

Title (en)

Heat recovery apparatus and heat recovery method.

Title (de)

Wärmerückgewinnungsapparat und Wärmerückgewinnungsverfahren.

Title (fr)

Récupérateur de chaleur et méthode pour récupérer la chaleur.

Publication

EP 0236607 A1 19870916 (EN)

Application

EP 86301713 A 19860311

Priority

EP 86301713 A 19860311

Abstract (en)

A heat recovery apparatus for boilers, or the like, comprising a heat recovery housing with combustion gas inlet (26) in the bottom, and a combustion gas outlet (22) in the top. A plurality of interconnected water conduit tubes (38) pass circuitously through the housing. A tube roof (46) is arranged above the tubes (38). A plurality of pivotal bypass dampers (28) when in a closed position define a generally flat by-pass structure angled to the horizontal and extending between a side wall to the tube roof in order to divert the flow of combustion gases from the inlet towards the water conduit tubes. A condensate drain (34) is positioned in the bottom of the housing and underneath the tubes. A plurality of pivotal exit dampers (50) when in a closed position define a generally horizontal flat exit structure extending from the opposite side wall to the tube roof and can open to allow the flow of combustion gases from the tubes to the outlet. The dampers are operated to allow alternately heat exchange at the water tubes and draining of condensate.

IPC 1-7

F28D 21/00

IPC 8 full level

F22B 35/00 (2006.01); **F22D 1/02** (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP)

F22B 35/007 (2013.01); **F22D 1/02** (2013.01); **F28D 21/0007** (2013.01); **F24D 2200/18** (2013.01)

Citation (search report)

- [Y] EP 0042129 A2 19811223 - VAILLANT JOH GMBH & CO [DE], et al
- [Y] GB 719423 A 19541201 - BABCOCK & WILCOX LTD
- [A] EP 0078207 A2 19830504 - CHAFFOTEAUX ET MAURY [FR]
- [A] FR 1566024 A 19690502
- [A] US 4346674 A 19820831 - MERRITT JR JOHN H
- [A] US 1885267 A 19321101 - VICTOR KALFUS
- [A] FR 2475707 A1 19810814 - SEVELEN METALLBAU [CH]
- [A] US 681245 A 19010827 - MUIR ALEXANDER [US]
- [A] US 4401261 A 19830830 - BROWN LEEROY W [US]
- [A] US 4373473 A 19830215 - GRANDMONT ROBERT [CA]
- [A] US 3122202 A 19640225 - SCHARRES HARRY J
- [A] GB 2134233 A 19840808 - KIDD ARCHIBALD W
- [E] US 4583494 A 19860422 - GORDON JR MERRILL K [US]

Cited by

GB2416827A; FR3053774A1; EP0319392A1; FR2624268A1; WO2010075601A3

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0236607 A1 19870916

DOCDB simple family (application)

EP 86301713 A 19860311