

Title (en)

STORAGE TYPE HOT WATER SUPPLY DEVICE

Title (de)

WARMWASSERVERSORGUNGSEINRICHTUNG DER SPEICHERART

Title (fr)

DISPOSITIF D'ALIMENTATION EN EAU CHAUDE DU TYPE À RÉSERVE

Publication

EP 2199702 A4 20141105 (EN)

Application

EP 08792578 A 20080820

Priority

- JP 2008064857 W 20080820
- JP 2007217282 A 20070823

Abstract (en)

[origin: EP2199702A1] To provide a hot water storage type hot water supply device that is capable of controlling a drop in energy efficiency even while activating a relief valve in the same manner as conventionally. A heat exchange component (3) for a tub and pump (12) are installed in a bypass path (41). A relief valve (43) is connected to the bypass path (41), and energy loss is controlled by releasing cold water and not high-temperature hot water. A communication path (46) that bypasses a narrow component (44) and an air reservoir component (45) and allows an upper portion of a hot water storage tank (2) and the bypass path (41) to be communicated with each other is disposed, and a check valve (47) is installed in the communication path (46). The check valve (47) is configured such that it is not opened by differential pressure stemming from convection leading from the upper portion of the hot water storage tank (2) through the bypass path (41) to a bottom portion of the hot water storage tank (2) and such that it is opened by differential pressure generated by the driving of the pump (12), so that convection loss is prevented.

IPC 8 full level

F24H 4/04 (2006.01); **F24H 9/20** (2006.01)

CPC (source: EP US)

F24D 19/083 (2013.01 - EP US); **F24H 4/04** (2013.01 - EP US); **F24H 9/2007** (2013.01 - EP US)

Citation (search report)

- [XAI] JP 2006118753 A 20060511 - DENSO CORP
- [XAI] JP S58140552 A 19830820 - MATSUSHITA ELECTRIC IND CO LTD
- [X] JP 2007071516 A 20070322 - SANDEN CORP
- [X] JP 2004199920 A 20040715 - NORITZ CORP
- [X] JP 2003106654 A 20030409 - NORITZ CORP
- See references of WO 2009025310A1

Cited by

EP2613102A4; US9103554B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2199702 A1 20100623; **EP 2199702 A4 20141105**; **EP 2199702 B1 20170308**; CN 101779087 A 20100714; CN 101779087 B 20130710; JP 2009052758 A 20090312; JP 4274273 B2 20090603; US 2011259560 A1 20111027; WO 2009025310 A1 20090226

DOCDB simple family (application)

EP 08792578 A 20080820; CN 200880103409 A 20080820; JP 2007217282 A 20070823; JP 2008064857 W 20080820; US 67436408 A 20080820