

Title (en)

REFRIGERATION CYCLE DEVICE AND REFRIGERATION CYCLE DEVICE CONTROL METHOD

Title (de)

KÄLTEKREISLAUFVORRICHTUNG UND KÄLTEKREISLAUFVORRICHTUNGSTEUERUNGSVERFAHREN

Title (fr)

DISPOSITIF À CYCLE DE RÉFRIGÉRATION ET PROCÉDÉ DE COMMANDE DE DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication

**EP 3301380 A4 20180418 (EN)**

Application

**EP 16841193 A 20160511**

Priority

- JP 2015169268 A 20150828
- JP 2016063963 W 20160511

Abstract (en)

[origin: EP3301380A1] The purpose of the present invention is to reduce the temperature of a refrigerant sucked in by a high-stage compressor and prevent the high-stage compressor from sucking in a liquid medium. This refrigeration cycle device has a compression unit having a low-stage compressor (7) and a high-stage compressor (8), a condenser (11), a first expansion valve (12), and an evaporator (17). The refrigeration cycle device is equipped with: a liquid bypass circuit (32) which branches off from a pipe connecting the condenser (11) and the first expansion valve (12), and joins into a pipe connecting the low-stage compressor (7) and the high-stage compressor (8); a third expansion valve (33) which is provided to the liquid bypass circuit (32) and adjusts the amount of the refrigerant flowing through the liquid bypass circuit (32); and a controller (40) which controls the third expansion valve (33) and increases the amount of the refrigerant flowing through the liquid bypass circuit (32) when the discharge temperature of the high-stage compressor (8) is higher than a predetermined value, and which controls the third expansion valve (33) and adjusts the amount of the refrigerant flowing through the liquid bypass circuit (32) on the basis of the suction superheat degree of the high-stage compressor (8).

IPC 8 full level

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Citation (search report)

- [I] JP 2009192164 A 20090827 - MITSUBISHI ELECTRIC CORP
- [I] JP H062966 A 19940111 - MATSUSHITA ELECTRIC IND CO LTD
- [A] JP 2000346478 A 20001215 - DAIKIN IND LTD
- See references of WO 2017038161A1

Cited by

GB2614564A

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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**EP 3301380 A1 20180404**; **EP 3301380 A4 20180418**; **EP 3301380 B1 20190501**; CN 107709895 A 20180216; JP 2017044454 A 20170302; KR 102098164 B1 20200408; KR 20180011259 A 20180131; WO 2017038161 A1 20170309

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