

Title (en)  
A heat exchanger and a method of manufacturing thereof

Title (de)  
Wärmetauscher und Verfahren zu dessen Herstellung

Title (fr)  
Echangeur de chaleur et sa méthode de fabrication

Publication  
**EP 1496329 A3 20100804 (EN)**

Application  
**EP 04015096 A 20040628**

Priority  
PL 36106503 A 20030703

Abstract (en)  
[origin: EP1496329A2] The invention relates to a heat exchanger (1) comprising a cooling core (2) consisting of plurality of parallel tubes and cooling fins, two manifolds (3) fluidly connected with opposite ends of each tube, and an inlet and outlet ports for a heat exchanging medium, and a method of manufacturing thereof. To preliminary assemble the heat exchanger, which allows one-shot furnace brazing of all components thereof, with no need to use auxiliary supporting elements, said method comprises the steps of (i) preliminary assembling on the manifold (3) at least one bracket (4) having a mounting plate (5); (ii) making at least one fitting block (7) having a slot (8) for the mounting plate (5) of the bracket (4) and a flow duct ended by an orifice (10) surrounded by annular groove (16) for a brazing agent (17), bordered at its outer side by securing ring (18); (iii) pushing the fitting block (7) in the mounting plate (5) of the bracket; (iv) placing at least one joint pipe (11) fluidly connected with the manifold (3), in the orifice (10) of the fitting block (7) to create an annular capillary gap; (v) placing the brazing agent (17) in the annular groove (16) and squeezing the securing ring (18) inwards, at least in few points; and (vi) one shot brazing of the heat exchanger components together.

IPC 8 full level  
**F28F 9/00** (2006.01); **F28F 9/04** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP)  
**F28F 9/002** (2013.01); **F28F 9/0246** (2013.01); **F28F 9/0251** (2013.01); **F28F 3/048** (2013.01)

Citation (search report)

- [A] US 6557373 B1 20030506 - NITTA MINORU [US]
- [A] JP S6396496 A 19880427 - NIPPON DENSO CO
- [AD] US 6154960 A 20001205 - BALDANTONI ANTONIO [US], et al
- [A] US 5163716 A 19921117 - BOLTON JAMES D [US], et al
- [A] GB 1204724 A 19700909 - CHAUSSON USINES SA [FR]

Cited by  
EP1956333A1; FR2958387A1; LU102301B1; FR2958386A1; EP3848665A1; WO2011120972A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL HR LT LV MK

DOCDB simple family (publication)  
**EP 1496329 A2 20050112**; **EP 1496329 A3 20100804**; PL 361065 A1 20050110

DOCDB simple family (application)  
**EP 04015096 A 20040628**; PL 36106503 A 20030703