

# Utilization of Methods of Lexical Analysis to Optimize Operation of Industrial Aggregates

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*To evaluate the method of operation of industrial system, such as heating furnaces, it is necessary to handle the amount of data that are available in the control systems of these devices. These data are necessary for validation of models of optimal operation of these devices.*

*Creating a consistent database for later use for data mining is a time consuming task. The article will be shown the possibility of using lexical analysis of operational data and how to create the basis finite automaton generating script for verification.*

*Mathematical basis of summarizing options mathematical simulation of temperature field in the heated material, the possible methods of identification systems furnace environment - surface material - temperature field in the material.*

*The mathematical description of the automaton allows you to create a machine that evaluates the correctness of a set of input symbols, and divide them into lexical elements. Technological data of industrial furnaces can be understood as a sequence of certain symbols; such a machine can recognize and evaluate them as a lexical symbol. Based on this determination, then the data can be a good way to tie together, to serve as verification data for the model of thermal processes.*

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