

**MATHEMATICAL AND INFORMATION SUPPORT OF HYDRAULIC EXPERIMENTS
AT PIPELINES**

The article contains summarized results of the research into developed software programme capable of processing findings of hydraulic experiments held at pressure pipelines (protective coatings). The authors describe the algorithm of the analysis procedure, sequential analysis, mathematical and hydro-mechanical modeling of the process of transformation of hydraulic values. The authors provide their concept of the dialog box and description of input and output information, as well as functions of the software programme at intermediate stages of the hydraulic analysis. Basic input information supplied into the hydraulic analysis software programme includes the pipeline, its inner diameter, length, and acceptable roughness error.

Whenever a user presses the "display result" button, interim information is displayed on the screen and, if necessary, a set of output information is provided in the form of tables and graphs. The choice for the optimal solution is made on the basis of the minimum margin of error between experimental and analytical values of the pipe roughness.

The findings may be useful to researchers involved in the study of hydraulic characteristics of pipelines made of various materials and to designers and builders engaged in renovation of sections of pipelines.

Key words: hydraulic experiment, pipeline, modeling, surface roughness, accuracy, software programme.

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