

Abstract

Thermal generator using magneto-calorific material

5 The present invention proposes a thermal generator which is non-polluting, has very good energy efficiency, is of simple and economical design and uses little energy, at the same time as being capable of further development, flexible and modular.

10 In this thermal generator (1), the thermal elements (3) composed of magneto-calorific material each comprises two separate collector circuits (31 and 32), a “hot” collector circuit connected to a hot heat transfer fluid circuit (51) and a “cold” collector circuit (32) linked to a cold heat transfer fluid circuit (52). The heat transfer fluid is made to move alternately in one or the other of the collector circuits (31 and 32) depending on whether or not the thermal elements (3) are subjected to the magnetic field generated
15 by the magnets (40) moving in rotation around a central axis (B) with respect to the thermal elements (3). The heat transfer fluid circuits (51 and 52) are partly incorporated in a plate (2) carrying the said thermal elements (3) and connected to external circuits which have heat exchangers (55 and 56) using the calories and frigories generated by those thermal elements (3).

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Applications: Heating, tempering, air conditioning or refrigeration in any industrial installation or any domestic application.

Figure 1.

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