

Annotation

In the diploma project examines electric cutting machines and calculated frequency converter Stank brand 16M30. The mathematical model of the drive machine tools and model composed by a computer program MATLAB. In the main part was designed power element circuit and selected electric motor and transformer. With this program schedules derived angular speed and transients.

In the section of health and life safety measures considered compliance with safety regulations when using the electric metal cutting machines (installation, repair, etc.), the action of the electrostatic field on the human body and its valuation is calculated ventilation plant. According to calculate chosen lamp type of luminous flux management.

And in the economic part is considered the capital costs, cost effectiveness, and the annual cost calculations substation technical and economic indicators. Had been calculate economic efficiency when changing the system generator-engine to the system thyristor converter- engine.