

Title (en)

Refrigerator using non-azeotropic refrigerant mixture and control method thereof

Title (de)

Kühlschrank unter Verwendung eines nichtazeotropen Kühlgemischs und Steuerungsverfahren davon

Title (fr)

Réfrigérateur utilisant un mélange réfrigérant non azéotrope et son procédé de commande

Publication

**EP 2592372 A2 20130515 (EN)**

Application

**EP 12191517 A 20121107**

Priority

KR 20110115911 A 20111108

Abstract (en)

A refrigerator using a non-azeotropic refrigerant mixture (NARM) and a control method thereof. The refrigerator reduces the rotational speed of a freezing chamber fan or stopping the freezing chamber fan for a designated time, and/or increasing the rotational speed of a compressor in a simultaneous freezing/refrigerating operation mode of an NARM cycle as compared to a freezing operation mode, and may thus decrease evaporation latent heat of a refrigerant consumed by a freezing chamber evaporator and relatively increase evaporation latent heat of the refrigerant usable in a refrigerating chamber evaporator without increase in a charging amount of the refrigerant, thereby preventing over-charging due to increase in the charging amount of the refrigerant and reducing cycling loss.

IPC 8 full level

**F25D 29/00** (2006.01); **F25D 17/06** (2006.01)

CPC (source: EP KR US)

**F25D 11/02** (2013.01 - US); **F25D 17/06** (2013.01 - KR); **F25D 17/065** (2013.01 - EP US); **F25D 19/00** (2013.01 - KR); **F25D 29/00** (2013.01 - EP KR US); **F25D 29/003** (2013.01 - US); **F25B 9/006** (2013.01 - EP US); **F25B 2600/0253** (2013.01 - EP US); **F25B 2600/112** (2013.01 - EP US)

Cited by

EP3643997A4; US11226148B2; US11371768B2; EP3674631B1

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 2592372 A2 20130515**; **EP 2592372 A3 20150909**; CN 103090619 A 20130508; KR 20130050700 A 20130516; US 2013111933 A1 20130509

DOCDB simple family (application)

**EP 12191517 A 20121107**; CN 201210443057 A 20121108; KR 20110115911 A 20111108; US 201213672076 A 20121108