

Title (en)
REFRIGERANT CYCLE DEVICE, REFRIGERANT AMOUNT DETERMINATION SYSTEM, AND REFRIGERANT AMOUNT DETERMINATION METHOD

Title (de)
KÜHLMITTELKREISLAUF, KÜHLMITTELMENGENBESTIMMUNGSSYSTEM UND KÜHLMITTELMENGENBESTIMMUNGSVERFAHREN

Title (fr)
DISPOSITIF DE CYCLE DE RÉFRIGÉRANT, SYSTÈME DE DÉTERMINATION DE QUANTITÉ DE RÉFRIGÉRANT, ET PROCÉDÉ DE DÉTERMINATION DE QUANTITÉ DE RÉFRIGÉRANT

Publication
EP 3885676 A4 20220810 (EN)

Application
EP 19887164 A 20191112

Priority
• JP 2018216841 A 20181119
• JP 2019044420 W 20191112

Abstract (en)
[origin: EP3885676A1] The technique in PTL 1 is incapable of grasping a decrease in the amount of a refrigerant from an initial amount of the refrigerant, and the determination of the amount of the refrigerant is insufficient for the purpose other than protection of a compressor. A refrigeration cycle apparatus (100) includes an air temperature sensor (36), a condensation temperature sensor (37), an acquisition unit (38), and a determination unit (34). The air temperature sensor (36) detects an air temperature, which is a temperature of air that flows into a condenser. The condensation temperature sensor (37) detects a condensation temperature of the refrigerant that flows through the condenser. The acquisition unit (38) acquires a temperature difference between the air temperature and the condensation temperature. The determination unit (34) determines an amount of the refrigerant included in the refrigerant circuit by comparing a first temperature difference and a second temperature difference with each other. The first temperature difference is a temperature difference acquired by the acquisition unit (38) at a first timing. The second temperature difference is a temperature difference acquired by the acquisition unit (38) at a second timing.

IPC 8 full level
F25B 13/00 (2006.01); **F25B 49/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)
F25B 13/00 (2013.01 - US); **F25B 49/005** (2013.01 - EP); **F25B 49/02** (2013.01 - US); **F25B 13/00** (2013.01 - EP); **F25B 2500/19** (2013.01 - EP); **F25B 2500/222** (2013.01 - EP); **F25B 2700/2106** (2013.01 - EP); **F25B 2700/2116** (2013.01 - EP)

Citation (search report)
• [XY] US 2018283719 A1 20181004 - HONDA MASAHIRO [JP], et al
• [Y] WO 2008035418 A1 20080327 - MITSUBISHI ELECTRIC CORP [JP], et al
• [I] WO 2008010988 A1 20080124 - EMERSON CLIMATE TECHNOLOGIES [US], et al
• [I] US 2006137370 A1 20060629 - KANG PENGJU [US], et al
• [A] EP 3064867 A2 20160907 - FUJITSU GENERAL LTD [JP]
• [A] US 2014299289 A1 20141009 - ALSALEEM FADI M [US], et al
• See references of WO 2020105515A1

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

DOCDB simple family (publication)
EP 3885676 A1 20210929; EP 3885676 A4 20220810; CN 112888907 A 20210601; JP 2020085280 A 20200604; US 2022003472 A1 20220106; WO 2020105515 A1 20200528

DOCDB simple family (application)
EP 19887164 A 20191112; CN 201980069845 A 20191112; JP 2018216841 A 20181119; JP 2019044420 W 20191112; US 201917294890 A 20191112