

Title (en)

SAFETY DEVICE FOR DETECTING ELECTRODE BREAKAGE

Title (de)

SICHERUNGSEINRICHTUNG ZUR DETEKTION VON ELEKTRODENBRÜCHEN

Title (fr)

DISPOSITIF DE SÉCURITÉ SERVANT À DÉTECTER DES RUPTURES D'ÉLECTRODE

Publication

**EP 1825716 B1 20080625 (DE)**

Application

**EP 05850287 A 20051216**

Priority

- EP 2005013573 W 20051216
- DE 102004060826 A 20041217

Abstract (en)

[origin: US8654813B2] The invention relates to a safety device (1) for detecting electrode breakage in an electric arc furnace, wherein an electrode (6) is secured on an electrode support arm (4), and wherein a conduit is filled with a medium under a constant pressure and a pressure drop is produced at an electrode breakage, which is detected as an alarm signal. Here, the conduit (7a-d,3) is integrated in a protective component that is arranged beneath the electrode support arm (4) thereon, wherein in case of an electrode breakage, the conduit (7a-d,3) is damaged by a produce electric arc and the pressure drop takes place.

IPC 8 full level

**H05B 7/12** (2006.01); **H05B 7/10** (2006.01)

CPC (source: EP KR US)

**H05B 7/10** (2013.01 - KR); **H05B 7/101** (2013.01 - EP US); **H05B 7/12** (2013.01 - EP US)

Cited by

DE102010052086A1; WO2011110522A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**US 2008304538 A1 20081211**; **US 8654813 B2 20140218**; AT E399451 T1 20080715; CA 2590809 A1 20060629; CA 2590809 C 20131210; CN 100525553 C 20090805; CN 101080948 A 20071128; DE 102004060826 A1 20060629; DE 502005004544 D1 20080807; EP 1825716 A1 20070829; EP 1825716 B1 20080625; ES 2306286 T3 20081101; JP 2008524784 A 20080710; JP 4897700 B2 20120314; KR 101204715 B1 20121126; KR 20070096780 A 20071002; WO 2006066817 A1 20060629

DOCDB simple family (application)

**US 79340805 A 20051216**; AT 05850287 T 20051216; CA 2590809 A 20051216; CN 200580043352 A 20051216; DE 102004060826 A 20041217; DE 502005004544 T 20051216; EP 05850287 A 20051216; EP 2005013573 W 20051216; ES 05850287 T 20051216; JP 2007545964 A 20051216; KR 20067017333 A 20051216