

Annotation

In this diploma project, a feasibility study on the extension of Ekibastuz GRES-2 through installation of the K-500 MW unit is presented. The heat engineering section presents the calculation of the thermal scheme of the K-500 MW unit, the selection of the main and auxiliary equipment, general station facilities. In work the analysis of thermal schemes of "power units of increased efficiency" is carried out. In the life safety section, calculations of the artificial lighting of the turbine shop are presented. In the section of the economy, a business plan for the feasibility study for the expansion of Ekibastuz GRES-2 was drawn up.

According to the calculated investment indicators, the reconstruction of the state district power station proposed in the diploma project is economically justified: the payback period of the project is about 10 years.