

Title (en)
Energy-saving water boiler

Title (de)
Energiesparender Wasserkessel

Title (fr)
Chauffe-eau à économie d'énergie

Publication
EP 2388534 A3 20140827 (EN)

Application
EP 11152671 A 20110131

Priority
TW 99116373 A 20100521

Abstract (en)
[origin: EP2388534A2] A water boiler (10) includes a water storage tank (12), a heater (16), and a heat pipe unit (18). The water storage tank (12) includes a heating room (34), an outer water storage room (36), and an inner water storage room (40) between and spaced from the heating room (34) and the outer water storage room (36) in a radial direction. Outside water (56) flows from an inlet pipe (54) to the outer water storage room (36), and water (56) in the outer water storage room (36) flows into the inner water storage room (40) and the heating room (34) for storage. The heater (16) includes an induction coil (78). The heat pipe unit (18) includes a plurality of heat-transfer pipes (84). An upper segment (86) of each heat-transfer pipe (84) is arranged in the heating room (34), while a lower segment (88) of each heat-transfer pipe (84) is received in the induction coil (78). When the induction coil (78) turns ON, heat-transfer pipes (84) are heated to heat the water (56) in the heating room (34).

IPC 8 full level
F24H 1/06 (2006.01); **F24H 1/20** (2006.01); **F24H 1/22** (2006.01); **F28D 15/02** (2006.01); **H05B 6/02** (2006.01)

CPC (source: EP)
F24H 1/201 (2013.01); **F24H 1/208** (2013.01); **F24H 1/225** (2013.01); **F28D 15/0275** (2013.01); **H05B 6/108** (2013.01); **F24D 2220/07** (2013.01); **F24H 1/06** (2013.01); **F24H 2250/08** (2013.01)

Citation (search report)

- [Y] US 4514617 A 19850430 - AMIT HAIM [IL]
- [Y] DE 2433790 A1 19760129 - BOSCH GMBH ROBERT
- [A] GB 447338 A 19360515 - ALAN LESLIE WRIGHT, et al
- [A] US 2033443 A 19360310 - JOHN MOSES
- [A] CH 681044 A5 19921231 - GNOSIS ETS

Cited by
CN109631640A; KR101663131B1; EP2960592A1; FR3022990A1; CN109631641A; CN110906771A; CN111486730A; CN111486731A

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

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EP 2388534 A2 20111123; EP 2388534 A3 20140827; TW 201142222 A 20111201; TW I426221 B 20140211

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EP 11152671 A 20110131; TW 99116373 A 20100521