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2. Denomination
Intensifying the heat-mass exchange processes at cooling towers of liquid tape type
3. Specialty
05.14.06. –Technical heat processes physics and industrial heat power engineering
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5. Dissertation research effected at
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<p>It is shown, that thermal resistance of liquid type is not depreciating small, that gives the path to intensification of process of heat-mass transfer both by influence on the gas phase, and on liquid one and allows to consider a regular roughness as heat-mass transfer intensificator not only in gas, but also in liquid phase. In the engineering computations at the optimal range of loading on gas and liquid ($0.8 < l < 1.2$) it is possible to ignore the influence on thermal resistance of liquid tape and analyze the commutation of water cooling tower, based on the value of total thermal resistance only (R_{Σ}). The design of mutual heat-mass transfer processes is made at the evaporated cooling of water in cooling tower taking into account the real images of phase thermal resistances. The method of finding state of air current on height (in the counter current chart) and volume (in crosscurrent chart) for water cooling tower attachment is designed. The attachment "the double slanting reef" with the sloping location of basic channel is recommended for the cool tower with multichannel attachment of surface. Polyvinylchloride is preferred as a material. The type-sized rows of counter - and cross current cooling towers film-type in the range of productivity on cooled water are developed. They provide in the conditions of multysection exploitation and continental climate, on the basis of principle of the compensation of lost with evaporation and drops outcomes.</p> <p>Keywords: cooling tower film-type, regular attachment, regular roughness, heat-mass transfer, counter- and cross current, ventilator.</p>