

Title (en)

Heat exchanger, more particularly flat tubes heat exchanger for automotive vehicle

Title (de)

Wärmetauscher, insbesondere Flachrohr-Wärmetauscher eines Kraftfahrzeuges

Title (fr)

Echangeur de chaleur, en particulier échangeur de chaleur à tubes plats pour véhicule automobile

Publication

EP 1300646 A3 20060517 (DE)

Application

EP 02018694 A 20020821

Priority

DE 10149507 A 20011006

Abstract (en)

[origin: EP1300646A2] The heat exchanger (1), particularly of flat tube type, is for a road vehicle and has two coolant tanks (2,4), between which is a tube block (3). Inflow (5) and outflow (6) tubes are formed and the tanks, each of which extends at least partly along a long side of the corresponding tank and has at least one radial aperture (7,8), which communicates with a side aperture (9,10) formed in the tanks. <??>Each tube is soldered to the corresponding tank. The radial aperture and the corresponding side aperture are aligned to one another. They are both formed as longitudinal slots which extend in the longitudinal direction of the corresponding tube and along their longitudinal extent have a constant or varying aperture width.

IPC 8 full level

F28F 9/04 (2006.01); **F28D 1/053** (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP US)

F28D 1/05391 (2013.01 - EP US); **F28F 9/0246** (2013.01 - EP US); **F28F 9/0278** (2013.01 - EP US)

Citation (search report)

- [Y] US 5771965 A 19980630 - INABA HIROYUKI [JP], et al
- [A] EP 0809082 A2 19971126 - MODINE MFG CO [US]
- [DA] DE 19719255 A1 19981112 - VALEO KLIMATECH GMBH & CO KG [DE]
- [A] FR 2479961 A3 19811009 - SUEDEDEUTSCHE KUEHLER BEHR [DE]
- [A] US 5203407 A 19930420 - NAGASAKA YOSHIKIYO [JP]
- [A] US 5956847 A 19990928 - REDMAN ROBERT J [US]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 014, no. 075 (M - 0934) 13 February 1990 (1990-02-13)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11 28 November 1997 (1997-11-28)

Cited by

EP3757502A1; US9759492B2; WO2020260052A1; WO2006094583A1; WO2021069060A1; WO2008141744A1; JP2008531976A; EP2150757B1

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 SK TR

DOCDB simple family (publication)

EP 1300646 A2 20030409; **EP 1300646 A3 20060517**; DE 10149507 A1 20030410; US 2003150603 A1 20030814; US 2006070729 A1 20060406; US 7000690 B2 20060221; US 7234515 B2 20070626

DOCDB simple family (application)

EP 02018694 A 20020821; DE 10149507 A 20011006; US 26451102 A 20021004; US 28297305 A 20051118