

Title (en)

Heat exchanger for fuel fired water heater

Title (de)

Wärmeübertrager für brennstoffbeheizte Wassererhitzer

Title (fr)

Echangeur de chaleur pour chauffe-eau chauffé par un combustible

Publication

EP 1396688 A3 20041215 (DE)

Application

EP 03018275 A 20030812

Priority

DE 10241060 A 20020905

Abstract (en)

[origin: EP1396688A2] The heat exchanger (8) for fuel-heated water heaters has water pipes (12,14) in at least two rows (18,20), with one above the other, and at least one packet of plates (22,24) penetrated by the pipes and between which are formed gaps (26,28) for the passage of combustion gases, and with the narrow sides of the plates tapering vertically upwards. The narrow sides of the plates in relation to the inner wall (1) of the heater (10) are located approximately gap-free, while the wide sides of the plates define the inlet and outlet length of the gaps for the passage of the combustion gases.

IPC 1-7

F24H 9/00; **F28F 1/32**; **F28F 9/013**

IPC 8 full level

F24H 9/00 (2006.01); **F28F 1/32** (2006.01); **F24H 1/40** (2006.01)

CPC (source: EP)

F24H 9/0026 (2013.01); **F28F 1/32** (2013.01); **F24H 1/40** (2013.01)

Citation (search report)

- [Y] EP 0881437 A2 19981202 - BOSCH GMBH ROBERT [DE]
- [Y] DE 9017483 U1 19910321
- [XY] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04 31 August 2000 (2000-08-31)
- [XY] PATENT ABSTRACTS OF JAPAN vol. 0132, no. 23 (M - 829) 24 May 1989 (1989-05-24)
- [XY] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11 28 November 1997 (1997-11-28)
- [X] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 03 31 March 1999 (1999-03-31)

Cited by

WO2007028462A1

Designated contracting state (EPC)

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EP 1396688 A2 20040310; **EP 1396688 A3 20041215**; DE 10241060 A1 20040318

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