

Title (en)
Method for treating boron-containing steel.

Title (de)
Verfahren zur Behandlung von borhaltigem Stahl.

Title (fr)
Procédé pour le traitement d'acier contenant du bore.

Publication
EP 0012226 A1 19800625 (DE)

Application
EP 79104467 A 19791113

Priority
CH 1181178 A 19781117

Abstract (en)
[origin: ES8101123A1] A method of treating boron-containing steel for continuous casting, especially for teeming or pouring into small sectional shapes or formats with unregulated nozzles. There is introduced into the molten steel located in the casting ladle, by means of an inert carrier gas, in a powder form calcium or a compound thereof, at least one element forming a stable nitride at the melt temperature of the steel and boron or a boron compound. The thus treated steel is protected from renewed reaction with air along its path between the ladle and the continuous casting mold.

Abstract (de)
Verfahren zur Behandlung von borhaltigem Stahl zum Stranggießen, insbesondere zum Abgießen in kleinen Formaten mit unregelmäßigem Ausguß. In die in der Gießpfanne befindlichen Stahlschmelze wird durch ein inertes Trägergas und in Pulverform Calcium oder eine Verbindung desselben, mindestens ein, bei Stahlschmelztemperatur stabile Nitride bildendes Element und Bor bzw. eine Bor-Verbindung eingebracht. Der so behandelte Stahl wird auf seinem Weg von der Pfanne in die Kokille vor erneuter Reaktion mit der Luft geschützt.

IPC 1-7
C21C 7/00; **B22D 11/10**

IPC 8 full level
B22D 1/00 (2006.01); **B22D 11/10** (2006.01); **B22D 11/108** (2006.01); **B22D 11/11** (2006.01); **C21C 7/00** (2006.01); **C21C 7/04** (2006.01); **C21C 7/072** (2006.01); **C22C 33/04** (2006.01)

CPC (source: EP US)
B22D 11/11 (2013.01 - EP US); **C21C 7/0006** (2013.01 - EP US); **C21C 7/0037** (2013.01 - EP US); **C21C 2007/0018** (2013.01 - EP US)

Citation (search report)

- DE 2703149 B2 19780713
- US 2755181 A 19560717 - ETIENNE SPIRE
- US 2528867 A 19501107 - DAY MAURICE J
- DE 2134180 A1 19730118 - BREDERHOFF ERNST
- DE 2544947 A1 19770922 - THYSSEN EDELSTAHLWERKE AG
- US 2283299 A 19420519 - FENWICK TISDALE NORMAN
- DE 2527156 A1 19761230 - THYSSEN NIEDERRHEIN AG
- DE 2056405 A1 19710624 - MC CONCO
- US 3822735 A 19740709 - MILTENBERGER R, et al
- DE 1483619 A1 19700108 - BENTELER GEB PADERWERK
- DE 1936336 A1 19700827 - ROBLIN INDUSTRIES
- DE 1803377 B2 19760715

Cited by
EP0166908A1

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EP 79104467 A 19791113; AR 27881879 A 19791108; AT 79104467 T 19791113; BR 7907238 A 19791108; CA 339984 A 19791116; DE 2961903 T 19791113; ES 486598 A 19791116; FI 793135 A 19791010; JP 14834679 A 19791117; TR 2052579 A 19791115; US 9234479 A 19791108; ZA 795853 A 19791031