

Title (en)  
SHAFTLESS AIR HEATER

Title (de)  
WELLENLOSER LUFTERHITZER

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

Publication  
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Application  
**EP 14872998 A 20140703**

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• RU 2014000488 W 20140703

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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