

Title (en)
REFRIGERATION CYCLE APPARATUS

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
APPAREIL À CYCLE FRIGORIFIQUE

Publication
EP 3862649 A1 20210811 (EN)

Application
EP 18936213 A 20181002

Priority
JP 2018036849 W 20181002

Abstract (en)
A refrigeration cycle apparatus includes a refrigerant circuit through which refrigerant is circulated, an economizer circuit branching off from the refrigerant circuit between an intercooler and a main expansion valve or between the intercooler and a condenser and connecting to a compressor via the intercooler, an economizer expansion valve disposed in the economizer circuit, an intermediate pressure sensor configured to detect an intermediate pressure of the refrigerant to be injected into the compressor, a temperature sensor configured to detect a temperature of the refrigerant to be injected into the compressor, a calculating unit configured to calculate an economizer superheat degree that is a difference between a saturated gas temperature corresponding to the detected intermediate pressure and a detection value of the temperature sensor and obtain, on the basis of an operating state of the refrigerant circuit, a target value of the economizer superheat degree, and a flow rate control unit configured to adjust an opening degree of the economizer expansion valve such that the economizer superheat degree matches the target value.

IPC 8 full level
F25B 1/00 (2006.01)

CPC (source: EP)
F25B 49/02 (2013.01); **F25B 2500/19** (2013.01); **F25B 2600/2509** (2013.01); **F25B 2700/195** (2013.01); **F25B 2700/21163** (2013.01); **F25B 2700/21175** (2013.01)

Cited by
CN114353383A

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 3862649 A1 20210811; **EP 3862649 A4 20220112**; JP 6987269 B2 20211222; JP WO2020070793 A1 20210603; WO 2020070793 A1 20200409

DOCDB simple family (application)
EP 18936213 A 20181002; JP 2018036849 W 20181002; JP 2020550979 A 20181002