

Title (en)
REFINING MOLTEN METAL

Title (de)
FEINEN VON SCHMELZFLÜSSIGEM METALL

Title (fr)
RAFFINAGE DE METAL EN FUSION

Publication
EP 1749109 A2 20070207 (EN)

Application
EP 05744383 A 20050512

Priority
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Abstract (en)
[origin: WO2005111247A2] A method of refining molten metal in a vessel by the reaction of oxygen with impurities in the molten metal comprises the steps of: a) ejecting at least one primary jet of oxygen from a lance positioned above the molten metal into the molten metal to react with impurities therein and to form a layer of molten slag; b) continuing to eject the primary jet of oxygen from the lance and thereby causing the primary jet of oxygen to pass through the slag layer into the molten metal; c) ejecting a plurality of secondary jets of oxygen from the lance, the secondary jet of oxygen travelling for a distance separately from the primary jet of oxygen; and d) entraining the secondary jets of oxygen into the primary jet of oxygen upstream of the entry of the primary jet of oxygen into the molten metal. A lance head for use in the method has at least one primary oxygen port and a plurality of secondary oxygen ports, the axis of the second oxygen port diverging in the direction of flow from the primary oxygen port at an angle of up to 45°. The method and lance head are particularly of use in the Basic Oxygen Steelmaking (BOS) process. If desired, a stirring gas such as argon may be mixed with the primary oxygen.

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C21C 5/32 (2006.01); **C21C 5/46** (2006.01)

CPC (source: EP KR US)
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