

Title (en)
HOT-WATER HEATING SYSTEM, CONTROL DEVICE, AND CONTROL METHOD

Title (de)
WARMWASSERHEIZUNGSANLAGE, STEUERUNGSVORRICHTUNG UND STEUERUNGSVERFAHREN

Title (fr)
SYSTÈME DE CHAUFFAGE À EAU CHAUDE, DISPOSITIF ET PROCÉDÉ DE COMMANDE

Publication
EP 3306204 A4 20190130 (EN)

Application
EP 16802836 A 20160121

Priority
• JP 2015113425 A 20150603
• JP 2016051650 W 20160121

Abstract (en)
[origin: EP3306204A1] A hot water heating system includes a room temperature sensor that detects room temperature information of a building; a heat source unit that generates hot water; an indoor unit that rejects heat of hot water generated by the heat source unit and heats the building; and a controller that controls the heat source unit. The controller includes a control gain determination unit that calculates a first gain and a second gain based on thermal properties of the building, a heating control unit that updates a hot-water discharge temperature command corresponding to a target value of a temperature of water at an outlet of a refrigerant-water heat exchanger by using the first gain and the second gain, and a hot-water discharge temperature control unit that, in a case of air-conditioning ON in which the indoor unit supplies heat to the building, outputs a heat supply command to the heat source unit based on the hot-water discharge temperature command updated by the heating control unit. The first gain is designed so that the hot-water discharge temperature command that results in intended room temperature response in the case of air-conditioning ON is obtained, and the second gain is designed so that the hot-water discharge temperature command reflecting a change in room temperature in a case of air-conditioning OFF in which the indoor unit does not supply heat to the building is obtained. The heating control unit updates, in the case of air-conditioning ON, the hot-water discharge temperature command by using a setting temperature for room temperature, the room temperature information, and the first gain, and updates, in the case of air-conditioning OFF, the hot-water discharge temperature command by using the setting temperature, the room temperature information, and the second gain.

IPC 8 full level
F24D 3/00 (2006.01); **F24D 3/18** (2006.01); **F24F 11/30** (2018.01); **F24F 11/62** (2018.01)

CPC (source: EP)
F24D 3/00 (2013.01); **F24D 3/18** (2013.01); **F24F 11/30** (2017.12); **F24F 11/62** (2017.12); **F24F 2110/10** (2017.12); **F24F 2221/183** (2013.01)

Citation (search report)
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• [A] WO 2015071654 A1 20150521 - PASSIVSYSTEMS LTD [GB]
• [A] US 4784212 A 19881115 - BRIMER BENNY [US], et al
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• [A] EP 0518131 A1 19921216 - LANDIS & GYR POWERS INC [US]
• See references of WO 2016194397A1

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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 3306204 A1 20180411; EP 3306204 A4 20190130; EP 3306204 B1 20210707; JP 6516838 B2 20190522; JP WO2016194397 A1 20171019; WO 2016194397 A1 20161208

DOCDB simple family (application)
EP 16802836 A 20160121; JP 2016051650 W 20160121; JP 2017521706 A 20160121