

Title (en)  
VERTICAL FURNACE

Title (de)  
VERTIKALOFEN

Title (fr)  
FOUR VERTICAL

Publication  
**EP 2202323 A4 20100915 (EN)**

Application  
**EP 08778301 A 20080714**

Priority  
• JP 2008063074 W 20080714  
• JP 2007233197 A 20070907  
• JP 2008177041 A 20080707

Abstract (en)  
[origin: EP2202323A1] A vertical furnace provided in its top peripheral wall with a gas intake port and operated with an upper furnace unit sealed by raw materials present inside the furnace above the gas intake port, which is equipped with: (i) a right circular steel cylinder provided in the sealed zone in the upper furnace unit for partitioning charged raw material deposition zones, and (ii) a raw material charging unit installed above the furnace top for operating in cooperation with the right circular steel cylinder to separately charge raw materials with different properties inside and outside the right circular steel cylinder.

IPC 8 full level  
**C21B 11/02** (2006.01); **C21B 13/00** (2006.01); **C21C 5/56** (2006.01); **F27B 1/20** (2006.01); **F27D 3/00** (2006.01); **F27D 3/10** (2006.01)

CPC (source: EP)  
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Citation (search report)  
• [X] US 6129776 A 20001010 - NAITO MASAOKI [JP], et al  
• [X] US 3594154 A 19710720 - KANOKOGI TATSURO  
• [A] DE 2309297 A1 19740912 - WENZEL WERNER, et al  
• See references of WO 2009031367A1

Cited by  
CN104792150A; CN104697321A

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2202323 A1 20100630; EP 2202323 A4 20100915**; JP 2009079288 A 20090416; JP 4308878 B2 20090805; WO 2009031367 A1 20090312

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