

A method is elaborated for utilization of heat of exhaust of gas-turbine engines and design of heat-power unit on the basis of gas-turbine engines for its implementation. The unit includes a system for heat production with a case-pipe heat exchanger. This transfers heat being produced from utilization circuit of the system for heat production to the circuit of the consumer heating. The pipe framing is equipped with supply fittings providing hot water supply from the boiler-utilizer to heating network and to the circuit of the system for electric power production. Working medium in the system of electric energy production is the low-boiling hydrocarbon mix, for instance, the product of processing of oil condensate or oil. The closed circuit of the system of electric power production has a multi-stage system of evaporation of low-boiling hydro-carbon mix with hot water, unit for preliminary heating of condensate with hot vapor of hydro-carbon mix going out from the gas-turbine drive before feeding those to the condensation system, system of condensation of vapor of the working medium, and the unit for discharge from the low-boiling working medium circuit of non-condensed components of the gaseous hydrocarbon mix. The system for control and adjustment of the parameters of the heat-power unit has appliances providing operation of the utilization circuit of the system of heat production in the modes of heat generation and electric power production. Those inventions provide operation of the heat-power unit either in the mode of an electric power plant, or in the mode of cogeneration.