

Title (en)
ALUMINUM FIN MATERIAL FOR HEAT EXCHANGER

Title (de)
ALUMINIUMRIPPENMATERIAL FÜR EINEN WÄRMETAUSCHER

Title (fr)
MATÉRIAU POUR AILETTE EN ALUMINIUM POUR ÉCHANGEUR DE CHALEUR

Publication
EP 2119996 A4 20120606 (EN)

Application
EP 08711251 A 20080214

Priority
• JP 2008052409 W 20080214
• JP 2007037167 A 20070216

Abstract (en)
[origin: EP2119996A1] The present invention provides a fin material for a heat exchanger, which can prevent odor emission and deterioration of hydrophilicity for a long period. Disclosed in an aluminum fin material 1 for a heat exchanger includes a substrate 2, a primer-treated layer 3, a hydrophobic coating film layer 4 having a thickness of 0.1 to 10 μm , and a hydrophilic coating film layer 5 having a thickness of 0.1 to 10 μm , wherein the hydrophobic coating film layer 4 is made of at least one kind of a hydrophobic resin selected from the group consisting of an urethane-based resin, an epoxy-based resin, a polyester-based resin and a polyacrylic acid-based resin, the hydrophilic coating film layer 5 is made of a hydrophilic resin, which has a sulfonic acid group or a sulfonic acid group derivative, and also has at least one kind selected from the group consisting of a carboxyl group, carboxyl group derivative, a hydroxyl group and a hydroxyl group derivative, an existing ratio of S measured in a film thickness direction by high-frequency glow discharge optical emission spectroscopy is from 1 to 5 atomic % and an existing ratio of O is from 10 to 35 atomic %, and the total amount of impurities of the hydrophobic coating film layer 4 and the hydrophilic coating film layer 5 is 1% by mass or less.

IPC 8 full level
F28F 13/18 (2006.01); **C23C 22/07** (2006.01); **C23C 22/36** (2006.01); **F28F 19/04** (2006.01)

CPC (source: EP)
F28F 13/18 (2013.01); **F28F 17/005** (2013.01); **F28F 19/04** (2013.01); **F28F 21/084** (2013.01); **F28F 2245/02** (2013.01); **F28F 2245/04** (2013.01)

Citation (search report)
• [Y] JP 2007040686 A 20070215 - KOBE STEEL LTD, et al
• [Y] US 4973359 A 19901127 - YAMASOE KATSUYOSHI [JP]
• [Y] JP 2003183569 A 20030703 - MITSUBISHI ALUMINIUM
• [Y] EP 1245654 A1 20021002 - NIPPON PAINT CO LTD [JP]
• [Y] JP 2000171191 A 20000623 - NIHON PARKERIZING, et al
• [Y] CN 1892169 A 20070110 - KOBE STEEL LTD [JP]
• [A] JP H02154993 A 19900614 - MATSUSHITA REFRIGERATION
• [A] JP S62278033 A 19871202 - SHOWA ALUMINUM CORP
• [A] US 4908075 A 19900313 - YAMASOE KATSUYOSHI [JP]
• See references of WO 2008099868A1

Cited by
EP4191187A4; EP2894201A4; CN108431542A; US2015198389A1; EP3875879A4; US10048026B2; WO2017163127A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2119996 A1 20091118; EP 2119996 A4 20120606; EP 2119996 B1 20160629; AU 2008215475 A1 20080821; AU 2008215475 B2 20110428; CN 101568793 A 20091028; CN 101568793 B 20120215; JP 2008224204 A 20080925; MY 147891 A 20130131; WO 2008099868 A1 20080821

DOCDB simple family (application)
EP 08711251 A 20080214; AU 2008215475 A 20080214; CN 200880001317 A 20080214; JP 2008025140 A 20080205; JP 2008052409 W 20080214; MY PI20093201 A 20080214