

Title (en)
Non-azeotropic mixed refrigerant cycle and refrigerator equipped therewith

Title (de)
Nicht-azeotroper Mischkühlzyklus und Kühlschrank damit

Title (fr)
Cycle de frigorigène mixte non azéotrope et réfrigérateur ainsi équipé

Publication
EP 2592366 A3 20140618 (EN)

Application
EP 12190551 A 20121030

Priority
KR 20110115819 A 20111108

Abstract (en)
[origin: EP2592366A2] A non-azeotropic mixed refrigerant cycle and a refrigerator equipped with the same are disclosed. The non-azeotropic mixed refrigerant cycle includes a first refrigerant tube (P1) to guide a refrigerant from a condenser (2) to a first evaporator (4), a second refrigerant tube (P2) to guide the refrigerant from the first evaporator to a second evaporator (5), a third refrigerant tube (P3) to guide the refrigerant from the second evaporator to a compressor (1). A downstream portion of the first refrigerant tube is arranged within the second refrigerant tube, to form a first heat exchanger (7) having a double tube structure. An upstream portion of the first refrigerant tube is arranged within the third refrigerant tube, to form a second heat exchanger (8) having a double tube structure.

IPC 8 full level
F25B 5/04 (2006.01); **F25B 9/00** (2006.01); **F25B 40/00** (2006.01)

CPC (source: EP KR US)
F25B 1/00 (2013.01 - KR); **F25B 5/04** (2013.01 - EP KR US); **F25B 9/006** (2013.01 - EP US); **F25B 40/00** (2013.01 - EP US);
F25B 2500/18 (2013.01 - EP US)

Citation (search report)
• [X] US 5207077 A 19930504 - RADERMACHER REINHARD [US], et al
• [I] GB 2143014 A 19850130 - HOTPOINT LTD
• [I] DE 102009001677 A1 20100923 - BSH BOSCH SIEMENS HAUSGERAETE [DE]
• [X] WON JAE YOON ET AL: "Performance optimization of a LorenzMeutzner cycle charged with hydrocarbon mixtures for a domestic refrigerator-freezer", INTERNATIONAL JOURNAL OF REFRIGERATION, ELSEVIER, PARIS, FR, vol. 35, no. 1, 28 September 2011 (2011-09-28), pages 36 - 46, XP028336834, ISSN: 0140-7007, [retrieved on 20111006], DOI: 10.1016/J.IJREFRIG.2011.09.014

Cited by
EP2857778A1; EP3073210A1

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 2592366 A2 20130515; EP 2592366 A3 20140618; CN 103090602 A 20130508; KR 20130050639 A 20130516; US 2013111943 A1 20130509

DOCDB simple family (application)
EP 12190551 A 20121030; CN 201210443790 A 20121108; KR 20110115819 A 20111108; US 201213661662 A 20121026