

Title (en)

AIR-CONDITIONING SYSTEM AND METHOD FOR CONTROLLING AIR-CONDITIONING SYSTEM

Title (de)

KLIMATISIERUNGSSYSTEM UND VERFAHREN ZUR STEUERUNG VON KLIMATISIERUNGSSYSTEM

Title (fr)

SYSTÈME DE CLIMATISATION ET PROCÉDÉ DE COMMANDE POUR SYSTÈME DE CLIMATISATION

Publication

EP 3091311 B1 20190227 (EN)

Application

EP 14875380 A 20141015

Priority

- CN 201310728551 A 20131224
- CN 2014088670 W 20141015

Abstract (en)

[origin: EP3091311A1] The disclosure discloses an air-conditioning system. The air-conditioning system includes a double-cylinder capacity-variable compressor (30), the double-cylinder capacity-variable compressor (30) having a suction port of an upper cylinder, a suction port of a lower cylinder and an exhaust port. The air-conditioning system further includes a first solenoid valve (71), one end of the first solenoid valve (71) is connected to the exhaust port of the double-cylinder capacity-variable compressor (30), and the other end of the first solenoid valve (71) is connected to a one-way valve (50) and the suction port of the lower cylinder of the double-cylinder capacity-variable compressor respectively. One end of the one-way valve (50) is connected to the first solenoid valve (71), and the other end of the one-way valve (50) is communicated with an inner chamber of a gas-liquid separator. The air-conditioning system further includes a second solenoid valve (72), the second solenoid valve (72) being provided in a pipeline connecting the suction port of the lower cylinder of the double-cylinder capacity-variable compressor to an inlet of the gas-liquid separator. By means of a drain bypass pipeline provided with a solenoid valve and additionally provided between the suction port of the lower cylinder and the inlet of the gas-liquid separator, a high-pressure coolant at a suction side of the lower cylinder can be decompressed to the gas-liquid separator, thereby optimizing the stability of the system when being switched from a single-cylinder operation to a double-cylinder operation. The disclosure also discloses a method for controlling an air-conditioning system.

IPC 8 full level

F25B 13/00 (2006.01); **F04C 23/00** (2006.01); **F25B 41/20** (2021.01)

CPC (source: CN EP US)

F25B 41/20 (2021.01 - CN EP US); **F25B 41/24** (2021.01 - CN EP US); **F25B 49/02** (2013.01 - CN EP US); **F04C 28/24** (2013.01 - CN EP); **F25B 1/02** (2013.01 - CN EP); **F25B 13/00** (2013.01 - CN EP); **F25B 2400/074** (2013.01 - CN EP); **F25B 2600/0261** (2013.01 - CN EP); **F25B 2600/2519** (2013.01 - CN EP); **F25B 2700/21151** (2013.01 - CN EP); **F25B 2700/21152** (2013.01 - CN EP)

Cited by

WO2019000869A1; WO2018179014A1; WO2019000868A1

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 3091311 A1 20161109; **EP 3091311 A4 20170920**; **EP 3091311 B1 20190227**; CN 104729130 A 20150624; CN 104729130 B 20170510; ES 2717515 T3 20190621; JP 2017502247 A 20170119; JP 6498677 B2 20190410; TR 201905512 T4 20190521; WO 2015096539 A1 20150702

DOCDB simple family (application)

EP 14875380 A 20141015; CN 201310728551 A 20131224; CN 2014088670 W 20141015; ES 14875380 T 20141015; JP 2016542927 A 20141015; TR 201905512 T 20141015