

Abstract

Device and method for generating thermal units with magnetocaloric material

5 The present invention concerns a device for generating thermal units using magnetocaloric material, with low energy consumption, evolutive, of a simple design, reliable operation, which allows to generate thermal units in a cost effective way while at the same time removing the risks of thermal fluid leakage and limiting the number of mechanical parts.

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 The device (1a) for generating thermal units using magnetocaloric material comprises a magnetic element (2a) coupled to a power supply (3a), a magnetocaloric element (4a), a circuit (5) for thermal exchange fluid in which one or more thermal exchange fluids are made to circulate by means of circulation (6), and two heat exchangers (7, 15 8). The power supply (3a) is set up to generate electric pulses so as to create an impulsive magnetic field that causes the heating and the cooling of the magnetocaloric element (4a) and hence of the thermal exchange fluid .

 Application: heat exchanger for cooling, heating, air-conditioning, regulation.

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 Figure 1.