

Title (en)
METHOD FOR DETERMINING AT LEAST ONE STATE VARIABLE OF AN ELECTRIC ARC FURNACE, AND ELECTRIC ARC FURNACE

Title (de)
VERFAHREN ZUR BESTIMMUNG MINDESTENS EINER ZUSTANDSGRÖSSE EINES ELEKTROLICHTBOGENOFENS UND ELEKTROLICHTBOGENOFEN

Title (fr)
PROCEDE POUR DETERMINER AU MOINS UNE GRANDEUR D'ETAT D'UN FOUR ELECTRIQUE A ARC ET FOUR ELECTRIQUE A ARC

Publication
EP 1910763 A1 20080416 (DE)

Application
EP 06764149 A 20060712

Priority

- EP 2006064156 W 20060712
- DE 102005034379 A 20050722
- DE 102005034409 A 20050722

Abstract (en)
[origin: WO2007009924A1] The invention relates to a method for determining a state variable of an electric arc furnace, especially for determining the level of the foamed slag (15) in an electric arc furnace. According to said method, the energy supplied to the electric arc furnace is determined with the aid of at least one electric sensor (13a, 13b, 13c) while solid-borne noise is measured in the form of oscillations on the electric arc furnace. The at least one state variable, particularly the level of the foamed slag (15), is determined by means of a transfer function which is determined by evaluating the measured oscillations, i.e. the solid-borne noise, and evaluating measured data of the at least one electric sensor (13a, 13b, 13c). The state of the level of the foamed slag (15) can thus be reliably recognized and be monitored over time. The level of the foamed slag (15) is decisive for the effectiveness with which energy is fed into the electric arc furnace. Furthermore, losses caused by radiation are reduced by covering the arc (18) with the foamed slag (15). The improved measuring method allows the level of the foamed slag to be automatically controlled or regulated in a reliable manner.

IPC 8 full level
F27B 3/28 (2006.01); **C21C 5/52** (2006.01); **F27D 19/00** (2006.01)

CPC (source: EP KR US)
C21C 5/52 (2013.01 - KR); **C21C 5/5211** (2013.01 - EP US); **F27B 3/28** (2013.01 - EP US); **F27D 19/00** (2013.01 - EP US); **F27D 21/00** (2013.01 - EP US); **C21C 5/4673** (2013.01 - EP US); **C21C 2005/5288** (2013.01 - EP US); **Y02P 10/20** (2015.11 - EP US)

Citation (search report)
See references of WO 2007009924A1

Citation (examination)
DE 19801295 A1 19990722 - SIEMENS AG [DE]

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EP2824408A1; WO2015003832A1

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)
WO 2007009924 A1 20070125; AR 055992 A1 20070912; BR PI0613414 A2 20110111; BR PI0613414 A8 20161018; CA 2615929 A1 20070125; CA 2615929 C 20140304; CN 101228406 A 20080723; CN 101228406 B 20110126; EP 1910763 A1 20080416; JP 2009503419 A 20090129; KR 101176735 B1 20120823; KR 20080022585 A 20080311; KR 20100092067 A 20100819; MX 2008000982 A 20080327; RU 2008106778 A 20090827; RU 2415179 C2 20110327; UA 87068 C2 20090610; US 2008285615 A1 20081120; US 2010315098 A1 20101216; US 9255303 B2 20160209

DOCDB simple family (application)
EP 2006064156 W 20060712; AR P060103113 A 20060720; BR PI0613414 A 20060712; CA 2615929 A 20060712; CN 200680026905 A 20060712; EP 06764149 A 20060712; JP 2008521942 A 20060712; KR 20087001819 A 20080123; KR 20107017205 A 20060712; MX 2008000982 A 20060712; RU 2008106778 A 20060712; UA A200800783 A 20060712; US 86201110 A 20100824; US 99602006 A 20060712