

## SUMMARY

The master's thesis consists of: 131 pages, 46 figures, 25 tables, a graphic part of the A1 format on 6 sheets, 54 sources in the list of references. The structure of the diploma project includes the following sections:

1. Analytical review in the field of electric drive and automation of grain storage complexes. 2. Description of technological process of grain storage and industrial installation, development of requirements for electric drive and automation system. 3. Rationale for choosing an automated electric drive system. 4. Design of the electric power converter. 5. Special Forces. Methods of load balancing of multi-motor asynchronous electric drives. 6. Research and analysis of static and dynamic characteristics of the automated electric drive. 7. Automation of technological process. 8. Development of a startup project. Economic justification for technical solutions.

The purpose of the master's thesis is to design a system of complex automation of the grain storage complex, to determine the parameters to be controlled, regulated and signaled, to develop and research a two-motor asynchronous electric drive of the scraper conveyor with a system of load balancing of asynchronous motors.

AUTOMATION, SCRAPER CONVEYOR, FREQUENCY CONVERTER,  
MATHEMATICAL MODEL, TWO-MOTOR ASYNCHRONOUS ELECTRIC  
DRIVES SYSTEM, CONTROLLER, RESEARCH, STATIC AND DYNAMIC  
CHARACTERISTICS

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