

Title (en)  
REFRIGERATION CYCLE

Title (de)  
GEFRIERZYKLUS

Title (fr)  
CYCLE DE CONGÉLATION

Publication  
**EP 2309206 A4 20111012 (EN)**

Application  
**EP 09742690 A 20090427**

Priority  
• JP 2009058292 W 20090427  
• JP 2008122301 A 20080508

Abstract (en)  
[origin: US2011056236A1] In a refrigeration cycle comprising a compressor, a condenser, a pressure reduction and expansion means, and an evaporator, R1234yf is used as the refrigerant, the refrigerant at the exit side of the evaporator is controlled in a superheated condition, and the refrigeration cycle is operated in a range of 5 to 16 degrees of superheat, and preferably in a range of 10 to 16 degrees of superheat. When the refrigerant used is changed to the new refrigerant R1234yf, while high advantage for improving the coefficient of performance can be achieved, the rise in temperature of the discharged refrigerant is appropriately suppressed so that deterioration of refrigerating machine oil in the refrigerant can be prevented, and a high-efficiency operation can be realized as the entirety of the refrigeration cycle.

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

CPC (source: EP US)  
**F25B 1/00** (2013.01 - EP US); **F25B 9/002** (2013.01 - EP US); **F25B 2400/121** (2013.01 - EP US); **F25B 2400/18** (2013.01 - EP US); **F25B 2600/21** (2013.01 - EP US)

Citation (search report)  
• [X] FR 2905633 A1 20080314 - VALEO SYSTEMES THERMIQUES [FR]  
• [A] US 5392612 A 19950228 - ALSENZ RICHARD H [US]  
• See references of WO 2009136566A1

Designated contracting state (EPC)  
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 SE SI SK TR

DOCDB simple family (publication)  
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**US 99168309 A 20090427**; CN 200980116874 A 20090427; EP 09742690 A 20090427; JP 2008122301 A 20080508; JP 2009058292 W 20090427