The present study is devoted to the design of main flow parameters a conveyor control system with a large number of sections. For the design of the control system, a neural network is used. The architecture of the neural network is justified and the rules for the formation of nodes for the input and output layers are defined. The main parameters of the model are identified and analyzed. The data set for training the neural network is formed using the analytical model of the transport system. The criterion for the quality of the transport system is written. For the given criterion for the quality of the transport system, the Pontryagin function is defined and the adjoint system of equation for the model are identified and analyzed. The data set for training the neural network is used. It allows calculating optimal control of the transport system. For calculation is used additional model of the transport system with output nodes which are controls. A graphical representation of the results of the study is given.
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