

Title (en)  
Method and apparatus for the treatment of molten metals.

Title (de)  
Verfahren und Vorrichtung zum Behandeln von Metallschmelzen.

Title (fr)  
Procédé et dispositif pour le traitement de métaux fondus.

Publication  
**EP 0396267 A1 19901107 (EN)**

Application  
**EP 90303889 A 19900411**

Priority  
GB 8910288 A 19890505

Abstract (en)  
Apparatus for the treatment of molten metal with a particulate treatment agent and a gas comprises a vessel (21), a rotary device for dispersing particulate treatment agent and a gas in molten metal contained in the vessel and means (23), (51) for supplying the particulate treatment agent and gas to the rotary device. The rotary device comprises a hollow shaft (1) having a discharge end and a hollow rotor (2) attached to the shaft, the rotor having a plurality of vanes (13) each extending from the shaft or from a location adjacent the shaft towards the periphery of the rotor so that the hollow interior of the rotor is divided into a plurality of compartments (10), each compartment having an inlet (11) adjacent the shaft and an outlet (12) adjacent the periphery of the rotor, and the rotor has means for passing the particulate treatment agent and gas from the discharge end of the hollow shaft of the device to the compartments. In a preferred embodiment the discharge end of the shaft opens into a manifold (8) in the rotor and the inlets (11) for the compartments (10) are in the wall (6) of the manifold. For relatively fine particles the means for supplying the particulate treatment agent and gas to the rotary device may be a hopper fitted with gas injection nozzles, or an apparatus (23) in which the particulate treatment agent is fluidised by the gas to produce a dispersion and which is connected by a pipe (33) to the bore of the shaft of the rotary device. For larger particles the means for supplying the particulate treatment agent and gas to the rotary device may be a hopper (51) having a sealed top (52) having a closable inlet (53) for the particles of treatment agent, and an aperture (54) in its base (55) communicating with a tube (61) located inside the bore (62) of the shaft (63) of the rotary device, the sidewall (58) of the hopper adjacent the base having at least one series of apertures spaced apart around its perimeter, each aperture having projecting through it to the inside of the hopper a sliding member (56, 57), and the tube having one or more apertures therein for the introduction of gas.

IPC 1-7  
**C21C 7/00; C22B 9/05; C22B 21/06**

IPC 8 full level  
**B22D 11/10** (2006.01); **B22D 1/00** (2006.01); **B22D 11/11** (2006.01); **B22D 11/112** (2006.01); **B22D 11/116** (2006.01); **B22D 11/117** (2006.01); **B22D 11/119** (2006.01); **C21C 5/46** (2006.01); **C21C 7/00** (2006.01); **C22B 9/05** (2006.01); **C22B 21/06** (2006.01)

CPC (source: EP KR)  
**C21C 5/4613** (2013.01 - EP); **C21C 7/0037** (2013.01 - EP); **C22B 9/05** (2013.01 - EP); **C22B 21/06** (2013.01 - KR); **C22B 21/064** (2013.01 - EP)

Citation (search report)  
• [XPD] EP 0332292 A1 19890913 - FOSECO INT [GB]  
• [AD] EP 0183402 A2 19860604 - FOSECO INT [GB]

Cited by  
EP0495581A3; EP0753589A1; DE19539621C1; US5804135A; US6589313B2; US6960239B2; EP0620285B1

Designated contracting state (EPC)  
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0396267 A1 19901107**; AU 5479190 A 19901108; AU 622318 B2 19920402; BR 9002097 A 19910813; CA 2015341 A1 19901105; GB 8910288 D0 19890621; JP H02303653 A 19901217; KR 900018397 A 19901221; NZ 233458 A 19911223; ZA 903099 B 19910327

DOCDB simple family (application)  
**EP 90303889 A 19900411**; AU 5479190 A 19900504; BR 9002097 A 19900504; CA 2015341 A 19900424; GB 8910288 A 19890505; JP 11495690 A 19900427; KR 900006400 A 19900507; NZ 23345890 A 19900427; ZA 903099 A 19900424