

Title (en)

METHOD AND DEVICE FOR INTENSIFYING THE BURNING OF SOLID FUELS IN A FIREPLACE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR VERSTÄRKUNG DER VERBRENNUNG FESTER BRENNSTOFFE IN EINEN KAMIN

Title (fr)

PROCÉDÉ ET DISPOSITIF D'INTENSIFICATION DU BRÛLAGE DE COMBUSTIBLES SOLIDES DANS UN FOYER

Publication

EP 2906873 A4 20161005 (EN)

Application

EP 13844960 A 20131008

Priority

- FI 20126055 A 20121009
- FI 2013050974 W 20131008

Abstract (en)

[origin: WO2014057172A1] The invention relates to a method for intensifying the burning of solid fuels in fireplaces, in which fuel is heated up and gasified in a fire chamber (8). Furthermore, the invention relates to a device for applying the method, which device includes a fire chamber (8). According to the method in the burning of fuel, the burning of gases in it is separated from the burning of solid carbon in the fuel by releasing gases from the fuel in the fire chamber by means of heat and by conveying them to a uniform, planar flow of combustion air in the top part of the fire chamber in which air is conveyed and in which gases are burned. In the device according to the invention, on the edges of the top part of the fire chamber there is all around a gap (3, 13, 23) entering from a combustion air channel/channels which is directed towards an exit opening (4, 15, 25) along the bottom surface (14, 24) of the top part of the fire chamber advantageously in the middle section, from which a flow channel extends to an afterburner (31) being above it, the inner surface of the fire chamber is of heat-resistant material having a low heat capacity, behind it there is a heat insulator layer (18), and in a batch-burning fire chamber there is in the bottom part a grate (7, 17) or inside the grate a char basket and an adjustable supply mechanism of combustion air.

IPC 8 full level

F23B 30/00 (2006.01); **A61H 33/06** (2006.01); **F23B 10/00** (2011.01); **F23B 80/04** (2006.01); **F23B 90/06** (2011.01); **F24B 1/19** (2006.01); **F24B 5/02** (2006.01)

CPC (source: EP FI)

A61H 33/063 (2013.01 - EP); **F23B 10/00** (2013.01 - EP); **F23B 10/02** (2013.01 - FI); **F24B 1/189** (2013.01 - EP); **F24B 1/197** (2013.01 - EP); **F24B 5/026** (2013.01 - EP); **F23B 80/04** (2013.01 - EP); **F23B 90/06** (2013.01 - EP)

Citation (search report)

- [XAY] US 4766876 A 19880830 - HENRY DANIEL S [US], et al
- [Y] CH 367305 A 19630215 - SEVERA JAN [CZ], et al
- [A] EP 2085694 A2 20090805 - HWAM HOLDING AS [DK]
- [XA] US 5622161 A 19970422 - STACK MICHAEL [IE]
- [XA] US 2011220090 A1 20110915 - ATEMBOSKI ALAN R [US], et al
- [A] WO 9964789 A1 19991216 - MORSOE JERNSTOEBERI A S [DK], et al
- [XA] DE 2946774 A1 19810527 - BRUUN & SOERENSEN [SE]
- [X] DE 429878 C 19260604 - RUDOLF BERGMANS
- [A] FR 2546272 A1 19841123 - KUCZEWSKI DE PORAY MARCEL [FR]
- [A] EP 0271477 A1 19880615 - VOEST ALPINE AG [AT]
- [A] DE 854981 C 19521110 - VICARD PIERRE G
- See references of WO 2014057172A1

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

DOCDB simple family (publication)

WO 2014057172 A1 20140417; EP 2906873 A1 20150819; EP 2906873 A4 20161005; EP 2906873 B1 20191218; FI 127234 B 20180215; FI 20126055 A 20140410; RU 2015117059 A 20161210

DOCDB simple family (application)

FI 2013050974 W 20131008; EP 13844960 A 20131008; FI 20126055 A 20121009; RU 2015117059 A 20131008