

Title (en)
SHAFTLESS AIR HEATER

Title (de)
WELLENLOSER LUFTERHITZER

Title (fr)
UNITÉ DE CHAUFFAGE D'AIR SANS COLONNE

Publication
EP 3106527 A4 20170920 (EN)

Application
EP 14872998 A 20140703

Priority
• RU 2013156426 A 20131218
• RU 2014000488 W 20140703

Abstract (en)
[origin: EP3106527A1] The invention relates to metallurgy, to designs of top combustion (shaftless) hot air heaters of blast furnaces. A shaftless air heater includes a cylindrical chamber (1) with a checkerwork (2) and a dome (3) located above the checkerwork (2) and having a cylindrical section (4) as well as a tapering section (5) located above the cylindrical section (4) and a cylindrical throat (6) located above the tapering section (5) and communicating with a pre-chamber (7) located above the dome. Channels (9, 10 and 11, 12) for supplying air and gas respectively into the pre-chamber (7) are located in lateral walls (8) of the pre-chamber (7). The shaftless air heater is implemented with a ratio of the diameter (D 1) of the cylindrical throat (6) to the diameter (D 2) of the cylindrical section (4) of the dome (3) ranging from 0.31 to 0.41. The technical result is elimination of conditions for combustion pulsations and increase in completeness of gas combustion.

IPC 8 full level
C21B 9/00 (2006.01); **C21B 9/02** (2006.01)

CPC (source: EP)
C21B 9/02 (2013.01)

Citation (search report)
• [X] CN 201299198 Y 20090902 - SHANGHAI HONGKOU BAODING ROAD [CN]
• See references of WO 2015094011A1

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)
EP 3106527 A1 20161221; EP 3106527 A4 20170920; BR 112016014342 A2 20170808; EA 201600432 A1 20161031; JP 2017501309 A 20170112; RU 2554239 C1 20150627; UA 116703 C2 20180425; WO 2015094011 A1 20150625

DOCDB simple family (application)
EP 14872998 A 20140703; BR 112016014342 A 20140703; EA 201600432 A 20140703; JP 2016560612 A 20140703; RU 2013156426 A 20131218; RU 2014000488 W 20140703; UA A201607409 A 20140703