

Title (en)

Mould or blank, casting moulding material mix and method for its manufacture

Title (de)

Form oder Formling, Giesserei-Formstoffmischung und Verfahren zu seiner Herstellung

Title (fr)

Forme ou pièce brute, mélange de matériaux de formage de fonderie et son procédé de fabrication

Publication

**EP 1832357 B1 20100310 (DE)**

Application

**EP 07004766 A 20070308**

Priority

DE 102006011530 A 20060310

Abstract (en)

[origin: EP1832357A1] The mold uses quartz moulding sand and an aluminium oxide binder. The quartz sand has a particle size range of 0.05 to 5 mm and the aluminium oxide has a particle size of 1 to 200  $\mu$ m. The binder is arranged as a coating layer over the surface of the sand and contains an aqueous glass phase which draws together along the contacting faces of the quartz particles in knuckle manner and has a micro-porous structure in the boundary phases. Foundry moulding mixture is used to produce mould or moulding blank with additions of broken or ground emulsion-free aluminium oxide and an aqueous glass based binder. Independent claim describes method for manufacturing mould by mixing binder-oxide mixture with moulding sand and casting it under pressure in moulding box and drying liquid binder to produce micro-porous binder bridges between individual quartz sand particles.

IPC 8 full level

**B22C 1/18** (2006.01); **B22C 9/02** (2006.01); **B22D 29/00** (2006.01)

CPC (source: EP)

**B22C 1/188** (2013.01); **B22C 9/02** (2013.01); **B22C 9/12** (2013.01); **B22D 29/002** (2013.01); **B22D 29/005** (2013.01)

Cited by

EP2853320A1; US9352385B2; WO2008113765A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1832357 A1 20070912**; **EP 1832357 B1 20100310**; AT E460243 T1 20100315; DE 102006011530 A1 20070913; DE 502007003051 D1 20100422; ES 2342733 T3 20100713; PL 1832357 T3 20100831; SI 1832357 T1 20100730; WO 2007104469 A1 20070920

DOCDB simple family (application)

**EP 07004766 A 20070308**; AT 07004766 T 20070308; DE 102006011530 A 20060310; DE 502007003051 T 20070308; EP 2007002008 W 20070308; ES 07004766 T 20070308; PL 07004766 T 20070308; SI 200730240 T 20070308