

Title (en)
Refrigeration cycle and water heater

Title (de)
Kältekreislauf und Wassererwärmer

Title (fr)
Cycle de réfrigération et chauffe-eau

Publication
EP 1873466 A2 20080102 (EN)

Application
EP 07252602 A 20070627

Priority
JP 2006177463 A 20060628

Abstract (en)
In order to regulate discharge pressure in a refrigeration cycle without using a tank for regulating a refrigerant, there is provided a refrigeration cycle in which a compressor (10), a condenser (30), a variable pressure reducer (90) and an evaporator (100) are connected in sequence by a refrigerant pipe, wherein an internal heat exchanger (60) which causes heat exchange between a refrigerant which exits from the condenser or a gas cooler (30,200) and a refrigerant which is sucked into the compressor is provided, and the discharge pressure is regulated by changing the refrigerant amount stored in the evaporator by regulating the pressure reduction amount of the variable pressure reducer. Also, it is preferable that the pressure reduction amount of the variable pressure reducer is decreased when the discharge pressure becomes a predetermined pressure or more.

IPC 8 full level
F25B 9/00 (2006.01); **F25B 13/00** (2006.01); **F25B 40/00** (2006.01)

CPC (source: EP)
F25B 9/008 (2013.01); **F25B 13/00** (2013.01); **F25B 40/00** (2013.01); **F25B 2309/061** (2013.01); **F25B 2313/0272** (2013.01); **F25B 2313/02741** (2013.01); **F25B 2339/047** (2013.01); **F25B 2600/05** (2013.01); **F25B 2600/17** (2013.01); **F25B 2600/2501** (2013.01); **F25B 2700/1931** (2013.01)

Cited by
CN101957062A; CN102155791A; JP2020521100A; CN102538361A; CN103017409A; SE2050095A1; CN114945781A; EP4040077A1; EP3779326A4; WO2021154149A1; US11953240B2; US11480367B2; WO2018215425A1

Designated contracting state (EPC)
DE ES FR GB IT

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1873466 A2 20080102; **EP 1873466 A3 20100317**; JP 2008008523 A 20080117

DOCDB simple family (application)
EP 07252602 A 20070627; JP 2006177463 A 20060628