

## **THE SUMMARY**

The thesis describes the technology and composition of an overhead crane, provides basic requirements for an electric drive. The kinematic diagram of the crane is determined, the parameters of the mechanical part of the electric drive are determined, an induction motor is selected and its parameters are determined. In addition, natural mechanical and electromechanical characteristics are created.

A system for automatic control of a frequency-controlled electric drive is selected and its parameters are determined. The block diagram and transients of an asynchronous machine are considered. A frequency-controlled electric drive was developed, and its work was studied using computer simulation in MATLAB. It was also found that it effectively controls the start and stop modes.

The section on life safety is devoted to the application of the basics of life safety in working conditions, identifies dangerous and harmful factors of production.

The economic section provides a feasibility study for the selection of an electric drive system for crane equipment, calculations of capital investments and operating costs.