

Title (en)

METHOD AND DEVICE FOR THE THERMAL TREATMENT OF SAND

Title (de)

VERFAHREN UND VORRICHTUNG ZUR THERMISCHEN BEHANDLUNG VON SAND

Title (fr)

PROCÉDÉ ET DISPOSITIF DESTINÉS AU TRAITEMENT THERMIQUE DU SABLE

Publication

EP 3328809 A1 20180606 (DE)

Application

EP 16757549 A 20160727

Priority

- DE 102015112282 A 20150728
- DE 2016100340 W 20160727

Abstract (en)

[origin: WO2017016550A1] The invention relates to a method and a device for sintering sand. The problem addressed by the invention is that of using energy-saving sintering to make it possible to use desert sand, having round grains and evenly distributed among the grain fractions, for use as a building material, in particular as an aggregate. The problem is solved by providing a focusing device (3) for thermal-energy rich radiation (2) in order to create at least one focal point (5) on the surface of a bulk sand (10) and a positioning device (6) for continuous relative movement between the focal point (5) and the sand (10). The problem is also solved via a use of desert sand as an aggregate for a component (12), characterised in that, by sintering, obtained grain bonds (11) of desert sand (10) are incorporated in a matrix material (13) as an aggregate.

IPC 8 full level

C04B 28/02 (2006.01); **C04B 18/02** (2006.01); **C04B 20/04** (2006.01); **C04B 30/00** (2006.01); **F24S 20/30** (2018.01); **F24S 23/00** (2018.01); **F24S 23/30** (2018.01); **C04B 111/00** (2006.01)

CPC (source: EP US)

B28B 11/243 (2013.01 - US); **C04B 14/06** (2013.01 - US); **C04B 18/023** (2013.01 - EP US); **C04B 20/04** (2013.01 - EP US); **C04B 28/02** (2013.01 - EP US); **C04B 30/00** (2013.01 - EP US); **F24S 20/30** (2018.04 - EP US); **F24S 23/30** (2018.04 - US); **F24S 23/31** (2018.04 - EP US); **F24S 30/00** (2018.04 - US); **F24S 50/80** (2018.04 - EP US); **F24S 70/16** (2018.04 - US); **G02B 3/08** (2013.01 - US); **G02B 19/0009** (2013.01 - US); **G02B 19/0042** (2013.01 - US); **C04B 2111/0025** (2013.01 - EP US); **Y02E 10/40** (2013.01 - US); **Y02E 10/47** (2013.01 - EP)

Citation (search report)

See references of WO 2017016550A1

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 102015112282 A1 20170202; EP 3328809 A1 20180606; US 2018222795 A1 20180809; WO 2017016550 A1 20170202

DOCDB simple family (application)

DE 102015112282 A 20150728; DE 2016100340 W 20160727; EP 16757549 A 20160727; US 201615747154 A 20160727