SUMMARY

Master’s dissertation includes 110 pages, 55 figures, 15 tables, 25 sources of used literature, 6 schemes in A1 format.

In this master's dissertation the development of a loose two-channel electric drive with the corresponding control system was carried out, its research on the simulation model was carried out.

The analytical review in the field of two-channel electromechanical systems, as well as programs for simulation modeling is executed. Different types of designs of two-channel multi-engine systems, their mathematical models and principles of work are considered. A simplified 3D model for controlling a radar ship station on the basis of a non-driven electromechanical differential and multi-pole asynchronous electric motors is developed, the regulators and parameters of the simulation model of the installation are synthesized.

The simulation of dynamic modes of the work of the electromechanical differential, as well as the synthesized two-channel system was carried out. Applied software packages MATLAB / SIMULINK, SimMechanics, SolidWorks.

ELECTRIC DRIVE, DOUBLE-CHANNEL, ELECTROMECHANICAL DIFFERENTIAL, SYNTHESIS, RESEARCH, MODELING, MATLAB / SIMULINK, SIMMECHANICS