

Abstract

Heat generator comprising a magneto-caloric material and thermie generating method

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The invention relates to a heat generator comprising magneto-caloric material and a method for generating efficient and reliable thermies enabling of substantially limiting displaceable inert masses in order to produce a magnetic filed variation required for obtaining a magnetocaloric effect and usable by individuals and/or industries.

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The inventive generator (10) comprises magnetocaloric thermal elements (Ti) which are circularly arranged and crossed by conduits containing coolant flowing therethrough and magnetic elements (Gi) exposing said thermal elements (Ti) to a magnetic field action. The generator (10) also comprises magnetic convergence (Mj) and magnetic divergence (mj) elements arranged between the thermal elements (Ti) and the magnetic elements (Gi) and coupled to displacement means (not represented) for moving from one thermal element (Ti) to another thermal element (Ti+1) and initiating the magnetic flux variation in said thermal elements (Ti), thereby promoting the calorie and/or frigorie generation.

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The invention can be used for tempering, cooling, heating, conserving, drying and air-conditioning.

Fig. 1