

Title (en)

HEATING ELEMENT FOR MOTOR VEHICLES

Title (de)

HEIZKÖRPER FÜR KRAFTFAHRZEUGE

Title (fr)

CORPS CHAUFFANT POUR VÉHICULES AUTOMOBILES

Publication

EP 2394126 A1 20111214 (DE)

Application

EP 10701881 A 20100202

Priority

- EP 2010051232 W 20100202
- DE 102009007619 A 20090205

Abstract (en)

[origin: WO2010089287A1] The invention relates to a heat exchanger, in particular a heating element (1) for motor vehicles, comprising a block (4) that has flat tubes (2) and corrugated fins (3) and a collecting tank (5, 6) on the inlet side and on the outlet side, wherein the flat tubes comprise flat sides having embossed vortex generators, and a coolant can flow through the flat tubes. It is proposed that the flat tubes (2) have an inner diameter (L) in the range of 0.9 to 1.2 mm, preferably of 1.0 mm, and that the corrugated fins (3) have a height (H) in the range of 6.3 to 8.0 mm, preferably of 8.3 mm.

IPC 8 full level

F28D 1/03 (2006.01); **F28D 1/053** (2006.01); **F28F 1/12** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP US)

F28D 1/0391 (2013.01 - EP US); **F28D 1/05366** (2013.01 - EP US); **F28F 1/126** (2013.01 - EP US); **F28F 3/046** (2013.01 - EP US);
F28F 2001/027 (2013.01 - EP US)

Citation (search report)

See references of WO 2010089287A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

DE 102009007619 A1 20100812; EP 2394126 A1 20111214; EP 2394126 B1 20150408; US 2012024510 A1 20120202;
WO 2010089287 A1 20100812

DOCDB simple family (application)

DE 102009007619 A 20090205; EP 10701881 A 20100202; EP 2010051232 W 20100202; US 201113204100 A 20110805