

Title (en)
METHOD FOR THE CONTROLLED OPERATION OF A REGENERATIVELY HEATED INDUSTRIAL FURNACE, CONTROL UNIT AND INDUSTRIAL FURNACE

Title (de)
VERFAHREN ZUM GEREGLTEN BETRIEB EINES REGENERATIV BEHEIZTEN INDUSTRIEOFENS, STEUEREINHEIT UND INDUSTRIEOFEN

Title (fr)
PROCÉDÉ POUR FAIRE FONCTIONNER DE MANIÈRE RÉGULÉE UN FOUR INDUSTRIEL CHAUFFÉ DE MANIÈRE RÉGÉNÉRATIVE, UNITÉ DE COMMANDE ET FOUR INDUSTRIEL

Publication
EP 2976586 A2 20160127 (DE)

Application
EP 14718336 A 20140319

Priority

- DE 102013204840 A 20130319
- EP 2014055493 W 20140319

Abstract (en)
[origin: WO2014147117A2] The invention relates to a method for the controlled operation of a regeneratively heated industrial furnace (100), comprising a furnace chamber (10), preferably for controlling the fuel energy supplied to the furnace chamber (10) for a fuel of varying calorific value, comprising the steps of: - injecting fuel into the furnace chamber (10) by way of at least one fuel injector (20, 20'), which is designed for the injection of fuel, in particular virtually without any combustion air, - periodically alternating conduction of on the one hand combustion air to the furnace chamber (10) in a first period phase and on the other hand exhaust gas (EG) from the furnace chamber (10) in a second period phase, separately from the fuel, wherein - a supply of the combustion air or such like oxidizing agent is set and a residual amount of oxygen in the exhaust gas is determined. It is provided according to the invention that - an oxygen consumption of the supplied combustion air and the residual oxygen that is converted in the combustion of the fuel is determined and - the oxygen consumption is used as a measure of an amount of fuel energy that is used, wherein a stream of fuel for injection is set in such a way that the oxygen consumption is controlled to a predetermined value of the oxygen consumption.

IPC 8 full level
F27B 3/00 (2006.01); **C03B 5/235** (2006.01); **F23N 5/00** (2006.01); **F27B 3/20** (2006.01); **F27D 19/00** (2006.01); **F27D 99/00** (2010.01)

CPC (source: EP)
C03B 5/235 (2013.01); **C03B 5/237** (2013.01); **F23N 5/003** (2013.01); **F27B 3/002** (2013.01); **F27B 3/20** (2013.01); **F27D 19/00** (2013.01); **F27D 99/0003** (2013.01); **F27D 2019/0012** (2013.01); **F27D 2019/0034** (2013.01); **Y02P 40/50** (2015.11)

Citation (search report)
See references of WO 2014147117A2

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102013204840 A1 20140925; CN 105247308 A 20160113; CN 105247308 B 20171024; EP 2976586 A2 20160127; WO 2014147117 A2 20140925; WO 2014147117 A3 20141113

DOCDB simple family (application)
DE 102013204840 A 20130319; CN 201480029060 A 20140319; EP 14718336 A 20140319; EP 2014055493 W 20140319