

Title (en)
HEAT EXCHANGER SHUNT

Title (de)
NEBENANSCHLUSS FÜR WÄRMETAUSCHER

Title (fr)
DÉRIVATION D'ÉCHANGEUR DE CHALEUR

Publication
EP 3715760 A1 20200930 (EN)

Application
EP 20153957 A 20200127

Priority
JP 2019065599 A 20190329

Abstract (en)
In a header pipe at an upstream side of evaporation where refrigerant with a large ratio of liquid refrigerant (liquid rich) flows, since a flow distance of the refrigerant from an inlet of a heat exchanger is short, energy lost by pressure loss and a head difference is small and the refrigerant moves upward in the header pipe while kinetic energy of the refrigerant is kept. Accordingly, inertia of outflowing to the flat pipe is large, and uneven flow of the liquid refrigerant occurs at an upper portion of the heat exchange sections with momentum of moving upward in the header pipe, which causes the refrigerant to unevenly flow to the 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, and the communication hole 16a is configured to have a smaller opening area than that of the communication hole 16b immediately below the communication hole 16a.

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F25B 41/00 (2013.01 - CN); **F28D 1/0471** (2013.01 - EP); **F28D 1/05375** (2013.01 - EP); **F28F 9/0204** (2013.01 - EP); **F28F 9/0278** (2013.01 - EP); **F25B 2313/005** (2013.01 - CN); **F28D 2021/0068** (2013.01 - EP)

Citation (applicant)
JP 2014048028 A 20140317 - SHARP KK, et al

Citation (search report)
• [XY] US 2013126140 A1 20130523 - PARK TAEGYUN [KR], et al
• [XY] US 2008023185 A1 20080131 - BEAMER HENRY EARL [US], et al
• [YA] US 2014338874 A1 20141120 - JINDOU MASANORI [JP], et al
• [A] JP 2016125748 A 20160711 - DAIKIN IND LTD
• [A] JP 2018091503 A 20180614 - DAIKIN IND LTD
• [A] US 2013292104 A1 20131107 - PARK TAEGYUN [KR], et al

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

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EP 3715760 A1 20200930; **EP 3715760 B1 20220810**; CN 111750573 A 20201009; CN 111750573 B 20230407; JP 2020165578 A 20201008

DOCDB simple family (application)
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