

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF DE CIRCUIT DE RÉFRIGÉRATION

Publication
EP 3992552 A1 20220504 (EN)

Application
EP 21191420 A 20210816

Priority
JP 2020182013 A 20201030

Abstract (en)
[Object] The present disclosure provides a refrigeration cycle device capable of suppressing rise in discharge temperature and rise of discharge pressure even when the discharge temperature and the discharge pressure reach upper limits of operating range.[Solving Means] The refrigeration cycle device includes: a main refrigerant circuit 8 formed from a compressing mechanism 1, a usage-side heat exchanger 2, an intermediate heat exchanger 5, a first expanding device 3 and a heat source-side heat exchanger 4; a bypass refrigerant circuit 6 in which after refrigerant which branches off from between the usage-side heat exchanger 2 and the first expanding device 3 is decompressed by a second expanding device 7, heat of the refrigerant is exchanged with that of the refrigerant which flows through the main refrigerant circuit 8, and the refrigerant joins up with the refrigerant which is in middle of a compression operation of a compression rotating element; discharge temperature detecting means 15 for detecting discharge temperature, discharge pressure detecting means 16 for detecting discharge pressure; and a control device 20, wherein when the discharge pressure is higher than predetermined pressure and the discharge temperature is higher than predetermined temperature, opening degrees of both the first expanding device 3 and the second expanding device 7 are increased.

IPC 8 full level
F25B 49/02 (2006.01)

CPC (source: EP)
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Citation (applicant)
JP 2009192164 A 20090827 - MITSUBISHI ELECTRIC CORP

Citation (search report)
• [X] US 2015362235 A1 20151217 - YAMASHITA KOJI [JP]
• [A] WO 2020071299 A1 20200409 - DAIKIN IND LTD [JP]
• [A] GB 2533041 A 20160608 - MITSUBISHI ELECTRIC CORP [JP]
• [A] EP 2088390 A2 20090812 - MITSUBISHI ELECTRIC CORP [JP]
• [A] US 2015020535 A1 20150122 - HATOMURA TAKESHI [JP], et al

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)
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