

Title (en)
HOT WATER SUPPLY SYSTEM

Title (de)
HEISSWASSERVERSORGUNGSSYSTEM

Title (fr)
SYSTÈME D'ALIMENTATION EN EAU CHAUDE

Publication
EP 3663670 A1 20200610 (EN)

Application
EP 18841308 A 20180727

Priority
• JP 2017150147 A 20170802
• JP 2018028302 W 20180727

Abstract (en)
Overall energy efficiency of a hot water supply system including a heat pump heating unit and an auxiliary heating unit is optimized. Provided are a hot water storage tank, a hot water delivery unit for supplying hot water from the hot water storage tank to a use side, a heat pump heating unit for boiling water in the hot water storage tank, and an auxiliary heating unit capable of heating the hot water supplied to the hot water delivery unit. Performed are a heat pump isolated operation that boils water in the hot water storage tank using the heat pump heating unit, and an auxiliary heating combined operation that simultaneously performs heating of hot water using the auxiliary heating unit as well as boiling when the amount of heat is insufficient only by boiling using the heat pump heating unit. Boiling in a first mode of the heat pump isolated operation has higher heating capability and lower heat pump efficiency than those of boiling in a second mode. The boiling in the first mode is performed in a condition where a shortage of the amount of heat is likely to be caused by the boiling in the second mode in a state where a large amount of delivery of hot water is estimated or a large amount of hot water is actually delivered.

IPC 8 full level
F24H 4/02 (2006.01); **F24H 1/18** (2006.01)

CPC (source: EP US)
F24D 11/0214 (2013.01 - EP); **F24D 17/02** (2013.01 - EP); **F24D 19/1054** (2013.01 - EP US); **F24H 4/04** (2013.01 - EP); **F24H 9/2014** (2013.01 - EP US); **F24H 15/104** (2022.01 - EP US); **F24H 15/156** (2022.01 - EP US); **F24H 15/172** (2022.01 - EP US); **F24H 15/176** (2022.01 - EP US); **F24H 15/212** (2022.01 - EP US); **F24H 15/238** (2022.01 - EP US); **F24H 15/258** (2022.01 - EP US); **F24H 15/281** (2022.01 - EP US); **F24H 15/34** (2022.01 - EP US); **F24H 15/36** (2022.01 - EP US); **F24H 15/375** (2022.01 - EP US); **F24H 15/38** (2022.01 - EP US); **F24H 15/421** (2022.01 - EP US)

Cited by
CN117545961A; GB2604956B; GB2613709A; GB2613709B; WO2022168034A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3663670 A1 20200610; **EP 3663670 A4 20210714**; CN 110730889 A 20200124; CN 110730889 B 20220104; JP 2019027740 A 20190221; JP 6944832 B2 20211006; WO 2019026801 A1 20190207

DOCDB simple family (application)
EP 18841308 A 20180727; CN 201880038655 A 20180727; JP 2017150147 A 20170802; JP 2018028302 W 20180727