

Title (en)
HEAT EXCHANGER FOR AIR CONDITIONERS

Title (de)
WÄRMETAUSCHER FÜR KLIMAAANLAGE

Title (fr)
ECHANGEUR DE CHALEUR POUR CONDITIONNEURS D'AIR

Publication
EP 0936432 B1 20030108 (EN)

Application
EP 97944133 A 19971016

Priority
• JP 9703729 W 19971016
• JP 30734296 A 19961031

Abstract (en)
[origin: EP0936432A1] In a heat exchanger for use in an air conditioner or the like, a plurality of fins (10) are provided in parallel, and a plurality of upwind heat transfer tubes (13) and a plurality of downwind heat transfer tubes (14) penetrate the fins (10). Both the upwind heat transfer tubes and the downwind heat transfer tubes (13, 14) are arranged in respective rows in approximately identical directions and in a staggered form as a whole. Cut lines (15) are provided between the upwind heat transfer tubes (13) and the downwind heat transfer tubes (14). The cut lines (15) are arranged in a direction identical to the direction in which the heat transfer tubes (13, 14) are aligned, and extended in a direction intersecting the direction (X) of arrangement thereof. With this arrangement, a sufficient rigidity of the fins is secured while preventing the unnecessary heat conduction via the fins. <IMAGE>

IPC 1-7
F28F 1/32

IPC 8 full level
F28F 3/00 (2006.01); **F25B 39/00** (2006.01); **F28D 1/047** (2006.01); **F28F 1/32** (2006.01)

CPC (source: EP KR)
F28D 1/0477 (2013.01 - EP); **F28F 1/325** (2013.01 - EP); **F28F 3/00** (2013.01 - KR)

Citation (examination)
US 5553663 A 19960910 - YU SI-HONG [KR]

Cited by
EP2565574A4; KR20040004967A; EP1983270A4; EP2123998A3; EP2031335A3; EP2784424A1; US9127868B2

Designated contracting state (EPC)
BE DE ES FR GB GR IT PT

DOCDB simple family (publication)
EP 0936432 A1 19990818; EP 0936432 A4 20000119; EP 0936432 B1 20030108; AU 4573197 A 19980522; AU 710016 B2 19990909; CN 1159564 C 20040728; CN 1228833 A 19990915; DE 69718343 D1 20030213; DE 69718343 T2 20030918; ES 2190544 T3 20030801; HK 1019354 A1 20000203; JP H10132480 A 19980522; KR 20000034784 A 20000626; MY 118256 A 20040930; PT 936432 E 20030331; TW 415582 U 20001211; WO 9819126 A1 19980507

DOCDB simple family (application)
EP 97944133 A 19971016; AU 4573197 A 19971016; CN 97196926 A 19971016; DE 69718343 T 19971016; ES 97944133 T 19971016; HK 99104402 A 19991007; JP 30734296 A 19961031; JP 9703729 W 19971016; KR 19980710166 A 19981211; MY PI9705095 A 19971028; PT 97944133 T 19971016; TW 88203348 U 19971023