

Title (en)
REFRIGERATION CYCLE

Title (de)
KÜHLKREISLAUF

Title (fr)
CYCLE FRIGORIFIQUE

Publication
EP 2314955 A4 20111102 (EN)

Application
EP 09770011 A 20090609

Priority
• JP 2009060488 W 20090609
• JP 2008168961 A 20080627

Abstract (en)
[origin: EP2314955A1] Provided is a refrigeration cycle wherein a compressor, a condenser, a depressurizing/expanding means and an evaporator are provided. The refrigeration cycle uses R1234 as a refrigerant, and has an oil separating means, which forcibly separates the refrigerant and oil one from the other, in a two-phase separation region wherein the refrigerant and the oil exist in a separated state without being dissolved with each other. The refrigerant and the oil can be forcibly separated suitably at a suitable position even when the refrigerant is changed to the new refrigerant R1234yf, and the refrigeration cycle can be operated at a high efficiency as a whole.

IPC 8 full level
F25B 1/00 (2006.01); **F25B 43/02** (2006.01)

CPC (source: EP US)
F25B 43/02 (2013.01 - EP US); **F25B 2400/02** (2013.01 - EP US); **F25B 2400/121** (2013.01 - EP US)

Citation (search report)
• [IY] US 6327868 B1 20011211 - FURUYA SHUNICHI [JP], et al
• [Y] US 3336762 A 19670822 - STANLEY PATTERSON THOMAS
• [Y] US 3978685 A 19760907 - TAYLOR DAVID H
• [A] WO 2007002625 A2 20070104 - HONEYWELL INT INC [US], et al
• [I] EP 1862749 A2 20071205 - SANDEN CORP [JP]
• [A] US 2006196220 A1 20060907 - WESTERMEYER GARY W [US]
• [A] US 2006260340 A1 20061123 - BHATIA KANWAL [US], et al
• [A] EP 0540459 A1 19930505 - CARRIER CORP [US]
• See references of WO 2009157301A1

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)
EP 2314955 A1 20110427; **EP 2314955 A4 20111102**; **EP 2314955 B1 20150902**; CN 102077037 A 20110525; JP 2010007978 A 20100114; JP 5119060 B2 20130116; US 2011113819 A1 20110519; WO 2009157301 A1 20091230

DOCDB simple family (application)
EP 09770011 A 20090609; CN 200980124789 A 20090609; JP 2008168961 A 20080627; JP 2009060488 W 20090609; US 200913001494 A 20090609