

## **Abstract**

The diploma project provides for the modernization of the electric drive of the belt conveyor for small loads.

In accordance with the task set by the project, the type of belt conveyor is selected, the necessary thrust and power of its drive are determined. As the motor of the selected conveyor, an electric motor with a phase rotor is selected, the power of which corresponds to the calculated power. Figure 2.7 shows the substitution scheme and sets the natural mechanical characteristics.

This diploma project examines the three-phase start-up of a rotary engine, selected obstacles for each stage. Mechanical transients are calculated when starting the engine.

The energy indicators of the proposed electric drive are calculated. The scheme of control of the electric drive of the phase rotary engine is made.

In the MatLab program, a model of a phase rotary engine was built, and its transients under various modes were considered.

In the section safety of life, the calculation of noise per person, as well as the calculation of air purification cyclones. In the economic part, the operating costs are calculated, and the economic efficiency of the proposed electric drive