

Title (en)  
Shaft furnace

Title (de)  
Schachtofen

Title (fr)  
Four à cuve

Publication  
**EP 1930449 A3 20090107 (EN)**

Application  
**EP 07023877 A 20071210**

Priority  
• IR 138538200 A 20061211  
• DE 102006062689 A 20061221

Abstract (en)  
[origin: EP1930448A2] The invention refers to a vertical shaft furnace (100) for a burden (115) moving under the influence of gravity from the top to the bottom of the shaft furnace, in particular for the production of directly reduced iron, with at least one furnace outlet (120) provided at the top of the shaft furnace, which is characterized in that the central axis of the furnace gas outlet (120) is slanted with regard to the horizontal by an angle of 45 to 55°.

IPC 8 full level  
**C21B 13/02** (2006.01); **F27B 1/00** (2006.01); **F27D 17/00** (2006.01)

CPC (source: EP)  
**C21B 13/02** (2013.01); **F27B 1/005** (2013.01); **F27B 1/16** (2013.01); **F27B 1/18** (2013.01); **F27D 17/001** (2013.01)

Citation (search report)  
• [YA] GB 2016124 A 19790919 - HAMBURGER STAHLWERKE GMBH  
• [YA] WO 0036159 A1 20000622 - DANIELI OFF MECC [IT]  
• [YA] GB 1111251 A 19680424 - HUETTENWERK OBERHAUSEN AG  
• [YA] GB 1269841 A 19720406 - MIDLAND ROSS CORP [US]

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK RS

DOCDB simple family (publication)  
**EP 1930448 A2 20080611**; **EP 1930448 A3 20081231**; **EP 1930448 B1 20100707**; AT E473302 T1 20100715; DE 202007019169 U1 20101111; DE 202007019452 U1 20120827; DE 202007019472 U1 20121012; DE 602007007561 D1 20100819; EP 1930449 A2 20080611; EP 1930449 A3 20090107; EP 1930449 B1 20120627; EP 1930678 A2 20080611; EP 1930678 A3 20081231; EP 1930678 B1 20120627; ES 2346796 T3 20101020; ES 2386464 T3 20120821; ES 2386466 T3 20120821

DOCDB simple family (application)  
**EP 07023875 A 20071210**; AT 07023875 T 20071210; DE 202007019169 U 20071210; DE 202007019452 U 20071210; DE 202007019472 U 20071210; DE 602007007561 T 20071210; EP 07023876 A 20071210; EP 07023877 A 20071210; ES 07023875 T 20071210; ES 07023876 T 20071210; ES 07023877 T 20071210