

Title (en)

HIGH FREQUENCY, LOW TEMPERATURE REGENERATIVE HEAT EXCHANGER

Title (de)

HOCHFREQUENZ-SPEICHERWÄRMETAUSCHER FÜR NIEDRIGE TEMPERATUREN

Title (fr)

ECHANGEUR THERMIQUE REGENERATIF A HAUTE FREQUENCE ET BASSE TEMPERATURE

Publication

EP 1309824 A1 20030514 (EN)

Application

EP 02752211 A 20020703

Priority

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- US 30286201 P 20010705
- US 18936602 A 20020701

Abstract (en)

[origin: WO03004945A1] A high-frequency, low-temperature regenerator (12) includes a substrate (50) having rare earth material (52) disposed thereon. The substrate (50) which has a thickness of less than or equal to approximately 0.001 inches, is constructed from a material, such as polyimide, polyester, or stainless steel, or consists of a stack of plated substrates (44) which dimples, pleats, or other mechanisms to preserve spaces (54) of approximately 0.00025 inches between the stacked plated substrates (44). The thickness of the layer of rare earth material (52) which is approximately 0.0002 inches, is smaller than the thermal penetration depth of the selected rare earth material (52) to enable all of the rare earth material (52) to contribute to thermal regeneration at an operating frequency of 30Hz.

IPC 1-7

F25B 9/14; **F28D 17/02**

IPC 8 full level

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CPC (source: EP)

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