

Title (en)
SHAFTLESS AIR HEATER

Title (de)
WELLENLOSER LUFTERHITZER

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

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Application
EP 14872998 A 20140703

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Abstract (en)
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.

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