

Title (en)
Method of stirring during continuous casting.

Title (de)
Verfahren zum Umrühren beim Stranggießen.

Title (fr)
Procédé de brassage lors de la coulée continue.

Publication
EP 0028761 A1 19810520 (DE)

Application
EP 80106596 A 19801027

Priority
SE 7909163 A 19791106

Abstract (en)
1. Method for stirring the non-solidified portions of a cast strand extruding from a continuous casting machine, the strand is being formed in a mould (4) and the stirring being performed asymmetrically by an electromagnetic stirrer, characterized in that the stirring is performed by at least one first and at least one second stirrer, whereby said first stirrer (1) works asymmetrically by being supplied either by two phases having a mutual phase displacement differing from 90 degrees, or by three phases having a mutual phase displacement differing from 120 degrees, while the second stirrer (2) works with the same number of phases as the first stirrer but either symmetrically or with a different type of asymmetry than said first stirrer, for example with a current in one phase deviating at least 10 percent from the current in one of the other phases, or with correspondingly asymmetrically constructed phase coils.

Abstract (de)
Die Erfindung betrifft ein Verfahren zum Umrühren der nicht erstarrten Bereiche eines aus einer Stranggießmaschine austretenden Gießstranges. Der Strang wird in einer Kokille (4) geformt, und das Umrühren erfolgt mit zwei elektromagnetischen Umrührern (1, 2). Das Umrühren mit dem einen Umrührer erfolgt asymmetrisch, indem die Speisung dieses Umrührers entweder zweiphasig mit einer von 90° abweichenden Verschiebung zwischen den Phasenströmen erfolgt oder dreiphasig mit einer von 120° abweichenden Verschiebung zwischen den Phasenströmen. Zur Zusammenfassung gehört Figur 2.

IPC 1-7
B22D 11/10; B22D 11/12

IPC 8 full level
B01F 13/08 (2006.01); **B22D 11/10** (2006.01); **B22D 11/115** (2006.01); **B22D 11/12** (2006.01); **B22D 27/02** (2006.01)

CPC (source: EP SE)
B22D 11/122 (2013.01 - EP SE)

Citation (search report)
DE 2401145 A1 19741031 - NIPPON STEEL CORP

Cited by
US4699205A; EP0317789A1; FR2578767A1; US4909306A; US4867786A; GB2184674A; IT202100012824A1; EP2268431A4; US4852635A; AT518460A1; AT518460B1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0028761 A1 19810520; EP 0028761 B1 19850220; DE 3070220 D1 19850328; JP H0131979 B2 19890628; JP S5686661 A 19810714; SE 430223 B 19831031; SE 7909163 L 19810507

DOCDB simple family (application)
EP 80106596 A 19801027; DE 3070220 T 19801027; JP 15511480 A 19801104; SE 7909163 A 19791106