

ABSTRACT

Diploma project is presented on 79 pages contains 20 figures and 7 tables.

In this diploma project was investigated and designed the electromechanical control system of tourist electric suitcase. The model includes a Brushless DC gear motor 3-phase 4000 rpm at 62W with a power part based on the MSP430FR2355 microcontroller.

A virtual model of the BLDC circuit drive with a hysteresis current control circuit is presented in Matlab (Simulink). Transition graphs are displayed on a separate sheet.

As a result of research and calculations from the catalog, an electric drive was selected that meets the requirements of a given system. Conclusions on work are made.

ELECTRIC SUITCASE, BRUSHLESS DC MOTOR, HYSTERESIS CONTROL, SIMSCAPE.

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