

Title (en)

Water-air heat exchanger of aluminium for motor vehicles

Title (de)

Wasser/Luft-Wärmetauscher aus Aluminium für Kraftfahrzeuge

Title (fr)

Echangeur de chaleur eau-air en aluminium pour véhicules automobiles

Publication

EP 0656517 B1 19990210 (DE)

Application

EP 94118047 A 19941115

Priority

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- DE 9318525 U 19931203

Abstract (en)

[origin: EP0656517A1] The invention relates to a water-air heat exchanger for motor vehicles and to assigned production methods. The heat exchanger consists overall of aluminium or an aluminium alloy, and has a series arrangement of ribbed (finned) parallel flat tubes (2) whose ends are plugged in a soldered fashion into inwardly pointing collars (14) of the tube plate (tube sheet) (8) of a waterbox (6). The flat tubes (2) are respectively constructed with at least two flows by means of an inner partition. The two flows open into different compartments of the waterbox (6), which are separated from one another by a partition (30). The invention relates to reliable, tight soldering of the partition (30) of the waterbox (6) against the inner partitions of the flat tubes (2). For this purpose, the partition (30) of the waterbox (6) respectively engages between the collars (14) in a groove (72) or a slot in the tube plate (8). <IMAGE>

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IPC 8 full level

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Cited by

DE102010053478B4; WO9850749A1; DE102009037305A1; CN102003912A; DE10255487A1; DE102012109541A1; EP1731864A1; EP1462754A3; DE102016218088A1; DE10243416A1; DE102015202765A1; EP0958953A1; FR3069312A1; DE19819247A1; CN101975519A; EP1298401A3; DE102009057175A1; DE102012109493B4; DE19752139A1; FR2771483A1; DE19752139B4; DE10259026A1; DE19719259A1; US6142217A; DE19719259B4; EP2026028A3; CN108735516A; US7600560B2; DE102009055931A1; US9089890B2; US2021207535A1; WO2005119155A1; WO2006133748A1; WO2019015952A1; WO2005085738A1; EP2717010A1; US11898809B2; US8590607B2; US11920517B2; US11885573B2; US6202741B1; JP2008501923A; DE102010053478A1; US8844504B2; US11982232B2

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