

Title (en)

HEAT PUMP DEVICE AND METHOD OF CONTROLLING REGULATION VALVE

Title (de)

WÄRMEPUMPENVORRICHTUNG UND VERFAHREN ZUR STEUERUNG EINES REGELVENTILS

Title (fr)

DISPOSITIF DE POMPE À CHALEUR ET PROCÉDÉ DE COMMANDE D'UNE SOUPAPE DE RÉGULATION

Publication

EP 2434231 A1 20120328 (EN)

Application

EP 09844887 A 20090518

Priority

JP 2009059138 W 20090518

Abstract (en)

It is aimed to provide a heat pump type hot-water supply outdoor apparatus that can control a temperature of a compressor shell, according to a water temperature of a water circuit and a temperature of the compressor. A heat pump type hot-water supply outdoor apparatus 1a includes a refrigeration cycle including a compressor 2, a water-refrigerant heat exchanger 3, an expansion valve 4, and an air heat exchanger 5, a water jacket 10 that is arranged on the shell of the compressor 2 and connected in the middle of a branch water circuit 8 branching in parallel to a main water circuit 7 which starts from a hot water storage tank 30 and returns to the hot water storage tank 30 through a water-refrigerant heat exchanger 3, a water flow valve 9 that is connected between a branch A and the water jacket 10 and regulates the quantity of water flow, according to a control signal, a shell temperature detection sensor 6 that senses a temperature of the shell of the compressor 2, a water temperature sensor 11 that is installed in the vicinity of the branch A and senses a temperature of the water flowing out of the hot water storage tank 30, and a control apparatus 20a that generates a control signal for controlling the water flow valve 9, based on the temperature sensed by the shell temperature detection sensor 6 and the temperature sensed by the water temperature sensor 11, and outputs it to the water flow valve 9.

IPC 8 full level

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Cited by

CN107401840A; CN109798661A; CN109028653A; CN105466014A; CN107560173A; CN114353360A; WO2021212962A1

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