

Title (en)

Device for heating air during the duty cycle of a heating boiler

Title (de)

Vorrichtung zum Erhitzen von Luft während des Arbeitszyklus eines Heizkessels

Title (fr)

Dispositif pour le chauffage de l'air pendant le cycle d'utilisation d'une chaudière

Publication

EP 2236953 A3 20110119 (EN)

Application

EP 10460003 A 20100215

Priority

PL 38735709 A 20090312

Abstract (en)

[origin: EP2236953A2] Device for heating air during the duty cycle of a heating boiler fired in particular by solid fuel or biomass, composed of a conduit for supplying air to the furnace and a conduit for outflow the exhaust gas from the heating boiler into the flue, characterised in that the device has the closed exhaust gas conduit (2) which over the length of its connection with the flue (8) is shaped resembling a cosine curve with advantageously vertical exhaust gas conduits (4) adhered to the vertical air conduits (11) which over the length of the air conduit (3) have a shape resembling a sine curve, and on the last vertical conduit (5), where the end section (7) of the exhaust gas conduit (2) is guided to the flue (8), there is a pumping fan (6). The closed exhaust gas conduit (2) in the shape resembling a cosine curve has vertical exhaust gas conduits (4) which decrease in volume in the flue (8) direction, and the air conduit (3) in the shape resembling a sine curve has vertical air conduits (11) which increase in volume in the boiler (1) direction.

IPC 8 full level

F24H 6/00 (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP US)

F24H 6/00 (2013.01 - EP US); **F28D 21/0008** (2013.01 - EP US); **F24D 2200/06** (2013.01 - EP US)

Citation (search report)

- [Y] US 5394860 A 19950307 - BORLE DEL [CA]
- [Y] US 6357396 B1 20020319 - STANSFIELD TOD A [US], et al
- [Y] FR 1562693 A 19690224
- [A] US 5295473 A 19940322 - NEUFELDT JACOB J [CA]

Cited by

CN103322674A

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 MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2236953 A2 20101006; EP 2236953 A3 20110119; JP 2010266184 A 20101125; PL 222775 B1 20160930; PL 387357 A1 20100913; US 2010233641 A1 20100916

DOCDB simple family (application)

EP 10460003 A 20100215; JP 2010055053 A 20100311; PL 38735709 A 20090312; US 72255510 A 20100312