

Title (en)

Stirring device for metallic melts in continuous-casting installations.

Title (de)

Einrichtung zum Umrühren von metallischen Schmelzen in Stranggiessanlagen.

Title (fr)

Dispositif pour le brassage de métaux en fusion dans les installations de coulée continue.

Publication

EP 0028369 A1 19810513 (DE)

Application

EP 80106491 A 19801023

Priority

DE 2944760 A 19791106

Abstract (en)

1. Apparatus for stirring metal melts in continuous casting plants during the solidification process by means of a constant magnetic field which passes through the string (2), which is guided between rollers (3), at right angles to the direction of movement of the string, and which also cuts a constant current which is passed through the string (1) at right angles to the direction of movement thereof and to the constant field, in which the yoke (6) of an electromagnet (4) which produces the constant field, is arranged on the wide side of the string outside the guide rollers (3), and the magnetic poles are each provided with a pole shoe (9) embracing at least one of the guide rollers (3), whilst on the other wide side of the string (1), there is arranged a return armature (5) having correspondingly designed poles (11) and in which, in order to supply the constant current, contact brushes or contact rolls, which can be directly pressed against the narrow sides of the surface of the string, are provided, characterised in that on the yoke (6) of the electromagnet (4), there are arranged two magnetic systems, the field coils (7) of which produce oppositely-directed magnetic fields.

Abstract (de)

Zur Erzielung eines gleichmäßigen Gefüges und einer gleichmäßigen Verteilung von Seigerungen über den Querschnitt eines aus einer Kokille gezogenen Stranges (1) wird die noch flüssige Schmelze (2) im Strang mittels eines elektromagnetischen Feldes und eines dieses senkrecht schneidenden Gleichstromes umgerührt. Der das Gleichfeld erzeugende Elektromagnet (4) ist mit zwei gegensinnig gewickelten Erregerspulen (7) ausgestattet. Dadurch wird die Hauptströmung in Richtung und symmetrisch zu der Längsachse des Stranges erzielt.

IPC 1-7

B22D 11/12; **B22D 11/10**

IPC 8 full level

B22D 11/10 (2006.01); **B22D 11/115** (2006.01); **B22D 11/12** (2006.01)

CPC (source: EP)

B22D 11/122 (2013.01)

Citation (search report)

- DE 2757342 A1 19790705 - LICENTIA GMBH
- DE 2328898 A1 19731220 - SIDERURGIE FSE INST RECH [FR], et al
- DE 2720391 A1 19771201 - ASEA AB
- DE 1583601 A1 19700917 - DEMAG ELEKTROMETALLURGIE GMBH
- EP 0019118 A1 19801126 - SIEMENS AG [DE]
- DE 2827240 A1 19800103 - SIEMENS AG
- DE 1803473 A1 19700521 - DEMAG AG

Cited by

CN106166603A; CN111844589A; US4867786A; AT519029A1; AT519029B1; EP0092126B1

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