

Title (en)

Heating and/or cooling device with multiple layers

Title (de)

Heiz- und/oder Kühlvorrichtung mit mehreren Schichten

Title (fr)

Dispositif de chauffage et/ou de refroidissement doté de plusieurs couches

Publication

EP 2009648 B1 20140129 (DE)

Application

EP 08015360 A 20021216

Priority

- EP 02796639 A 20021216
- DE 10162276 A 20011219

Abstract (en)

[origin: WO03052776A2] An electrically conductive resistive layer (26) is produced by thermally injecting an electrically conductive material (18) onto the surface of a non-conductive substrate (12). Initially, the material layer (14) arising therefrom has no desired shape. The material layer (14) is then removed (24) in certain areas so that an electrically conductive resistive layer (26) having said desired shape is produced.

IPC 8 full level

H01C 17/24 (2006.01); **C23C 4/01** (2016.01); **C23C 4/08** (2016.01); **H01C 17/242** (2006.01); **H05B 3/40** (2006.01)

CPC (source: EP US)

C23C 4/01 (2016.01 - EP US); **C23C 4/06** (2013.01 - US); **C23C 4/08** (2013.01 - EP US); **C23C 4/16** (2013.01 - US); **C23C 4/18** (2013.01 - EP US); **C23C 24/04** (2013.01 - EP US); **C23C 30/00** (2013.01 - EP US); **F24H 1/142** (2013.01 - EP US); **H01C 17/24** (2013.01 - EP US); **H01C 17/245** (2013.01 - EP US); **H05B 3/46** (2013.01 - EP US); **Y10T 29/49083** (2015.01 - EP US); **Y10T 29/49099** (2015.01 - EP US)

Cited by

DE102019127753A1; WO2020165080A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)

WO 03052776 A2 20030626; WO 03052776 A3 20040304; AT E414321 T1 20081115; CA 2471268 A1 20030626; CA 2471268 C 20070717; DE 10162276 A1 20030717; DE 10162276 B4 20150716; DE 10162276 C5 20190314; DE 50213016 D1 20081224; EP 1459332 A2 20040922; EP 1459332 B1 20081112; EP 2009648 A1 20081231; EP 2009648 B1 20140129; ES 2314125 T3 20090316; ES 2452325 T3 20140331; PT 1459332 E 20081229; PT 2009648 E 20140325; US 2005025470 A1 20050203; US 2006108354 A1 20060525; US 2013260048 A1 20131003; US 2015267288 A1 20150924; US 7361869 B2 20080422; US 9029742 B2 20150512; US 9758854 B2 20170912

DOCDB simple family (application)

EP 0214310 W 20021216; AT 02796639 T 20021216; CA 2471268 A 20021216; DE 10162276 A 20011219; DE 50213016 T 20021216; EP 02796639 A 20021216; EP 08015360 A 20021216; ES 02796639 T 20021216; ES 08015360 T 20021216; PT 02796639 T 20021216; PT 08015360 T 20021216; US 201313903710 A 20130528; US 201514669836 A 20150326; US 32846906 A 20060109; US 87275204 A 20040621