Title (en)

Method and machine for continuous casting of thin slabs

Title (de)

Verfahren und Vorrichtung zum Stranggiessen von Dünnbrammen

Title (fr)

Procédé et dispositif pour la coulée continue de brames minces

Publication

EP 1046442 A1 20001025 (EN)

Application

EP 00107872 A 20000412

Priority

JP 11298199 A 19990421

Abstract (en)

The object of the invention is to provide a continuous casting method and a continuous casting machine for producing thin-slab cast strips stably. A continuous casting machine of a vertical bending type for casting thin-slab cast strips, wherein a liquid core reduction-roll segment 4 is provided so as to constitute rolls in the bending zone B below the mold 1. The liquid core reduction-roll segment 4 comprises a group of fixed rolls 8 disposed outside the guide roll radius being bent of a cast strip and a group of movable rolls 3 disposed inside the guide roll radius. The group of movable rolls 3 is supported by a tilting frame guide roll radius 7 with an oil-hydraulic cylinder 10 so that it is moved toward the group of fixed rolls 8 to roll the cast strip. <IMAGE>

A method of casting a thin-slab cast strip with a continuous casting machine of a vertical bending type. The method comprises bending the cast strip drawn out of a mould (1) in a bending zone with simultaneous liquid core reduction in an unsolidified state. The continuous casting apparatus comprises: (1) the liquid core reduction-roll segment (4) comprising a group of fixed rolls (8) disposed outside the guide roll radius bent of a cast strip and a group of movable rolls (3) positioned inside the guide roll radius; (2) the group of movable rolls is supported by a tilting frame guide roll radius (7) with a oil-hydraulic cylinder (10) which moves toward and away from the group of fixed rolls.

IPC 1-7

B22D 11/12

IPC 8 full level

B22D 11/128 (2006.01); **B22D 11/12** (2006.01)

CPC (source: EP)

B22D 11/1206 (2013.01)

Citation (search report)

- [A] US 4010792 A 19770308 - ISHIGURO MORIYUKI, et al
- [A] EP 0776708 A1 19970604 - DANIELI OFF MECC [IT]
- [A] DE 19639302 A1 19980326 - SCHLOEMANN SIEMAG AG [DE]
- [A] PATENT ABSTRACTS OF JAPAN vol. 008, no. 009 (M - 268) 14 January 1984 (1984-01-14)

Citation (examination)

- EP 0776708 A1 19970604 - DANIELI OFF MECC [IT]
- EP 0625388 A1 19941123 - DANIELI OFF MECC [IT]
- US 5018569 A 19910528 - BURAU ARMIN [DE], et al
- PLESCHIUTSCHNIGG F.P.: "THE I.S.P. TECHNOLOGY, SHORT PRODUCTION LINE FOR HOT STRIPS AND PLATES", CAHIERS D'INFORMATIONS TECHNIQUES DE LA REVUE DE METALLURGIE, vol. 89, no. 6, 1 June 1992 (1992-06-01), pages 547 - 561, XP000296106

Cited by

CN102712037A; CN101920316A; WO2011089045A1

Designated contracting state (EPC)

AT DE IT

DOCDB simple family (publication)

EP 1046442 A1 20001025; JP 2000301303 A 20001031; JP 3355311 B2 20021209

DOCDB simple family (application)

EP 00107872 A 20000412; JP 11298199 A 19990421