

Title (en)  
Burner, shaft furnace and shaft furnace operating method

Title (de)  
Brenner, Schachtofen und Verfahren zum Betreiben eines Schachtofens

Title (fr)  
Brûleur, four à cuve et méthode pour opérer un four à cuve

Publication  
**EP 1035221 A3 20031119 (DE)**

Application  
**EP 00104379 A 20000302**

Priority  
DE 19909743 A 19990305

Abstract (en)  
[origin: EP1035221A2] A burner, having three or more annular outlet opening regions arranged concentrically about a central outlet opening, is new. Independent claims are also included for the following: (i) a metal-producing shaft furnace comprising an oxygen supply device in the form of the above burner and/or an oxygen lance equipped with the above burner; and (ii) a process for operating the above shaft furnace.

IPC 1-7  
**C21C 5/46; F23D 14/22; F27B 1/16; F27D 23/00**

IPC 8 full level  
**C21C 1/08** (2006.01); **F27B 1/16** (2006.01); **F27D 99/00** (2010.01)

CPC (source: EP)  
**C21C 1/08** (2013.01); **F27B 1/16** (2013.01); **F27D 99/0033** (2013.01)

Citation (search report)

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- [A] PATENT ABSTRACTS OF JAPAN vol. 004, no. 093 (C - 017) 5 July 1980 (1980-07-05)

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EP0992596A3; EP0992753A3

Designated contracting state (EPC)  
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