

ESTIMATION OF THE INFLUENCE OF HEATING SOURCE TEMPERATURE ON ENERGY EFFICIENCY OF SINGLE-STAGE ABSORPTION THERMAL TRANSFORMER CYCLES

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The effect of the heating source temperature on the energy efficiency of actual single-stage cycles of an Absorption Bromine Lithium Refrigeration Machine (ABLRM), an Absorption Bromine Lithium Step Down Thermal Transformer (ABLSDDT) and an Absorption Bromine Lithium Step Up Thermal Transformer (ABLSUTT) depending on the magnitude of the degree of internal heat recovery are analyzed in this article. Thermodynamic cycles with full heat recovery on the cold (for ABLRM and ABLSDDT) and warm (for ABLSUTT) sides of the regenerative heat exchanger of solutions in the absence of regenerative heat exchanger and cycles with a finite temperature difference between weak and strong solutions are considered.

Keywords: absorption refrigerating machine, absorption thermal transformer, degree of internal heat refrigeration, energy efficiency coefficients of cycles, heating source temperature, heat transformation.

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