## Annotation

This thesis describes the General characteristics of traction motors and their groups, characteristics of traction motors. Specify the main parts of traction electric motors and specify the groups of traction electric motors. The calculation is made according to the main parameters, including the calculation of the active layer of the armature and the calculation of the parameters of the armature windings.

In the next section, select the size and number of the brush, and determine the length of the collector. Calculation of the magnetic circuit, the anchor core, the main pole and the interface area of the pole with the backbone, the yoke backbone, design parameters and parameters of the main pole coil.

In the section safety of life, the working conditions at the workplace and the microclimates of the production premises were considered. In addition, this diploma project addresses the issue of how to calculate the lighting of workplaces and buildings, as well as the air purification system of industrial buildings. Influence and risk factors of electric current in production and made conclusions on improving working conditions.

The technical and economic Department calculates the capital investment and material costs, as well as the economic efficiency of the project.