

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 2320165 A3 20150225 (EN)**

Application

**EP 10186452 A 20101004**

Priority

JP 2009231659 A 20091005

Abstract (en)

[origin: EP2320165A2] A refrigeration cycle apparatus 1A includes: a refrigerant circuit 2 provided with a subcooling heat exchanger 23; a bypass passage 3 extending through the subcooling heat exchanger 23; and a controller 4 for controlling a main expansion means 24 in the refrigerant circuit 2 and a bypass expansion means 31 in the bypass passage 3. The bypass expansion means 31 is controlled so that a bypass side outlet temperature conforms to a saturation temperature at a pressure of a refrigerant to be drawn into a compressor 21, and a degree of superheat at an outlet of an evaporator 25 calculated based on an evaporator outlet temperature is equal to or lower than a predetermined degree of superheat.

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 2500/08** (2013.01); **F25B 2500/31** (2013.01); **F25B 2600/2509** (2013.01); **F25B 2700/2101** (2013.01); **F25B 2700/2103** (2013.01)

Citation (search report)

- [YA] DE 19522884 A1 19970102 - INST LUFT KAELTETECH GEM GMBH [DE]
- [Y] JP 2000018737 A 20000118 - DAIKIN IND LTD
- [A] EP 2068101 A1 20090610 - DAIKIN IND LTD [JP]
- [A] US 2005086957 A1 20050428 - LIFSON ALEXANDER [US], et al
- [A] JP 2007212134 A 20070823 - DAIKIN IND LTD

Cited by

EP2765370A1; EP2535674A3

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 2320165 A2 20110511; EP 2320165 A3 20150225; EP 2320165 B1 20180411**; CN 102032698 A 20110427; CN 102032698 B 20141217; DK 2320165 T3 20180723; JP 2011080633 A 20110421; JP 5421717 B2 20140219

DOCDB simple family (application)

**EP 10186452 A 20101004**; CN 201010509342 A 20101008; DK 10186452 T 20101004; JP 2009231659 A 20091005