

Annotation

The thesis was carried out on the topic of designing a segment of the 4A series of asynchronous motors from 10 to 20 kW.

Electromagnetic calculations of a number of squirrel-cage induction motors are made including:

- selection of main sizes;
- selection and calculation of stator and rotor windings
- calculation and construction of operational and starting characteristics;
- simplified thermal and ventilation calculations.

The calculations are performed in MathCad.

In the section of Life Safety, the issue of checking the grounding device and the development of fire safety issues is considered.

In the chapter “Economics”, a feasibility study was given when choosing an induction motor, the payback periods were calculated.