

Title (en)

A FLAT TUBE ASSEMBLY FOR A HEAT EXCHANGER

Title (de)

FLACHROHRANORDNUNG FÜR EINEN WÄRMETAUSCHER

Title (fr)

ENSEMBLE AILETTE ET TUBE PLAT D'UN ÉCHANGEUR DE CHALEUR

Publication

EP 3521745 A1 20190807 (EN)

Application

EP 18461515 A 20180206

Priority

EP 18461515 A 20180206

Abstract (en)

A flat tube assembly 1 for a heat exchanger, comprising a flat tube 10 and a fin 20 placed inside the tube 10, the flat tube 10 being formed by a sheet material and being defined by a bottom wall 11, a top wall 12 and two side walls 13, the distance between the bottom wall 11 and the top wall 12 defining the height direction H with tube height H_t, and the distance between the side walls 13 defining the width direction W, wherein at least one of the side walls 13 and a corner section 14 between the bottom wall 11 and this side wall 13 are formed by layers of the sheet material, and wherein the fin 20 is a corrugated sheet with plurality of adjacent walls joined at top and bottom bent portions 22 which are in contact with the top and bottom walls 11, 12 of the tube 10 respectively, the adjacent bent portions 22 being distanced from each other by substantially constant distance T₁, wherein a terminal adjacent wall 21 of the fin 10 has a bottom side edge 23 which is distanced from the adjacent bottom bent portion 22, along the width direction W, by a distance T₂ which is bigger than distance T₁, and is distanced from the top wall 12, along the height direction H, by a distance H_f which is smaller than H_t.

IPC 8 full level

F28F 1/40 (2006.01); **F28D 1/03** (2006.01); **F28D 1/053** (2006.01); **F28F 1/02** (2006.01); **F28F 3/02** (2006.01)

CPC (source: EP)

F28D 1/0391 (2013.01); **F28D 1/05366** (2013.01); **F28F 1/02** (2013.01); **F28F 1/40** (2013.01); **F28F 3/025** (2013.01); **F28D 2021/008** (2013.01)

Citation (applicant)

- EP 1089047 A2 20010404 - VALEO INC [US]
- EP 1906127 A2 20080402 - INT TRUCK INTELLECTUAL PROP CO [US]

Citation (search report)

- [X] DE 102012211350 A1 20140102 - BEHR GMBH & CO KG [DE]
- [X] DE 102007033177 A1 20090122 - MODINE MFG CO [US]
- [A] EP 3040669 A1 20160706 - VALEO AUTOSYSTEMY SP ZOO [PL], et al
- [A] GB 2324145 A 19981014 - ROLLSEC LTD [GB]
- [A] JP H0552563 U 19930713

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3521745 A1 20190807; EP 3521745 B1 20221005

DOCDB simple family (application)

EP 18461515 A 20180206