

The invention relates to turbo-machine building, in particular to steam-turbine plants. A method for conversion of heat to mechanical work in steam-turbine plants provides for compression of liquid, its heating and evaporation at high pressure due to heat supply, expansion of high-pressure steam to low pressure with performing mechanical work, cooling and condensation of low pressure vapor. Low pressure vapor is cooled with increase of pressure in thermo-pressor due to evaporation of finely pulverized expanded compressed liquid in flow rate of which is increased to 90 % of sound velocity. Due to thermo-pressor, pressure of low pressure vapor at outlet from it is increased, and pressure drop in gas-turbine plant increases. The invention promotes increase of power effectiveness of steam turbines.