

Title (en)

REFRIGERATING CYCLE SYSTEM AND LIQUID FLOW-BACK PREVENTION METHOD

Title (de)

KÜHLZYKLUSYSTEM UND VERFAHREN ZUR VERHINDERUNG VON FLÜSSIGKEITSRÜCKFLUSS

Title (fr)

SYSTÈME À CYCLE DE RÉFRIGÉRATION ET PROCÉDÉ DE PRÉVENTION DE REFLUX LIQUIDE

Publication

**EP 3173714 B1 20180815 (EN)**

Application

**EP 16198071 A 20161110**

Priority

JP 2015229750 A 20151125

Abstract (en)

[origin: EP3173714A1] Liquid flow-back is prevented, and a compressor (4) is protected by a simple and low-cost configuration having high reliability and an excellent maintenance property. In a heating and cooling air conditioning system of the present invention, a gas-liquid mixed refrigerant sucked into an electric compressor (4) is separated, and only a vaporized refrigerant is sucked by an electric compressor (4), an electric heating element (23, 23A) is provided at a position of an allowable highest liquid level (H3) of a liquefied refrigerant (R) in an accumulator (12) storing a predetermined amount of the liquefied refrigerant (R), and a controller detects change of a heating value of the electric heating element (23) as change of power consumption, and performs protection operation for lowering the liquid level of the liquefied refrigerant (R) in a case where the power consumption reaches a predetermined threshold value.

IPC 8 full level

**F25B 43/00** (2006.01); **F25B 49/02** (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP)

**F25B 43/006** (2013.01); **F25B 49/02** (2013.01); **F25B 13/00** (2013.01); **F25B 2400/01** (2013.01); **F25B 2600/05** (2013.01); **F25B 2700/04** (2013.01); **F25B 2700/2113** (2013.01)

Cited by

CN112739962A; CN108759202A; CN109990515A; EP3702698A1; CN111623563A; US11326818B2

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 3173714 A1 20170531**; **EP 3173714 B1 20180815**; JP 2017096564 A 20170601

DOCDB simple family (application)

**EP 16198071 A 20161110**; JP 2015229750 A 20151125