

Title (en)

FREEZING DEVICE, FREEZING SYSTEM, AND CONTROL METHOD OF FREEZING DEVICE

Title (de)

GEFRIERVORRICHTUNG, GEFRIERSYSTEM UND VERFAHREN ZUR STEUERUNG EINER GEFRIERVORRICHTUNG

Title (fr)

DISPOSITIF DE CONGÉLATION, SYSTÈME DE CONGÉLATION ET PROCÉDÉ DE COMMANDE DE DISPOSITIF DE CONGÉLATION

Publication

EP 4113035 B1 20230927 (EN)

Application

EP 22181615 A 20220628

Priority

JP 2021110944 A 20210702

Abstract (en)

[origin: EP4113035A1] Provided is a freezing device (1) that can improve thermal efficiency even in a low outside air temperature and obtain necessary freezing performance. The freezing device includes: a compressor (3) configured to compress a CO₂ refrigerant; a gas cooler (5) configured to cool a CO₂ refrigerant discharged from the compressor (3); and a control unit configured to set a high-pressure target value of the CO₂ refrigerant so that the CO₂ refrigerant in the gas cooler (5) becomes subcritical and perform subcritical control when an outside air temperature is less than a first predetermined temperature, which is lower than the critical point of the CO₂ refrigerant, and a target evaporation temperature in an evaporator to which the CO₂ refrigerant cooled by the gas cooler (5) is guided via an expansion valve (7) is less than or equal to a second predetermined temperature.

IPC 8 full level

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CPC (source: EP)

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