Information and analytical system as a method for scientific information processing

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Effective management of the large flows of various information cannot be organized without the use of computer information systems (IAS). In scientific and technical applications, the IAS is of particular value, which provide deep analytical processing of data from previous studies or experiments and predicting parameters of new experiments as well as processing and analyzing of their results.

For more than 30 years, the IAE Branch RSE NNC RK has been conducting studies to justify NPP safety. During this time, a large amount of experimental data and research results have been gained obtained when modeling the processes that take place while developing severe accidents at nuclear reactors.

The goal of this study is to provide quick access to the necessary experimental data, to create a single mathematical apparatus for calculation of input parameters and a method for comprehensive analysis of output parameters.

The main component of the IAS is an analytical unit with the following functions: determination of time-temperature parameters that depend on a set power and heating rate, comparison of experiments and their results, output of only necessary data tracing.

Due to quick access to the necessary data and research results, the ability to calculate input parameters using a single mathematical apparatus and a comprehensive analysis of output parameters, speed and volume of processed data and reliability of compared parameters will be increased, number of errors in planning experiments will be decreased, and repeatability of the results required for analysis will be increased.

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