ABSTRACT

The abstract contains: pages-160, figures-69, tables-19, graphic part on 6 sheets.

The development of an automated pumping station electromechanical system saw the suppression of three sequentially connected water pumps, one of which was speed controlled.

In the master's work the electromechanical system of dust suppression on the basis of an induction motor is developed. The method of frequency control of the speed of the AC drive for the pumping station is described, as well as the principle of the subordinate control, in accordance with the initial data, the calculation of the power, the choice of the engine and the power equipment, the structural scheme of the SAK, the parameters of the dynamic units are determined, the dynamic properties of the IF-AD system are studied -pump. The development of automated electromechanical systems for the pumping station saw the suppression of three sequentially connected pumps, one of which is speed controlled. A schematic diagram based on the complete electric drive. The corresponding conclusions are made based on the results of the work.

Knowledge of the following disciplines was used to perform the master's dissertation: "Electric Drive Theory", "Electromechanical Automation Systems of General Industrial Mechanisms", "Design of Automation Systems", "Theory of Automatic Control".

The graphic part includes: electrical schematic diagram, transient head and performance diagrams, frequency converter connection diagram, general view of the pump installation.

ELECTROMECHANICAL SYSTEM, AUTOMATIC CONTROL, TRANSITION PROCESSES, PRESSURE, PERFORMANCE, PUMP, SYNTHESIS

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