

## ANNOTATION

In this diploma project we present the system of automatic operation of electric drive based on frequency inverter, which drives the feed pump of centrifugal type. The feed pump of this type is designed to supply steam boilers with water.

During the work we've done the selection electric motor feed pump, frequency converter, also the calculation of their parameters was done. A mathematical model of the system and the virtual drive - BP - centrifugal pump – were developed during the research. The simulation results on the virtual model in MATLAB environment in different operating modes of the electric feed pump demonstrated good quality control to meet the requirements of the process.

Furthermore, measures for the protection of health and safety at workplace of the attendants at the pumping station were developed. Technical and economic calculation shows that the option "frequency converter - asynchronous motor with squirrel-cage rotor - feed pump" appears to be effective.