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Based on experimental investigations, the plant for measuring the material particle size in the flow has been created. The work objective is to develop a regression model for determining the material dispersivity in the flow to update the plant considering its geometrical parameters. The basic factors affecting the characteristics of the acoustic signals recorded during the material transportation have been found. The influence of each accepted factor and their effects on the maximum amplitude of the acoustic signals with the determination coefficient  $R = 0.9$  is estimated. The constructed regression model allows improvements in the plant for determining dispersivity of the bulk material in the flow.

*Keywords: granulometric composition, acoustic signals, factor, amplitude, regression model.*

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