

## **Abstract**

The diploma work is written on the theme "Improvement of electric drive, which has overhead crane with a 25 ton lifting ability." The work consists of the following components as the technical part, life safety and economic part.

The paper considers the control system of electric drive is made on the basis of the frequency converter. In particular, the engine is designed and selected for the mechanism. Static and dynamic characteristics of the developed built for the drive. asynchronous motor with squirrel-cage rotor and frequency inverter were selected. schematic diagrams of the power circuit of the electric, natural and man-made features of the induction motor were built. For developed electric built static and dynamic characteristics.

The program Matlab was developed simulation model of the drive.

As part of the "environmental protection" discussed measures to reduce harmful emissions into the atmosphere. We consider the working safety of the bridge crane. To ensure fire safety set gas fire extinguishers. We consider the requirements for electrical safety and earthing of electrical installations.

The economic part of the price was considered for operation and time for the payback period.