

Title (en)

HEAT EXCHANGER, REFRIGERATION CYCLE DEVICE, AND METHOD FOR MANUFACTURING HEAT EXCHANGER

Title (de)

WÄRMETAUSCHER, KÄLTEKREISLAUFVORRICHTUNG UND VERFAHREN ZUR HERSTELLUNG EINES WÄRMETAUSCHERS

Title (fr)

ÉCHANGEUR DE CHALEUR, DISPOSITIF À CYCLE FRIGORIFIQUE, ET PROCÉDÉ DE FABRICATION D'ÉCHANGEUR DE CHALEUR

Publication

**EP 3722729 B1 20210707 (EN)**

Application

**EP 17934163 A 20171206**

Priority

JP 2017043818 W 20171206

Abstract (en)

[origin: EP3722729A1] A heat exchanger according to an embodiment of the present disclosure includes: a first tube through which a first heat medium flows; and a second tube through which a second heat medium flows, the second tube being wound around the first tube, the first tube having a plurality of protrusions protruding inside of the first tube, the plurality of protrusions being provided in a plurality of streaks being provided in a spiral manner in a direction to which the first heat medium flows in the first tube, one streak of the plurality of streaks including the plurality of protrusions each being arranged at unequal spacing intervals.

IPC 8 full level

**B21D 53/06** (2006.01); **F28D 7/02** (2006.01); **F28F 1/40** (2006.01); **F28F 13/12** (2006.01)

CPC (source: EP)

**B21C 37/158** (2013.01); **B21D 53/06** (2013.01); **F25B 39/04** (2013.01); **F28D 7/0016** (2013.01); **F28F 1/426** (2013.01); **F28F 13/12** (2013.01); **F25B 2339/047** (2013.01); **F25B 2500/09** (2013.01); **F28D 7/02** (2013.01); **F28D 2021/007** (2013.01); **F28F 2001/027** (2013.01); **F28F 2210/06** (2013.01)

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 3722729 A1 20201014**; **EP 3722729 A4 20201111**; **EP 3722729 B1 20210707**; AU 2017442329 A1 20200611; AU 2017442329 B2 20210715; ES 2882218 T3 20211201; JP WO2019111349 A1 20201224; SG 11202004978Q A 20200629; WO 2019111349 A1 20190613

DOCDB simple family (application)

**EP 17934163 A 20171206**; AU 2017442329 A 20171206; ES 17934163 T 20171206; JP 2017043818 W 20171206; JP 2019557919 A 20171206; SG 11202004978Q A 20171206