

Title (en)
HEAT EXCHANGER SHUNT

Title (de)
NEBENANSCHLUSS FÜR WÄRMETAUSCHER

Title (fr)
DÉRIVATION D'ÉCHANGEUR DE CHALEUR

Publication
EP 3715761 B1 20220824 (EN)

Application
EP 20153958 A 20200127

Priority
JP 2019065600 A 20190329

Abstract (en)
[origin: EP3715761A1] In a header pipe at a downstream side of evaporation where refrigerant with a small ratio of liquid refrigerant (gas rich) flows, a flow distance of the refrigerant from an inlet of a heat exchanger is long and energy lost by pressure loss and a head difference is large. Accordingly, kinetic energy of the refrigerant is lowered, which reduces inertia of the refrigerant which moves upward in the header pipe, and as a result, liquid refrigerant is difficult to reach an upper portion of the header pipe, so that uneven flow of the liquid refrigerant occurs at a lower portion of the heat exchange sections, which causes the liquid refrigerant to unevenly flow to a plurality of flat pipes. When a heat exchanger functions as an evaporator, in a refrigerant outflow section 11 from which refrigerant outflows to a plurality of flat pipes 2, a header pipe 3b includes a partition wall 15 which divides a connection-side space 13 of the flat pipes 2 and a non-connection-side space 14 of the flat pipes 2, the partition wall 15 includes a plurality of communication holes 16a, 16b arranged in a vertical direction at an upper side of an intermediate position in the vertical direction, and the communication hole 16a is configured to have a larger opening area than that of the communication hole 16b immediately below the communication hole 16a.

IPC 8 full level
F28D 1/047 (2006.01); **F28D 1/053** (2006.01); **F28D 21/00** (2006.01); **F28F 9/02** (2006.01)

CPC (source: CN EP)
F28D 1/05375 (2013.01 - EP); **F28F 9/0204** (2013.01 - EP); **F28F 9/0278** (2013.01 - EP); **F28F 9/22** (2013.01 - CN);
F28D 2021/0068 (2013.01 - EP)

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

DOCDB simple family (publication)
EP 3715761 A1 20200930; **EP 3715761 B1 20220824**; CN 111750730 A 20201009; JP 2020165579 A 20201008

DOCDB simple family (application)
EP 20153958 A 20200127; CN 202010074741 A 20200122; JP 2019065600 A 20190329