

Title (en)
Water Heater having Condensing Recuperator and Dual Purpose Pump

Title (de)
Wassererhitzer mit Kondensatrückgewinnung und Doppelzweckpumpe

Title (fr)
Chauffe-eau doté d'un récupérateur de condensation et pompe à double usage

Publication
EP 2669593 A1 20131204 (EN)

Application
EP 12185738 A 20120924

Priority
US 201213484810 A 20120531

Abstract (en)
A water heater having primary and secondary heat exchanger and a pump to move water between the primary and secondary heat exchangers. The pump may also be used for the purpose of recirculating water within a building. The water heater may be manufactured with a method in which certain steps and components are added to a water heater of a first efficiency to arrive at a water heater having a second efficiency greater than the first efficiency. The additional steps and components may include attaching a condensing recuperator to a traditional power vent water heater.

IPC 8 full level
F24H 1/12 (2006.01); **F24H 1/20** (2006.01); **F24H 9/12** (2006.01)

CPC (source: EP US)
F24H 1/12 (2013.01 - EP US); **F24H 1/206** (2013.01 - EP US); **F24H 9/13** (2022.01 - EP US); **F24D 2200/046** (2013.01 - EP US); **Y10T 29/49387** (2015.01 - EP US)

Citation (search report)

- [X1] EP 0699872 A1 19960306 - BABCOCK OMNICAL GMBH [DE]
- [X1] DE 2227754 A1 19731220 - KIRSCHKE GUENTHER
- [X1] DE 3434415 A1 19860327 - SIEMENS AG [DE]

Cited by
EP4147110A4

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 2669593 A1 20131204; CA 2790875 A1 20131130; US 2013319348 A1 20131205

DOCDB simple family (application)
EP 12185738 A 20120924; CA 2790875 A 20120925; US 201213484810 A 20120531