

Title (en)
Heat exchanger

Title (de)
Wärmetauscher

Title (fr)
Echangeur de chaleur

Publication
EP 1031801 A2 20000830 (EN)

Application
EP 00103971 A 20000225

Priority
JP 4923399 A 19990226

Abstract (en)

The present invention provides a heat exchanger capable of improving heat exchange efficiency. The heat exchanger, in which a plurality of flat plate-shaped fins 1a are stacked at predetermined intervals, heat exchanger tubes 2 for passing refrigerant therethrough are inserted in a stacking direction, air is caused to pass through between each fin group 1, and the heat exchanger tubes 2 are disposed in a plurality of rows in an air passage direction A, is characterized in that: the heat exchanger tube 2 is partitioned into a portion for containing gas and a high proportion of gaseous phase of a gas-liquid two-layer flow of the refrigerant flowing in said tube, and a portion for containing liquid and a high proportion of liquid phase of the gas-liquid two-layer flow of the refrigerant; first heat exchanger tubes 2a and 2b of a 2-pass structure are disposed as the former portion, and a second heat exchanger tube 2c of a 1-pass structure is disposed as the latter portion; these first and second heat exchanger tubes 2a, 2b and 2c are communicated to each other through a coupling member 3; each pass of these first and second heat exchanger tubes 2a, 2b and 2c has, when the heat exchanger is operated as a condenser, an inlet in a leeward-side row and an outlet in a windward-side row; and at least part of the passes are of a counterflow type, being overlapped between a plurality of rows in the air passage direction. <IMAGE>

IPC 1-7
F25B 39/00; **F28D 1/047**; **F28F 9/26**

IPC 8 full level
F25B 39/00 (2006.01); **F25B 39/04** (2006.01); **F28D 1/047** (2006.01); **F28F 1/32** (2006.01); **F28F 9/26** (2006.01); **F25B 9/00** (2006.01)

CPC (source: EP)
F25B 39/00 (2013.01); **F28D 1/0477** (2013.01); **F28F 9/26** (2013.01); **F25B 9/006** (2013.01)

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Designated contracting state (EPC)
DE ES GR IT SE

DOCDB simple family (publication)
EP 1031801 A2 20000830; **EP 1031801 A3 20011205**; CN 1265463 A 20000906; JP 2000249479 A 20000914

DOCDB simple family (application)
EP 00103971 A 20000225; CN 00103626 A 20000225; JP 4923399 A 19990226