

Title (en)  
METHOD FOR ONLINE MEASUREMENT OF MOLTEN PHASES

Title (de)  
VERFAHREN ZUM ONLINE MESSEN VON SCHMELZPHASEN

Title (fr)  
MESURE EN LIGNE DE PHASES FONDUES

Publication  
**EP 1552291 A2 20050713 (EN)**

Application  
**EP 03763539 A 20030710**

Priority  
• CA 0301053 W 20030710  
• US 39507902 P 20020711

Abstract (en)  
[origin: WO2004008135A2] A method for identifying and quantifying information about molten phases, including slags, fluxes, metal and matte using a multivariate image analysis approach. Using this procedure, the properties of molten phases such as disruption of slag, the size of bare metal, partial solidification of slag, and temperature of slag can be accurately determined within a reasonable computation time. Moreover, this method can be implemented as an online measurement tool of molten phases.

IPC 1-7  
**G01N 33/20**; **C21C 5/46**; **B22D 2/00**; **G06T 5/00**

IPC 8 full level  
**B22D 2/00** (2006.01); **C21C 5/46** (2006.01); **F27D 21/00** (2006.01); **F27D 21/02** (2006.01); **G01N 33/20** (2006.01); **G06T 5/00** (2006.01); **G06T 7/00** (2006.01); **G06T 7/40** (2006.01); **C21C 5/52** (2006.01); **F27D 19/00** (2006.01)

CPC (source: EP US)  
**B22D 2/00** (2013.01 - EP US); **B22D 2/001** (2013.01 - EP US); **C21C 5/4673** (2013.01 - EP US); **F27D 19/00** (2013.01 - EP US); **F27D 21/0028** (2013.01 - EP US); **F27D 21/02** (2013.01 - EP US); **G01N 33/205** (2018.12 - EP US); **G06T 7/001** (2013.01 - EP US); **G06T 7/42** (2016.12 - EP US); **G06T 7/90** (2016.12 - EP US); **C21C 2005/5288** (2013.01 - EP US); **F27D 2019/0006** (2013.01 - EP US); **G06T 2207/30136** (2013.01 - EP US); **Y02P 10/20** (2015.11 - EP US)

Citation (search report)  
See references of WO 2004008135A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)  
AL LT LV MK

DOCDB simple family (publication)  
**WO 2004008135 A2 20040122**; **WO 2004008135 A3 20040408**; AU 2003249798 A1 20040202; AU 2003249798 A8 20040202; CA 2491646 A1 20040122; CN 1668920 A 20050914; EP 1552291 A2 20050713; JP 2005532557 A 20051027; US 2006220281 A1 20061005

DOCDB simple family (application)  
**CA 0301053 W 20030710**; AU 2003249798 A 20030710; CA 2491646 A 20030710; CN 03816537 A 20030710; EP 03763539 A 20030710; JP 2004520233 A 20030710; US 52095305 A 20050912