

Annotation

In this work, according to the assignment, work was done on the design of a three-phase synchronous motor.

During the design, general information was provided on the design features of high-power synchronous machines. And a review was conducted on their advantages and disadvantages.

The calculation of the damper winding, the magnetic circuit of a synchronous motor with a capacity of 560 kW, powered by a network voltage of 6000 V. Based on the calculation of the magnetic circuit, a graph of the magnetic characteristics of the same motor was built. As a result of the calculation of transients, the time constant was determined. Losses and engine efficiency were also calculated.

In the section of safety and vital functions, issues of types of protection such as grounding and grounding were considered. The section of the economy addressed issues of capital costs and material costs.