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## COMPUTER MODELING OF A TWO-SPEED ELEVATOR

In the modern world, computer simulation plays an important role in the development of new devices and their control systems. Thanks to modeling, a person minimizes the conduct of dangerous experiments that can damage both the health of others and nature. Having set in advance the correct parameters for units and parts, it is possible to calculate with a sufficiently high accuracy the result of the operation of a real device or system. Also, modern graphics allow you to see not only the design of the future device, but also the operation of virtual equipment, provided that all physical parameters are observed [1]. English occupies an important position in the lives of young scientists. This language is considered international and most of the software for testing various activities is written in it. As an example, the Matlab / Simulink simulation environment was used to conduct experiments and build the electromechanical characteristics of a two-speed electric elevator drive.

In the previous researches it has been proven that the loading degree of a cabin has an effect on the starting characteristics of the electric motor and, as a consequence, on most parameters of the control system. In the computer simulation environment Matlab / Simulink on the elevator model (Figure - 1), different values of the loading degree of the cabin were set for the experiments [2].

In the course of the study, the necessary coefficients were calculated for the transition to a reduced speed and brake application time. The use of the method for identifying of loading degree makes it possible to increase the positioning accuracy of the elevator almost threefold. This increases the energy efficiency of the system and improves dynamic performance [3]. Thus, the method for identifying of loading degree can be used not only for outdated equipment, but also in the development of new elevator control systems.

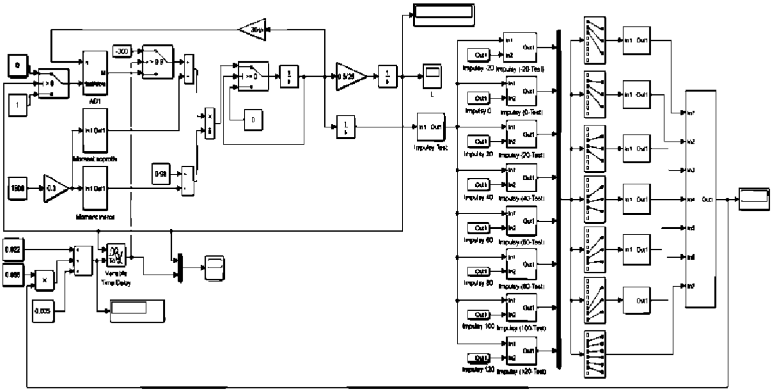

Figure 1 – Simulation model of the elevator

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