

## Annotation

The thesis deals with the design of methods for the expansion of the turbine department of CHP-1 in Almaty.

In the work, the main and auxiliary equipment of the station was selected and calculated before and after the design: a waste heat boiler, a gas turbine and other auxiliary devices. The main objective of the project is to increase the overall efficiency of the station. To this end, the calculation was made on replacing the old PT-60-90 / 18 turbine, which has developed its energy resource, with a newer and more innovative gas turbine "M704F4".

According to the section of life safety the calculation of artificial lighting.

In the economic part of the technical and economic indicators and payback period of the project.