

## **Annotation**

This diploma project deals with the design of a DC motor with a power of 22 kW. At the beginning of the project, we will get acquainted in General with the theory of DC machines, namely DC motors. The main dimensions of the DC motor, armature windings, the geometry of the tooth zone, cross sections, the size of magnetic circuits, as well as the calculation was carried out on the average length of magnetic lines, induction in the cross sections of magnetic circuits, the voltage of individual zones of magnetic circuits, collector and brush data, switching parameters, additional pole windings, losses and efficiency, working characteristics of the DC motor, heat and ventilation calculation, and in a special section, magnetic vibration and a method for reducing it are considered.

In addition to designing a DC motor, this diploma project considered the safety of life in the operation of this engine and carried out calculations for cost and efficiency.