

Title (en)

METHOD FOR INCREASING THE PENETRATION DEPTH OF AN OXYGEN STREAM

Title (de)

VERFAHREN ZUR ERHÖHUNG DER EINDRINGTIEFE EINES SAUERSTOFFSTRAHLES

Title (fr)

PROCÉDÉ POUR AUGMENTER LA PROFONDEUR DE PÉNÉTRATION D'UN JET D'OXYGÈNE

Publication

EP 2609223 B1 20170322 (DE)

Application

EP 11746203 A 20110727

Priority

- AT 14222010 A 20100825
- EP 2011062880 W 20110727

Abstract (en)

[origin: WO2012025321A2] The invention relates to a method for increasing the penetration depth of an oxygen stream having a volume flow and a mass flow entering the bed of an iron ore production unit, preferably a melt reduction unit or melter gasifier or an oxygen-blowing furnace, said stream comprising technically pure oxygen for gasifying carbon carriers present in the bed, characterized in that the ratio of volume flow to mass flow of the oxygen stream is increased.

IPC 8 full level

C21B 5/00 (2006.01); **C21B 7/16** (2006.01); **C21B 13/00** (2006.01); **F27D 3/16** (2006.01); **F27D 3/18** (2006.01)

CPC (source: EP KR US)

C21B 3/00 (2013.01 - US); **C21B 5/00** (2013.01 - EP KR US); **C21B 5/001** (2013.01 - EP US); **C21B 5/003** (2013.01 - EP US); **C21B 7/16** (2013.01 - EP KR US); **C21B 13/00** (2013.01 - EP KR US); **F27B 1/10** (2013.01 - EP US); **F27D 3/16** (2013.01 - EP KR US)

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 2012025321 A2 20120301; **WO 2012025321 A3 20130425**; AT 510313 A1 20120315; AT 510313 B1 20130615; AU 2011295333 A1 20130307; AU 2011295333 B2 20150528; BR 112013004417 A2 20160531; BR 112013004417 B1 20181009; CA 2809192 A1 20120301; CA 2809192 C 20180501; CN 103221554 A 20130724; CN 103221554 B 20190222; EP 2609223 A2 20130703; EP 2609223 B1 20170322; KR 101813670 B1 20171229; KR 20130080841 A 20130715; PL 2609223 T3 20170929; RU 2013112949 A 20140927; RU 2583558 C2 20160510; UA 106548 C2 20140910; US 2013154166 A1 20130620; US 8808422 B2 20140819

DOCDB simple family (application)

EP 2011062880 W 20110727; AT 14222010 A 20100825; AU 2011295333 A 20110727; BR 112013004417 A 20110727; CA 2809192 A 20110727; CN 201180041138 A 20110727; EP 11746203 A 20110727; KR 20137007316 A 20110727; PL 11746203 T 20110727; RU 2013112949 A 20110727; UA A201302386 A 20110727; US 201113818344 A 20110727