

Title (en)
MOLTEN METAL FEED NOZZLE

Title (de)
DÜSE ZUR ZUFÜHRUNG VON METALLSCHMELZE

Title (fr)
BUSE D'ALIMENTATION DE MÉTAL FONDU

Publication
EP 1818120 A4 20080507 (EN)

Application
EP 05795467 A 20051020

Priority
• JP 2005019282 W 20051020
• JP 2004311962 A 20041027

Abstract (en)
[origin: EP1818120A1] A nozzle end is provided with an extension 11 which has a lower portion immersed in a molten metal pool and extends toward a side weir 2 such that a stagnation area disappears on a free liquid surface of molten metal. The extension 11 is in the form of a quadrangular pyramid lying sidelong and is converged to a point P1 extremely close to the side weir 2. According to this molten metal feed nozzle, a stagnation area on a free liquid surface of molten metal is displaced by the extension 11 contiguous with the nozzle end to suppress generation of an unwanted solidification shell. Thus, no unwanted solidification shell is pinched as foreign matter by solidification' shells generated on outer peripheries of chilled rolls 1 for production of a strip, and break of a strip derived from enlargement of nip between the rolls can be averted.

IPC 8 full level
B22D 11/06 (2006.01)

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B22D 11/0642 (2013.01 - EP KR US); **B22D 11/10** (2013.01 - KR); **B22D 11/1287** (2013.01 - KR); **B22D 41/50** (2013.01 - KR)

Citation (search report)
• [X] DE 3809416 A1 19881013 - ISHIKAWAJIMA HARIMA HEAVY IND [JP]
• [X] WO 9914005 A1 19990325 - ISHIKAWAJIMA HARIMA HEAVY IND [JP], et al
• [X] US 4883113 A 19891128 - MATSUI KUNIO [JP], et al
• See references of WO 2006046459A1

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DE FR GB IT

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DOCDB simple family (application)
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