
Equation of mass variation of the phase in the heat storage using phase change materials

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The paper considers a concept of density (per unit length) of heat-accumulating materials for the phase in the heat storage using phase change materials. The authors present an equation of the mass variation in the phase composition during the processes of charging or discharging. This equation can be used in the framework of a one-dimensional quasi-stationary model to calculate the mass of both liquid and solid phases during the phase transition process, which is determined according to a given time schedule of temperature changes at the input.

Keywords: *heat storage, charging, discharging, phase transition, liquid phase, solid phase.*

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