

Title (en)

Method and apparatus for controlling the melting rate of an electrode by electroslag remelting.

Title (de)

Verfahren und Vorrichtung zur Regelung der Abschmelzrate einer Elektrode beim Elektroschlacken-Umschmelzen.

Title (fr)

Procédé et dispositif pour régler la vitesse de fusion d'une électrode par refusion sous laitier électroconducteur.

Publication

**EP 0059181 A1 19820901 (DE)**

Application

**EP 82890025 A 19820219**

Priority

AT 86681 A 19810225

Abstract (en)

[origin: CA1169899A] A method of regulating the melting rate of a self-consumable electrode during electroslag remelting in a slag bath, wherein the lowering speed of the electrode which is to be remelted, the length of which is determined, is regulated in consideration of maintaining a set or reference value of the melting rate and the current intensity and/or the potential. There is continuously determined the weight of the part of the electrode immersing into the slag bath from the actual total electrode weight and the length of the electrode above the surface of the slag bath and such is compared with a set or reference value and altered when there is present a deviation of the quotient  $U_{Ref}$  and  $J_{Ref}$ , wherein the former represents the reference potential or voltage and the latter the reference current, and the product remains constant. The actual melting rate is compared with a set or reference melting rate and when there is present a deviation there is correspondingly altered the product of  $J_{Ref}$  and  $U_{Ref}$ .

Abstract (de)

Beim Elektroschlacken-Umschmelzen von Elektroden ist eine genaue Regelung der Abschmelzrate von besonderer Bedeutung. Eine besonders genaue Regelung kann dann erreicht werden, wenn sowohl die Länge der Elektrode und das Gewicht derselben ermittelt wird, wobei sodann laufend das Gewicht des in das Schlackenbad eintauchenden Anteiles der Elektrode ermittelt werden kann.

IPC 1-7

**C22B 9/18**

IPC 8 full level

**C22B 9/18** (2006.01)

CPC (source: EP US)

**C22B 9/18** (2013.01 - EP US)

Citation (search report)

- [A] US 4091229 A 19780523 - WOODING PATRICK J, et al
- [A] FR 2008517 A1 19700123 - ASS ELECT IND
- [A] DE 2731227 A1 19780202 - INTECO INT TECHN BERATUNG
- [A] FR 2448273 A1 19800829 - INST ELEKTROSWARKI PATONA [SU]
- [A] FR 1597914 A 19700629
- [A] US 3890457 A 19750617 - FAIN PAVEL IOELIEVICH, et al
- [A] FR 2398116 A1 19790216 - LEYBOLD HERAEUS GMBH & CO KG [DE]
- [A] US 3744989 A 19730710 - DOENECKE C, et al
- [AD] AT 345487 B 19780925 - ELIN UNION AG [AT]

Cited by

CN105039732A; CN102887996A; WO2014177129A3

Designated contracting state (EPC)

BE CH DE FR GB IT LU NL SE

DOCDB simple family (publication)

**EP 0059181 A1 19820901; EP 0059181 B1 19841205**; AT 392751 B 19910610; AT A86681 A 19901115; BR 8200937 A 19830104; CA 1169899 A 19840626; DE 3261404 D1 19850117; US 4483708 A 19841120; ZA 821238 B 19830126

DOCDB simple family (application)

**EP 82890025 A 19820219**; AT 86681 A 19810225; BR 8200937 A 19820219; CA 396918 A 19820224; DE 3261404 T 19820219; US 35081182 A 19820222; ZA 821238 A 19820225