

Annotation

The diploma project considered the technological features of the teapackaging machine, and its functional diagram was suggested. There was made a selection of the electric drive system of belting transmission. The power of induction motor of belting transmission was calculated. In maintaining the constancy of the overload capacity there was calculated natural and artificial mechanical characteristics of the variable frequency drive. Frequency regulation law was selected. The parameters and elements of power circuit of the frequency converter were identified. Microcontroller power management was described. There were given the mathematical description of the elements of the FC-IM (frequency converter – induction motor). There was made a study of the system of frequencycontrolled electric drive in dynamic regimes in Matlab software environment.

The life safety part produced analysis of working conditions in the operation of belting transmission. Investigated the questions on the microclimate, noise, tea dusting and designed protective ground.

In the economic part of the diploma project was given the feasibility study. Identified the economic efficiency on the basis of a comparison of two options for building technological process.