

Title (en)

Flat tubes heat exchanger core with deformed tube ends

Title (de)

Wärmeübertrager-Flachrohrblock mit umgeformten Flachrohrenden

Title (fr)

Bloc de tubes plats avec extrémités déformées pour échangeur de chaleur

Publication

EP 1293743 A3 20031112 (DE)

Application

EP 02017056 A 20020727

Priority

DE 10146824 A 20010918

Abstract (en)

[origin: EP1293743A2] The flat tube block heat exchanger has at least one flat tube (1), which is shaped at least at one end section (1a) to open into a connection zone. The shaped end section of the flat tube is separated into a number of end part-sections (4a,4b) by one or more longitudinal dividing lines (3), with a twist towards its neighboring end section (1b), so that the facing flat sides (5a,5b) lie against each other in the connection zone.

IPC 1-7

F28F 1/02; **F28F 9/02**; **F28D 1/053**

IPC 8 full level

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

CPC (source: EP)

F28D 1/05391 (2013.01); **F28F 1/022** (2013.01); **F28F 1/025** (2013.01); **F28F 9/0212** (2013.01); **F28F 9/0221** (2013.01); **F28D 2021/0073** (2013.01); **F28D 2021/0084** (2013.01); **F28D 2021/0085** (2013.01)

Citation (search report)

- [A] EP 0992757 A2 20000412 - BEHR GMBH & CO [DE]
- [A] FR 2793013 A1 20001103 - VALEO THERMIQUE MOTEUR SA [FR]
- [A] DE 19830863 A1 20000113 - BEHR GMBH & CO [DE]
- [A] DE 4432972 A1 19950413 - VALEO THERMIQUE HABITACLE [FR]
- [A] DE 3813339 A1 19891109 - HAPPEL GMBH & CO [DE]
- [A] US 5186244 A 19930216 - JOSHI SHRIKANT M [US]

Cited by

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Designated contracting state (EPC)

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EP 1293743 A2 20030319; **EP 1293743 A3 20031112**; **EP 1293743 B1 20060920**; AT E340351 T1 20061015; DE 10146824 A1 20030424; DE 50208190 D1 20061102

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