Title (en)

REFRIGERATION CYCLE DEVICE

Title (de)

KÄLTEKREISLAUFVORRICHTUNG

Title (fr)

DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication

EP 2730859 A1 20140514 (EN)

Application

EP 12807481 A 20120703

Priority

- JP 2011148794 A 20110705
- JP 2012004313 W 20120703

Abstract (en)

A refrigeration cycle apparatus (100) has: a refrigerant circuit (1) including an upstream-side throttling device (14, 18), a gas-liquid separator (16), and a downstream-side throttling device (18, 14); an injection passage (22); and a controller (30). The injection passage (22) is provided with a heater (24). The controller (30) performs an intermediate pressure control operation for adjusting at least one of an opening degree of the upstream-side throttling device and an opening degree of the downstream-side throttling device so that a temperature difference between a gas-liquid separation temperature detected by an intermediate pressure temperature sensor (26) and an injection temperature detected by a superheat temperature sensor (28) becomes smaller than a predetermined value, and then increasing the opening degree of the downstream-side throttling device until the gas-liquid separation temperature drops by a predetermined value of degrees from the gas-liquid separation temperature that is detected on completion of the adjustment.

IPC 8 full level

F25B 1/00 (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP)

F25B 13/00 (2013.01); **F25B 41/39** (2021.01); F25B 2313/02741 (2013.01); F25B 2400/01 (2013.01); F25B 2400/072 (2013.01); F25B 2400/13 (2013.01); F25B 2400/23 (2013.01); F25B 2600/2509 (2013.01); F25B 2700/19 (2013.01); F25B 2700/2101 (2013.01); F25B 2700/2106 (2013.01); F25B 2700/2109 (2013.01)

Cited by

EP4071425A4; CN104990397A; EP3159630A1; EP3631325A4; US10317113B2; EP3901538A1; WO2018221875A1; US10976086B2; US11906219B2

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 2730859 A1 20140514; **EP 2730859 A4 20141112**; **EP 2730859 B1 20190410**; CN 103348197 A 20131009; CN 103348197 B 20160210; JP 5906440 B2 20160420; JP WO2013005424 A1 20150223; WO 2013005424 A1 20130110

DOCDB simple family (application)

EP 12807481 A 20120703; CN 201280007707 A 20120703; JP 2012004313 W 20120703; JP 2013522469 A 20120703