Title (en)

IMPROVED LATENT HEAT STORAGE DEVICE

Title (de)

VERBESSERTE LATENTWÄRMESPEICHERVORRICHTUNG

Title (fr)

DISPOSITIF AMÉLIORÉ DE STOCKAGE DE CHALEUR LATENTE

Publication

EP 2235466 A1 20101006 (EN)

Application

EP 08861002 A 20081219

Priority

- GB 2008004199 W 20081219
- GB 0724776 A 20071219

Abstract (en)

[origin: GB2455748A] A latent heat storage device has an elastomeric container 1 to contain a phase change material (PCM) 2 containing nano-particle conductive powder, which may be carbon or aluminium, arranged in a containment vessel 3. The elastomeric container 1 may have walls arranged to be as thin as possible, maximising heat transfer, whilst being strong enough to retain the PCM, may be formed into square or circular chambers or may be a continuous tube sealed at both ends, folded, and inserted into the containment vessel 3. Heat exchange fluid 6 may flow through the vessel in a closed circuit, passing through gaps between adjacent tubes or folds of the elastomeric container 1, these gaps being restricted by thermal expansion of the PCM thus avoiding overheating. The containment vessel may provide the structural integrity for the device when the PCM has melted, have a sealed lid, insulated panels or walls and a plurality of compartments and different PCMs, the heat exchange fluid 6 being directed to different compartments in turn or selectively. The device may have several vessels 3, which may have different atmospheres, e.g. reduced oxygen.

IPC 8 full level

F28D 20/02 (2006.01)

CPC (source: EP GB US)

F28D 20/02 (2013.01 - GB); **F28D 20/021** (2013.01 - GB); **F28D 20/023** (2013.01 - EP GB US); Y02E 60/14 (2013.01 - EP US)

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

GB 0724776 D0 20080130; **GB 2455748 A 20090624**; CN 101932898 A 20101229; CN 101932898 B 20121121; EP 2235466 A1 20101006; GB 201012030 D0 20100901; GB 2468619 A 20100915; GB 2468619 B 20120912; US 2011030915 A1 20110210; WO 2009077765 A1 20090625

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GB 0724776 A 20071219; CN 200880125872 A 20081219; EP 08861002 A 20081219; GB 2008004199 W 20081219; GB 201012030 A 20081219; US 80910508 A 20081219