

Abstract

An electronic review of materials for the purpose of types and modes of operation of the radar station and antenna drives was performed. The choice of the power part of the antenna electric drive is justified, a DC motor is selected as the antenna drive, its parameters are calculated, mechanical and Electromechanical characteristics are constructed, and energy indicators are determined. The parameters of the main elements of the thyristor Converter are calculated. Functional and structural schemes of the electric drive are constructed and transfer functions of dynamic links are defined, natural and artificial mechanical and Electromechanical characteristics are constructed. A simulation model of an electric drive has been compiled in the Matlab application package and transient characteristics have been studied.

In the section life safety, the lightning protection device of the radar station is calculated and the design parameters of the lightning rod are Determined.

In the economic part of the thesis, calculations were made to determine the stability of the designed DC motor.