

Title (en)  
METHOD AND MULTI-NOZZLE TUYERE FOR GUNITING OF METALLURGICAL PLANT

Publication  
**EP 0275311 B1 19900103 (DE)**

Application  
**EP 86905481 A 19860620**

Priority  
SU 8600061 W 19860620

Abstract (en)  
[origin: EP0275311A1] The method is intended for guniting of a metallurgical plant the walls (13) and the bottom (14) of which are lined with a refractory material. The method consists in directing one portion of oxygen, in the form of a jet, to the zone of the bottom (14) to obtain carbon monoxide, and another portion of oxygen, together with a refractory powder, to the lining to be restored, a powder-like fuel being continuously fed together with the jet of oxygen which is directed to the zone of the bottom (14). The method is implemented with the help of a multi-nozzle tuyere (1) comprising a cooled casing (2) with pipelines for supplying the refractory material, the fuel and the oxygen, said pipelines being mounted coaxially inside it, and also comprising nozzles (7, 9, 6 and 8) respectively for feeding the refractory material, the fuel and the oxygen, some (6 and 7) of the nozzles being mounted on the side wall of the tuyere (1) and serving to feed, respectively, the oxygen and the refractory material to the lining area to be restored, and the other (8 and 9) nozzles being mounted on the butt-end side of the tuyere (1) and serving to feed the oxygen and the fuel to the zone of the bottom (14) of the metallurgical plant. The total surface area of the cross-sections of the nozzles (6) for feeding the oxygen to the lining area to be restored essentially is equal to the total surface area of the cross-sections of the nozzles (8) for feeding the oxygen to the zone of the bottom (14) of the metallurgical plant.

IPC 1-7  
**C21C 5/44; F27D 1/16**

IPC 8 full level  
**C21C 5/44** (2006.01); **F27D 1/16** (2006.01)

CPC (source: EP)  
**C21C 5/443** (2013.01); **F27D 1/1652** (2013.01); **F27D 1/1673** (2013.01); **F27D 2001/1657** (2013.01)

Cited by  
US5889460A

Designated contracting state (EPC)  
AT DE FR GB IT NL SE

DOCDB simple family (publication)  
**EP 0275311 A1 19880727; EP 0275311 A4 19881024; EP 0275311 B1 19900103**; AT E49235 T1 19900115; BR 8607173 A 19880913; DE 3668005 D1 19900208; HU T47647 A 19890328; IN 165418 B 19891014; JP S63503558 A 19881222; WO 8707913 A1 19871230

DOCDB simple family (application)  
**EP 86905481 A 19860620**; AT 86905481 T 19860620; BR 8607173 A 19860620; DE 3668005 T 19860620; HU 441586 A 19860620; IN 848CA1986 A 19861121; JP 50474586 A 19860620; SU 8600061 W 19860620