

Title (en)

DEVICE AND METHOD FOR EFFICIENT CONDENSATION

Title (de)

VORRICHTUNG UND VERFAHREN ZUM EFFIZIENTEN KONDENSIEREN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE CONDENSATION EFFICACE

Publication

EP 2307824 B1 20160406 (DE)

Application

EP 09768974 A 20090623

Priority

- EP 2009004519 W 20090623
- DE 102008029597 A 20080623
- DE 102008031300 A 20080702

Abstract (en)

[origin: WO2009156125A2] The invention relates to an evaporator or a condenser (43) comprising a surface on which a working liquid (41) is placed. Turbulence generators (40) are also provided for generating turbulences in the working liquid on the working surface. A laminator (48) is alternatively or additionally provided in the condenser, for laminating the steam flow produced by the compressor. The evaporation efficiency is increased in the evaporator, and the condenser efficiency is increased in the condenser, which is useful for enabling the size of said components to be significantly reducing without any loss in performance, especially for a heat pump for heating buildings.

IPC 8 full level

F25B 39/00 (2006.01); **F28B 3/00** (2006.01); **F28F 13/12** (2006.01)

CPC (source: EP US)

F25B 30/02 (2013.01 - US); **F25B 39/00** (2013.01 - EP US); **F28F 13/12** (2013.01 - EP US); **F28F 13/182** (2013.01 - EP US);
F25B 43/043 (2013.01 - EP US)

Citation (examination)

WO 9215833 A1 19920917 - MODINE MFG CO [US]

Cited by

US11247188B2; WO2018172048A1

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 MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2009156125 A2 20091230; **WO 2009156125 A3 20100610**; EP 2307824 A2 20110413; EP 2307824 B1 20160406;
ES 2575686 T3 20160630; JP 2011525607 A 20110922; JP 2013076566 A 20130425; JP 2014206372 A 20141030; JP 5722930 B2 20150527;
JP 6106633 B2 20170405; PL 2307824 T3 20161230; US 2011146316 A1 20110623; US 2014075978 A1 20140320; US 9732994 B2 20170815

DOCDB simple family (application)

EP 2009004519 W 20090623; EP 09768974 A 20090623; ES 09768974 T 20090623; JP 2011515191 A 20090623; JP 2013015472 A 20130130;
JP 2014137514 A 20140703; PL 09768974 T 20090623; US 201314085747 A 20131120; US 97623010 A 20101222