

Title (en)
HEAT EXCHANGE TUBE, HEAT EXCHANGER AND HEAT PUMP UNIT

Title (de)
WÄRMETAUSCHERROHR, WÄRMETAUSCHER UND WÄRMEPUMPENEINHEIT

Title (fr)
TUBE D'ÉCHANGE DE CHALEUR, ÉCHANGEUR DE CHALEUR ET UNITÉ DE POMPE À CHALEUR

Publication
EP 3736521 B1 20230906 (EN)

Application
EP 18917408 A 20181214

Priority
• CN 201810409402 A 20180502
• CN 2018121202 W 20181214

Abstract (en)
[origin: EP3736521A1] The present disclosure relates to a heat exchange tube, a heat exchanger and a heat pump unit. The heat exchange tube includes a tube body and a fin arranged on an outer surface of the tube body, wherein the fin includes: a fin root part, arranged on the outer surface of the tube body; a transverse fin part, arranged on the top of the fin root part and extending laterally from two sides of the fin root part; and a fin top part, arranged on the top of the transverse fin part and constructed as a saw-toothed part, a concave portion of the saw-toothed part extending to the transverse fin part. The present disclosure is beneficial to enlarging a heat exchange area of the fin top part and thinning a liquid film; the saw-toothed fin top part is favorable for refrigerant flowing, thereby enhancing condensation property; and the transverse fin part extends laterally from the two sides of the fin to form a lower layer of channel and an upper layer of channel beneficial to evaporation and condensation, such that the heat exchange tube has both evaporation and condensation properties.

IPC 8 full level
F28F 1/42 (2006.01); **F28F 1/26** (2006.01)

CPC (source: CN EP RU)
F25B 30/00 (2013.01 - CN); **F28F 1/006** (2013.01 - EP); **F28F 1/26** (2013.01 - EP); **F28F 1/42** (2013.01 - CN); **F28F 1/422** (2013.01 - EP); **F28F 1/426** (2013.01 - RU); **F28F 13/187** (2013.01 - EP); **F28D 2021/007** (2013.01 - EP); **F28D 2021/0071** (2013.01 - EP); **F28F 2215/10** (2013.01 - EP)

Cited by
JP2021120611A

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 3736521 A1 20201111; **EP 3736521 A4 20201230**; **EP 3736521 B1 20230906**; CN 108387131 A 20180810; CN 108387131 B 20191119; RU 2760467 C1 20211125; WO 2019210690 A1 20191107

DOCDB simple family (application)
EP 18917408 A 20181214; CN 201810409402 A 20180502; CN 2018121202 W 20181214; RU 2020131269 A 20181214