## Annotation

In this diploma project, a calculation was made to increase the evaporation plant of the thermal power center of Almaty.

The energy, technical, economic and environmental indicators of the heat and power center are determined. The methods of increasing the efficiency of using energy types in the national economy and reducing the cost of fuel in the production of electricity and heat energy, increasing the efficiency of using steam installations in the national economy, the processes of converting fuel into steam during the cycle, increasing the efficiency of using generators based on various methods, and developing new technological processes that are most effective. The ways of further development of the efficiency of thermal power plants, the processes of basic operation of thermal machines, installations, and ways to improve the efficiency of the steam turbine cycle are studied.