

Title (en)

REFRIGERATOR WITH A PHASE CHANGE MATERIAL AS A THERMAL STORE

Title (de)

KÜHLSCHRANK MIT EINEM PHASENWECHSELMATERIAL ALS THERMISCHE SPEICHERUNG

Title (fr)

RÉFRIGÉRATEUR À MATÉRIAU À CHANGEMENT DE PHASE COMME ACCUMULATEUR THERMIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2016066980A1] A refrigerator having a thermal store comprising a phase change material is disclosed. The refrigerator has a cooling chamber (6) for containing an object to be cooled, and a vapour compression refrigeration system including a first evaporator (10) for cooling the cooling chamber and a second evaporator (12) for cooling the phase change material. A valve (15) is provided to control the flow of refrigerant to the first and second evaporators depending on the cooling load on the refrigerator. When the refrigerator is subject to a relatively low cooling load, refrigerant flows to the second evaporator (12) to cool the phase change material and, when the refrigerator is subject to a relatively high cooling load, refrigerant flows to the first evaporator (10) such that increased cooling is provided to the cooling chamber by the first evaporator and the phase change material. In a preferred embodiment, refrigerant flows to both the first and second evaporators (10,12) when the refrigerator is subject to a relatively low cooling load and substantially only to the first evaporator (10) when the refrigerator is subject to a relatively high cooling load.

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