

Title (en)
Refrigeration apparatus

Title (de)
Kälteanlage

Title (fr)
Appareil de réfrigération

Publication
EP 2543939 A2 20130109 (EN)

Application
EP 12187178 A 20071225

Priority
• EP 07860041 A 20071225
• JP 2006354392 A 20061228

Abstract (en)
It is an object of the present invention to reduce occurrence of noise in an operation by inhibiting occurrence of flow sound of refrigerant. A refrigeration apparatus (1) is a refrigeration apparatus using supercritical refrigerant operating in a zone that high pressure of the supercritical refrigerant is equal to or greater than the critical pressure. The refrigeration apparatus (1) includes a compressor (21), a gas cooler (23, 31), an expansion mechanism (V2, V5), an evaporator (31, 23), discharge pressure detection means (P1, T2, T3) and a control section (5). The compressor is configured to compress the supercritical refrigerant. The gas cooler is configured to cool the supercritical refrigerant compressed by the compressor. The expansion mechanism is configured to decompress the supercritical refrigerant. The evaporator is configured to evaporate the supercritical refrigerant decompressed by the expansion mechanism. The discharge pressure detection means is capable of detecting discharge pressure of the compressor. The control section is configured to regulate the opening degree of the expansion mechanism for controlling the discharge pressure to be equal to or greater than the critical pressure when the refrigeration apparatus is activated and the discharge pressure is less than the critical pressure.

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

CPC (source: EP)
F25B 9/008 (2013.01); **F25B 13/00** (2013.01); **F25B 2309/061** (2013.01); **F25B 2313/005** (2013.01); **F25B 2313/0294** (2013.01); **F25B 2341/063** (2013.01); **F25B 2500/12** (2013.01); **F25B 2500/19** (2013.01); **F25B 2600/17** (2013.01); **F25B 2600/2513** (2013.01); **F25B 2700/1931** (2013.01); **F25B 2700/2106** (2013.01); **F25B 2700/21174** (2013.01)

Citation (applicant)
JP 2000234814 A 20000829 - AISIN SEIKI

Cited by
CN104896750A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2103888 A1 20090923; **EP 2103888 A4 20120606**; **EP 2103888 B1 20180711**; EP 2543939 A2 20130109; EP 2543939 A3 20140423; ES 2680501 T3 20180907; JP 2008164226 A 20080717; JP 4386071 B2 20091216; TR 201810756 T4 20180827; WO 2008081771 A1 20080710

DOCDB simple family (application)
EP 07860041 A 20071225; EP 12187178 A 20071225; ES 07860041 T 20071225; JP 2006354392 A 20061228; JP 2007074812 W 20071225; TR 201810756 T 20071225