Title (en)
BINARY REFRIGERATION DEVICE

Title (de)
BINÄRE KÜHLVORRICHTUNG

Title (fr)
DISPOSITIF DE RÉFRIGÉRATION BINAIRE

Publication
EP 2995885 B1 20200415 (EN)

Application
EP 13883949 A 20130508

Priority
JP 2013062931 W 20130508

Abstract (en)

[origin: EP2995885A1] A two-stage refrigeration cycle system includes a higher-stage compressor 21, a higher-stage condenser 22, a higher-stage expansion device 23, and a higher-stage evaporator 24 connected in a higher-stage refrigeration cycle 20 by pipes through which refrigerant circulates therein, a lower-stage compressor 11, an auxiliary radiator 15, a lower-stage condenser 12, a lower-stage expansion device 13, and a lower-stage evaporator 14 connected in a lower-stage refrigeration cycle 10 by pipes through which refrigerant circulates therein, a cascade condenser C including the higher-stage evaporator 24 and the lower-stage condenser 12 and configured to heat exchange between the refrigerant flowing in the higher-stage refrigeration cycle 20 and the refrigerant flowing in the lower-stage refrigeration cycle 10, and a controller 30 configured to switch between a two-stage operation in which both the higher-stage refrigeration cycle 20 and the lower-stage refrigeration cycle 10 operate and a single-stage operation in which the higher-stage refrigeration cycle 20 stops and the lower-stage refrigeration cycle 10 operates, so as to select one of the two-stage operation and the single-stage operation having a higher COP.

IPC 8 full level
F25B 6/04 (2006.01); **F25B 7/00** (2006.01); **F25B 9/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP)
F25B 6/04 (2013.01); **F25B 7/00** (2013.01); F25B 9/008 (2013.01); F25B 49/02 (2013.01); F25B 2500/18 (2013.01); F25B 2500/19 (2013.01); F25B 2700/2106 (2013.01)

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EP4224092A1; US11137172B2; US10830500B2; US2022307733A1; US11841177B2; US11268741B2; WO2018019779A1; WO2018019777A1; US11982481B2

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