Title (en)

REFRIGERATION DEVICE

Title (de)

KÜHLVORRICHTUNG

Title (fr)

DISPOSITIF DE RÉFRIGÉRATION

Publication

EP 2306127 A1 20110406 (EN)

Application

EP 09733732 A 20090420

Priority

- JP 2009057824 W 20090420
- JP 2008111543 A 20080422

Abstract (en)

An air-conditioning apparatus (1) uses carbon dioxide as a refrigerant, and has a two-stage compression-type compression mechanism (2), a heat source-side heat exchanger (4), an expansion mechanism (5), a usage-side heat exchanger (6), a switching mechanism (3), an intermediate heat exchanger (7) which functions as a cooler of refrigerant discharged from a first-stage compression element and drawn into a second-stage compression element, and an intermediate heat exchanger bypass tube (9). In the air-conditioning apparatus (1), the intermediate heat exchanger (7) is disposed above the heat source-side heat exchanger (4), and when a reverse cycle defrosting operation is performed for defrosting the heat source-side heat exchanger (4) by switching the switching mechanism (3) to a cooling operation state, the intermediate heat exchanger bypass tube (9) is used to ensure that refrigerant does not flow to the intermediate heat exchanger (7).

IPC 8 full level

F25B 47/02 (2006.01); **F25B 1/00** (2006.01); **F25B 1/10** (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP US)

F25B 1/10 (2013.01 - EP US); **F25B 9/008** (2013.01 - EP US); **F25B 47/025** (2013.01 - EP US); F25B 13/00 (2013.01 - EP US); F25B 2309/061 (2013.01 - EP US); F25B 2313/0272 (2013.01 - EP US); F25B 2313/02741 (2013.01 - EP US); F25B 2313/0315 (2013.01 - EP US); F25B 2400/04 (2013.01 - EP US); F25B 2400/072 (2013.01 - EP US); F25B 2400/13 (2013.01 - EP US); F25B 2400/23 (2013.01 - EP US); F25B 2700/2106 (2013.01 - EP US)

Citation (search report)

See references of WO 2009131083A1

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

US 2011030409 A1 20110210; AU 2009239038 A1 20091029; AU 2009239038 B2 20120517; CN 102016456 A 20110413; CN 102016456 B 20130828; EP 2306127 A1 20110406; JP 2009264605 A 20091112; KR 101214310 B1 20121220; KR 20100135925 A 20101227; WO 2009131083 A1 20091029

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