

Title (en)
PROCESS AND APPARATUS FOR OPENING THE TAP HOLE OF A FURNACE

Publication
EP 0327833 B1 19920722 (DE)

Application
EP 89100651 A 19890116

Priority
DE 3803625 A 19880206

Abstract (en)
[origin: EP0327833A1] The tap hole of a blast furnace or other melting furnace which has been closed by a mud gun and by a tapping rod is opened by swivelling a percussive hammer on slides in line with the tap hole. An extension rod of the hamer is used to drive the tapping rod through a guide block into the melt clear of the tap hole. The extension rod is then quickly withdrawn out of range of the emerging melt.

IPC 1-7
C21B 7/12

IPC 8 full level
C21B 7/12 (2006.01)

CPC (source: EP KR US)
C21B 7/12 (2013.01 - EP KR US); **F27D 3/15** (2013.01 - KR)

Cited by
AT407919B; EP0526685A3; CN103890198A

Designated contracting state (EPC)
DE ES FR GB IT LU

DOCDB simple family (publication)
EP 0327833 A1 19890816; EP 0327833 B1 19920722; AU 2959989 A 19900125; AU 603726 B2 19901122; BR 8900501 A 19891003; CA 1334336 C 19950214; DE 3803625 A1 19890817; DE 3803625 C2 19920507; DE 58901856 D1 19920827; ES 2010162 A4 19891101; ES 2010162 T3 19930316; JP H0222408 A 19900125; JP H0353362 B2 19910814; KR 890013448 A 19890923; KR 930001005 B1 19930212; US 4960379 A 19901002

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EP 89100651 A 19890116; AU 2959989 A 19890203; BR 8900501 A 19890203; CA 590085 A 19890203; DE 3803625 A 19880206; DE 58901856 T 19890116; ES 89100651 T 19890116; JP 2595289 A 19890206; KR 890001358 A 19890204; US 30466189 A 19890131