

Title (en)

Method and device for continuous casting slabs, especially thin slabs

Title (de)

Verfahren und Vorrichtung zum Stranggiessen von Brammen, insbesondere von Dünnbrammen

Title (fr)

Procédé et dispositif pour couler en continue des brames, en particulier de brames minces

Publication

EP 1250972 A3 20040922 (DE)

Application

EP 02006338 A 20020321

Priority

DE 10119355 A 20010420

Abstract (en)

[origin: EP1250972A2] Process for continuously casting steel thin slabs comprises displacing the mold walls (13, 13') using ultrasound emitters (6, 6') in ultrasound vibrations with comparable high frequency and suitable amplitude so that the heat transition between the melt and the mold wall and the friction coefficient between the strand shell and the mold wall are reduced. An Independent claim is also included for a device for carrying out the process. Preferred Features: The frequency and amplitude are adjusting according to the operating results. The oscillating parameters of frequency and amplitude of different ultrasound emitters are individually adjusted according to observed operating results. Ultrasound waves (7, 7') are emitted horizontally to the mold wall.

IPC 1-7

B22D 11/051

IPC 8 full level

B22D 11/053 (2006.01)

CPC (source: EP)

B22D 11/053 (2013.01)

Citation (search report)

- [XY] US 5355935 A 19941018 - NOGUES MICHEL [FR]
- [Y] EP 0305930 A1 19890308 - NIPPON STEEL CORP [JP]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 0122, no. 08 (M - 709) 15 June 1988 (1988-06-15)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 0090, no. 63 (M - 365) 20 March 1985 (1985-03-20)
- [X] PATENT ABSTRACTS OF JAPAN vol. 0123, no. 92 (M - 755) 19 October 1988 (1988-10-19)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 0092, no. 45 (M - 418) 2 October 1985 (1985-10-02)

Cited by

CN113102733A; CN109317629A; CN112091191A; CN112846120A; US10316387B2; US10233515B1; US10022786B2; US10639707B2; US9481031B2; US10441999B2; US9617617B2; US10640846B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1250972 A2 20021023; EP 1250972 A3 20040922; DE 10119355 A1 20021024

DOCDB simple family (application)

EP 02006338 A 20020321; DE 10119355 A 20010420