

Title (en)  
Metallurgical process and furnace.

Title (de)  
Metallurgisches Verfahren und Ofen.

Title (fr)  
Procédé et four métallurgique.

Publication  
**EP 0040285 A1 19811125 (EN)**

Application  
**EP 80870028 A 19800519**

Priority  
EP 80870028 A 19800519

Abstract (en)  
A metallurgical furnace for and a process of melting, refining and processing metals and for the reduction of ores thereof by the non-stoichiometric combustion of a fluid fuel and a combustion-supporting gas within an internal-combustion burner (21) discharging below the metal-line (11) in a furnace therefore having a refractory or graphitic bottom and side-walls and having a roof (10) and having a feed-entrance (13) for introducing the solid feed-material into the furnace from above the level of the molten metal, and said furnace having an opening (15) for drawing off molten-metal, and said process involving the use of internal-combustion burners (21) extending downwardly through the roof (10) of the furnace with their discharge ends substantially below the melt-level (11) and with their other ends outside the furnace, each of the burners (21) having a refractory or metallic combustion chamber and a coolant-jacket surrounding said combustion chamber, with the coolant-inlet and the coolant-outlet of the jacket being near the other end of the burner, outside the furnace.

IPC 1-7  
**C22B 5/12**; **C22B 9/05**; **C21B 13/14**; **C21C 5/56**

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**C21B 13/00** (2006.01); **C21B 13/14** (2006.01); **C21C 5/56** (2006.01); **C22B 5/12** (2006.01); **C22B 9/05** (2006.01); **C22B 9/16** (2006.01); **F27B 3/22** (2006.01)

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Citation (search report)  
CA 832378 A 19700120 - GNII TSVETNYKH METALLOV, et al

Cited by  
CN114480771A; EP0605535A4; US5498277A; GB2302936A; GB2302936B

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