Title (en)

REFRIGERATION DEVICE

Title (de)

KÜHLVORRICHTUNG

Title (fr)

DISPOSITIF DE RÉFRIGÉRATION

Publication

EP 2910871 A4 20170419 (EN)

Application

EP 12884974 A 20120921

Priority

JP 2012074197 W 20120921

Abstract (en)

[origin: EP2910871A1] A refrigeration apparatus 100 includes a first refrigerant circuit 50 having a first evaporator 4, a second refrigerant circuit 60 having a second condenser 7, and a cascade condenser 15 formed by the first evaporator 4 and the second condenser 7. The second refrigerant circuit 60 of the refrigeration apparatus 100 includes a receiver 8, a tank 14, a bypass 13, and a bypass valve 13a. The receiver is disposed between the second condenser 7 and a second expansion valve 10. The tank 14 is connected to a second compressor 5 and stores excess refrigerating machine oil 18 in the second compressor 5 so as to adjust the amount of refrigerating machine oil 18 in the second compressor 5. The bypass 13 connects the receiver 8 and the tank 14 to each other. The bypass valve 13a is disposed in the bypass 13, opens the bypass 13 when a high-side pressure in the second refrigerant circuit 60 increases to a predetermined pressure or more, and closes the bypass 13 when the high-side pressure in the second refrigerant circuit 60 decreases to the predetermined pressure or less.

IPC 8 full level

F25B 7/00 (2006.01); **F25B 1/00** (2006.01)

CPC (source: EP)

F25B 7/00 (2013.01); **F25B 31/004** (2013.01); **F25B 43/02** (2013.01); F25B 2400/13 (2013.01); F25B 2400/16 (2013.01); F25B 2500/27 (2013.01); F25B 2600/2509 (2013.01); F25B 2700/03 (2013.01)

Citation (search report)

- [A] WO 2008150289 A1 20081211 - CARRIER CORP [US], et al
- See references of WO 2014045394A1

Cited by

US11268740B2

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 2910871 A1 20150826; **EP 2910871 A4 20170419**; **EP 2910871 B1 20191204**; JP 5819000 B2 20151118; JP WO2014045394 A1 20160818; WO 2014045394 A1 20140327

DOCDB simple family (application)

EP 12884974 A 20120921; JP 2012074197 W 20120921; JP 2014536495 A 20120921