SUMMARY

Master’s diploma work contains: 128 pages, 95 figures, 27 tables, 6 sheets of the graphic part.

The purpose of the master's dissertation is researching of energy characteristics of the electromechanical system of the elevator lifting system based on a vector-controlled asynchronous electric motor.

During the diploma project the following tasks were solved: analytical review of scientific and technical literature and structures of elevators, formed requirements for electric drive, substantiated and selected electric motor and elements of electromechanical system, developed a model of electromechanical system in software environment MATLAB «Simulink», provided research of changes of losses in the elevating system but also accuracy of positioning depending on change of size of loading of a cabin.

The implementation of this diploma project was provided through the use of the following programs: MATLAB 2013b, Microsoft Office Word 2016, Splan, Microsoft Visio 2016, Mathtype.

ASYNCHRONOUS ELECTRIC DRIVE, ALGORITHM OF ASYNCHRONAL ENGINE CONTROL, MATHEMATICAL MODELING, DYNAMIC CHARACTERISTICS, ELEVATOR, LIFTING PLANT, FREQUENCY CONTROL