

Title (en)  
Method and apparatus for the continuous casting of double-T-bleam blanks

Title (de)  
Verfahren und Vorrichtung zum Stranggiessen Doppel-T-Vorprofilen

Title (fr)  
Procédé et dispositif pour la coulée continue des blooms profilés à double T

Publication  
**EP 1815925 A1 20070808 (DE)**

Application  
**EP 05028469 A 20051224**

Priority  
EP 05028469 A 20051224

Abstract (en)  
The continuous casting of preliminary double-T steel sections, comprises introducing liquid steel substantially vertically into an open-ended die (1) and supplying partially hardened preliminary section to a strand guide with secondary cooling equipments. The cross section of the cavity of the open-ended die is made up of two flange parts (2,3) and a web part (4) and applied on a liquid strand in the preliminary section over magnet poles of magnetic fields. A 3-phase alternating current is supplied to agitating coils (19) of an agitator over a pole wiring in dependence of a thickness of the web part, a steel quality and a symmetrical or asymmetrical steel supply with one or two sprue (passage) in such a manner that electromagnetic travelling waves are applied in the liquid strand of the preliminary section with horizontal direction components. The travelling waves are generated in the flange parts with direction components rotating in same- or opposite direction and/or in the web part with linear direction components and/or in the area of the open-ended die and/or in different and adjustable heights in the preliminary section and/or in transition area or area of the web part with direction components rotating in same- or opposite direction. The liquid steel is supplied on the sprue intended symmetrically or asymmetrically in the web part and the distribution of the liquid steel is supported over the cross section of the cavity depending upon casting parameters and/or product parameters by the rotary and/or linear travelling waves. An independent claim is included for a device for continuous casting of preliminary double-T steel sections.

Abstract (de)  
Bei einem Verfahren zum Stranggiessen von Stahl-Vorprofilen, insbesondere Doppel-T-Vorprofilen, wird der flüssige Stahl im Wesentlichen vertikal in eine Durchlaufkokille (1) eingeführt. Der Formhohlraumquerschnitt dieser Durchlaufkokille (1) ist aus zwei Flanschteilen (2, 3) und einem Stegteil (4) zusammengesetzt. Der flüssige Kern des Vorprofilstranges wird unter Einsatz von elektromagnetisch induzierten Kräften im Bereich der Flanschteile (2, 3) und/oder des Stegteiles (4) in Rührbewegungen quer zur Stranggiessrichtung versetzt. Durch die Rührbewegungen wird der flüssige Stahl im Sumpf des Vorprofilstranges zwischen den Flanschteilen (2, 3) und dem Stegteil (4) ausgetauscht. Damit können die Strömungs- und Temperaturverhältnisse im Flüssigstahlsumpf innerhalb der Vorprofil-Strangschale gezielt aktiv beeinflusst werden und hierbei eine Stabilisierung des Gießspiegelbereiches, günstige und zudem steuerbare Strömungsverhältnisse herbeigeführt werden.

IPC 8 full level  
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Citation (applicant)  
EP 1419021 B1 20050629 - PROFILARBED SA [LU]

Citation (search report)  
• [DA] EP 1419021 A1 20040519 - PROFILARBED SA [LU]  
• [Y] US 4867786 A 19890919 - SAEKI MITSURU [JP], et al  
• [XY] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 03 31 March 1997 (1997-03-31)  
• [Y] PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12 5 December 2003 (2003-12-05)  
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