Title (en)
BLAST FURNACE OPERATION METHOD

Title (de)
BETRIEBSVERFAHREN FÜR EINEN VERBRENNUNGSOFEN

Title (fr)
PROCÉDÉ D'EXPLOITATION DE HAUT FOURNEAU

Publication
EP 2796565 A4 20151104 (EN)

Application
EP 12859458 A 20120301

Priority
- JP 2011279955 A 20111221
- JP 2012055886 W 20120301

Abstract (en)
[origin: WO2013094229A1] A blast furnace operation method, whereby the combustion temperature can be increased even if the volatile amount of pulverized coal is no more than 25 mass% and a high pulverized coal ratio operation is being used whereby the pulverized coal ratio is at least 150 kg/t, and, as a result, CO2 emissions can be reduced, by: using a double-piped lance (4) for blowing in fuel from a tuyere (3); blowing in the pulverized coal from the inner pipe of the double-piped lance (4); blowing in oxygen from the outer pipe of the double-piped lance (4); and having the oxygen concentration being at least 35 vol% for the gas comprising the carrier gas for the pulverized coal and the gas blown in from the outer pipe. In addition, the oxygen concentration is less than 70 vol% when the pulverized coal ratio is at least 170 kg/t. Furthermore, increased concentration of pulverized coal flow is prevented and fuel efficiency can be maintained by arranging the double-piped lance (4) such that the pulverized coal flows blown in from the two pipes of the double-piped lance (4) do not overlap.

IPC 8 full level
C21B 5/00 (2006.01); **C21B 7/00** (2006.01); **C21B 7/16** (2006.01)

CPC (source: EP)
C21B 5/003 (2013.01); **C21B 7/163** (2013.01); C21B 2005/005 (2013.01)

Citation (search report)
- [Y] JP 2011168882 A 20110901 - JFE STEEL CORP
- [Y] JP 2006241586 A 20060914 - JFE STEEL KK
- [Y] JP H06128614 A 19940510 - NIPPON STEEL CORP
- See references of WO 2013094229A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2013094229 A1 20130627; AU 2012355193 A1 20140724; AU 2012355193 B2 20150910; CN 104039985 A 20140910; EP 2796565 A1 20141029; EP 2796565 A4 20151104; EP 2796565 B1 20171004; IN 1257KON2014 A 20151016; KR 101629122 B1 20160609; KR 20140109963 A 20140916; TW 201326404 A 20130701; TW I495729 B 20150811

DOCDB simple family (application)
JP 2012055886 W 20120301; AU 2012355193 A 20120301; CN 201280064116 A 20120301; EP 12859458 A 20120301; IN 1257KON2014 A 20140610; KR 20147019597 A 20120301; TW 101106748 A 20120301