

Title (en)

Method for the controlled pre-rolling of thin slabs leaving a continuous casting plant, and relative device.

Title (de)

Verfahren und Vorrichtung zum geregelten Vorwalsen von aus einer Stranggiessanlage austretenden Dünnbrammen.

Title (fr)

Procédé et dispositif pour le pré laminage de brames minces sortant d'une installation de coulée continue.

Publication

**EP 0625388 A1 19941123 (EN)**

Application

**EP 94102876 A 19940225**

Priority

IT UD930083 A 19930517

Abstract (en)

Method for the controlled pre-rolling of thin slabs (20) leaving a continuous casting plant, whereby the pre-rolling is carried out with a plurality of pairs of rolls (14-16) grouped together in one or more pre-rolling assemblies (10), the first of the pre-rolling assemblies (10) being positioned immediately downstream of foot rolls (12) of a mold (11), at least one displaceable roll (16) being included in the pairs of rolls (14-16), the pairs of rolls (14-16) being associated with pressure transducer means (18) and hydraulic capsule means (17), position transducer means (24) being included, the pressure transducer means (18) and position transducer means (24) can be associated with a data processing unit (21), at least the first of the pairs of rolls (14-16) processing a slab (20) which has just emerged from the mold (11) with a thin solidified skin. The method achieves a pre-rolling with a reduction of the thickness of the slab (20) leaving the last pair of pre-rolling rolls (14-16) by at least 10% so as to eliminate the liquid core and to bring into contact the zones in a two-phase condition in order that the central solidification structure be refined and the central separation be minimized. <IMAGE>

IPC 1-7

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Citation (search report)

- [A] DE 3822939 C1 19891005
- [A] EP 0391823 A1 19901010 - TECHMETAL PROMOTION [FR]
- [A] EP 0353402 A1 19900207 - THYSSEN STAHL AG [DE]
- [DA] EP 0539784 A1 19930505 - DANIELI OFF MECC [IT]
- [DA] US 4134440 A 19790116 - KAWAWA TAKAHO, et al
- [DA] US 4056140 A 19771101 - IVES KENNETH D, et al
- [DA] US 3891025 A 19750624 - BOLLIG GEORG, et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 9, no. 155 (M - 392)<1878> 29 June 1985 (1985-06-29)

Cited by

EP0776708A1; RU2471590C2; US5941299A; EP0743116A1; US5803155A; US6491088B1; US8336602B2; US7762312B2; WO2022058168A1; WO2007039483A1; WO2009083231A1; WO9954072A1; WO2005084841A1; EP1046442A1

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