

Title (en)

Refrigeration cycle apparatus and hot water heater

Title (de)

Kühlzyklusvorrichtung und Heißwassererhitzer

Title (fr)

Appareil de cycle de réfrigération et radiateur à eau chaude

Publication

**EP 2320164 A3 20140205 (EN)**

Application

**EP 10186449 A 20101004**

Priority

JP 2009231660 A 20091005

Abstract (en)

[origin: EP2320164A2] A refrigeration cycle apparatus 1 includes: a refrigerant circuit 2 including a condenser 22 and a subcooling heat exchanger 23; and a bypass passage 3 that extends through the subcooling heat exchanger 23. In the bypass passage 3, a dryness fraction of the refrigerant that has flowed out of the subcooling heat exchanger 23 is adjusted. Since the subcooling heat exchanger 23 is configured appropriately, a ratio of an amount of heat exchange between, in the bypass passage 3, the refrigerant decompressed by the bypass expansion means 31 and the refrigerant passing through the refrigerant circuit 2 with respect to an amount of heat exchange between, in the condenser 22, the refrigerant that has flowed into the condenser 22 and a fluid to be heated falls in a specified range even during the operation using the adjusted dryness fraction. As a result, the subcooling effect of the subcooling heat exchanger 23 is secured.

IPC 8 full level

**F25B 40/02** (2006.01)

CPC (source: EP)

**F25B 40/02** (2013.01); **F25B 13/00** (2013.01); **F25B 2339/047** (2013.01); **F25B 2400/13** (2013.01); **F25B 2600/2509** (2013.01); **F25B 2700/2101** (2013.01); **F25B 2700/2103** (2013.01)

Citation (search report)

- [I] JP 2006258343 A 20060928 - MITSUBISHI ELECTRIC CORP
- [I] EP 1033541 A1 20000906 - DAIKIN IND LTD [JP]
- [I] EP 1762794 A1 20070314 - DAIKIN IND LTD [JP]
- [AD] JP H0436288 B2 19920615

Cited by

EP2733437A1; GB2495149A; US11231205B2; WO2017099814A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2320164 A2 20110511**; **EP 2320164 A3 20140205**; CN 102032699 A 20110427; CN 102032699 B 20141022; JP 2011080634 A 20110421; JP 5411643 B2 20140212

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**EP 10186449 A 20101004**; CN 201010539415 A 20100930; JP 2009231660 A 20091005