

Title (en)
REFRIGERATION DEVICE

Title (de)
KÜHLVORRICHTUNG

Title (fr)
DISPOSITIF DE RÉFRIGÉRATION

Publication
EP 2226594 A4 20140827 (EN)

Application
EP 08861390 A 20081111

Priority
• JP 2008070473 W 20081111
• JP 2007327971 A 20071219

Abstract (en)
[origin: EP2226594A1] A refrigerator is provided in which a refrigerant supplied to an evaporator is precooled to a dryness of nearly zero and is supplied in a single liquid phase to increase the amount of heat exchanged by the evaporator, thereby improving cooling performance or reducing the size of the evaporator. A refrigerator (1) has a refrigeration cycle (8) formed by sequentially connecting a compressor (2) that compresses a refrigerant, a condenser (3) that condenses the high-pressure gas refrigerant, an economizer (4) that evaporates some of the condensed liquid refrigerant to cool the liquid refrigerant by means of the latent heat of evaporation thereof and that has a circuit for injecting the evaporated medium-pressure refrigerant into an intermediate inlet of the compressor, an expansion valve (5) that adiabatically expands the liquid refrigerant, and an evaporator (7) that evaporates the adiabatically expanded refrigerant, and a refrigerant precooler (15) that precools the refrigerant supplied to the evaporator (7) is disposed between the economizer (4) and the evaporator (7).

IPC 8 full level
F25B 1/00 (2006.01); **F25B 1/053** (2006.01); **F25B 1/10** (2006.01); **F25B 9/00** (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP US)
F25B 1/053 (2013.01 - EP US); **F25B 1/10** (2013.01 - EP US); **F25B 9/006** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2400/23** (2013.01 - EP US)

Citation (search report)
• [A] JP 2006038306 A 20060209 - HITACHI LTD
• [A] JP 2006284034 A 20061019 - MITSUBISHI HEAVY IND LTD
• [A] WO 03002926 A1 20030109 - SHOWA DENKO KK [JP], et al
• See references of WO 2009078233A1

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DOCDB simple family (application)
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