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Work title: Natural gas-fired power unit with electric capacity of 328 MW

Annotation:

The work is devoted to topical issues of development of a 328 MW steam turbine power unit. A special part of the work is devoted to consideration of the issue of replacement of this power unit by a combined cycle power unit based on the GTD-110M turbine. Chapter 1 of the work is devoted to calculation of the thermal scheme of the 328 MW steam turbine unit, Chapter 2 - selection of equipment for this power unit, Chapter 3 - calculation of regenerative heater, Chapter 4 - determination of thermal efficiency indicators of the 328 MW steam-gas power unit scheme. The study of efficiency indicators of steam-turbine and combined-cycle schemes with comparable electric capacity has been carried out. It was obtained that the combined cycle unit has a higher efficiency compared to the steam turbine unit.