

Title (en)
HEAT PUMP HOT WATER HEATER

Title (de)
WÄRMEPUMPENWARMWASSERBEREITER

Title (fr)
CHAUFFAGE À EAU CHAUDE PAR POMPE À CHALEUR

Publication
EP 2940407 A4 20160525 (EN)

Application
EP 12891024 A 20121226

Priority
JP 2012083692 W 20121226

Abstract (en)
[origin: EP2940407A1] A heat pump hot water heater (10) includes a refrigerant circuit (20), a water circuit (30) and a control unit (40). The refrigerant circuit includes a first heat exchanger (21) configured to cause heat exchange between air and refrigerant, a second heat exchanger (25) configured to cause heat exchange between the refrigerant and water, and a compressor (22) configured to compress the refrigerant. The water circuit includes the second heat exchanger and a water supply mechanism (31) configured to supply the water to the second heat exchanger. The control unit is configured to control the refrigerant circuit and the water circuit so as to perform a defrosting operation of the first heat exchanger. The refrigerant circuit is capable of switching between a forward cycle operation and a reverse cycle operation. At least either in starting the defrosting operation or during performing the defrosting operation, the control unit is configured to determine a possibility of freezing of the water in the water circuit and select to perform either the forward cycle operation or the reverse cycle operation so as to perform the defrosting operation.

IPC 8 full level
F25B 47/02 (2006.01); **F24H 1/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)
F24D 11/0214 (2013.01 - EP); **F24D 19/0095** (2013.01 - EP); **F24D 19/1039** (2013.01 - EP US); **F24H 15/136** (2022.01 - EP US); **F24H 15/215** (2022.01 - EP US); **F24H 15/254** (2022.01 - EP US); **F24H 15/375** (2022.01 - EP US); **F24H 15/38** (2022.01 - EP US); **F25B 30/02** (2013.01 - EP); **F25B 47/025** (2013.01 - EP); **F25B 49/02** (2013.01 - EP); **F24D 2200/123** (2013.01 - EP); **F25B 2339/047** (2013.01 - EP); **F25B 2600/01** (2013.01 - EP); **F25B 2700/21161** (2013.01 - EP); **F25B 2700/21171** (2013.01 - EP)

Citation (search report)
• [XAYI] DE 102004010066 A1 20050922 - STIEBEL ELTRON GMBH & CO KG [DE]
• [XA] EP 2530410 A1 20121205 - MITSUBISHI ELECTRIC CORP [JP]
• [Y] EP 2395302 A1 20111214 - MITSUBISHI HEAVY IND LTD [JP]
• See references of WO 2014102934A1

Cited by
CN107525295A; EP3225922A1; FR3049697A1; US11397035B2

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 2940407 A1 20151104; **EP 2940407 A4 20160525**; **EP 2940407 B1 20181114**; ES 2710923 T3 20190429; JP 6190388 B2 20170830; JP WO2014102934 A1 20170112; WO 2014102934 A1 20140703

DOCDB simple family (application)
EP 12891024 A 20121226; ES 12891024 T 20121226; JP 2012083692 W 20121226; JP 2014553940 A 20121226