

Title (en)
Outdoor heat exchanger and heat pump having the same

Title (de)
Außenwärmetauscher und Wärmepumpe mit diesem Wärmetauscher

Title (fr)
Échangeur de chaleur externe et pompe thermique en disposant

Publication
EP 2455687 A3 20150930 (EN)

Application
EP 11189705 A 20111118

Priority
KR 20100115643 A 20101119

Abstract (en)
[origin: EP2455687A2] A heat pump is provided. The heat pump may include an outdoor heat exchanger that performs a heat exchange operation between refrigerant and outdoor air. The outdoor heat exchanger may include a refrigerant tube that guides refrigerant therethrough, and one or more fins coupled to the refrigerant tube. One face of each of the fins may be coated with a water repellent coating material and another face thereof may be coated with a hydrophilic coating material. An area coated with the water repellent coating material may be greater than an area coated with the hydrophilic coating material.

IPC 8 full level
F25B 39/00 (2006.01)

CPC (source: EP KR US)
F25B 39/00 (2013.01 - EP KR US); **F28F 1/32** (2013.01 - EP KR US); **F28F 13/182** (2013.01 - EP KR US); **F28F 19/006** (2013.01 - EP KR US); **F28F 21/084** (2013.01 - KR); **F28F 2245/02** (2013.01 - EP KR US); **F28F 2245/04** (2013.01 - EP KR US); **Y10S 165/514** (2013.01 - KR)

Citation (search report)

- [X] JP H06117788 A 19940428 - MATSUSHITA REFRIGERATION
- [X] JP H04371796 A 19921224 - MATSUSHITA REFRIGERATION
- [Y] JP H08152287 A 19960611 - SANYO ELECTRIC CO
- [Y] JP H06331293 A 19941129 - MATSUSHITA REFRIGERATION
- [I] JP S60117098 A 19850624 - FURUKAWA ALUMINIUM
- [A] US 2004035561 A1 20040226 - KO CHEOL-SOO [KR], et al

Cited by
EP2626654A3; EP3379192A4

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

DOCDB simple family (publication)
EP 2455687 A2 20120523; EP 2455687 A3 20150930; EP 2455687 B1 20170830; CN 102538297 A 20120704; CN 102538297 B 20141203; KR 20120054321 A 20120530; US 2012125030 A1 20120524

DOCDB simple family (application)
EP 11189705 A 20111118; CN 201110378687 A 20111118; KR 20100115643 A 20101119; US 201113298335 A 20111117