

Annotation

In the thesis, two methods of controlling an asynchronous electric drive with a centrifugal load are considered, with which it is possible to smoothly start the electric drive. The choice of an electric motor for mechanisms having a fan load is made, the parameters of the equivalent circuit of an induction motor in absolute units are determined according to the reference technical data. The calculation of natural and artificial mechanical and electromechanical characteristics of an induction motor is performed.

During the study, two simulation models were developed in the Matlab / Simulink software package: according to the IF-AE and TRV-AE schemes.

The drive is compared according to the IF-HELL system and the TRN-HELL system when controlling speed in the range of operation of centrifugal mechanisms.