

Title (en)

METHOD FOR CASTING CASTINGS

Title (de)

VERFAHREN ZUM GIESSEN VON GUSSTEILEN

Title (fr)

PROCÉDÉ SERVANT À COULER DES PIÈCES EN FONTE

Publication

EP 3119545 A1 20170125 (DE)

Application

EP 15738697 A 20150720

Priority

- DE 102014110826 A 20140730
- EP 2015066546 W 20150720

Abstract (en)

[origin: CA2948750A1] The invention relates to a method for casting castings, wherein a casting mold is provided, which consists of one or more casting mold parts or casting mold cores, which are produced from a mold material, which consists of core sand, binder, and optional additives. The casting mold (2) is encased in a housing in such a way that a filling space (10) is formed between an inner surface segment of the housing and an associated outer surface segment of the casting mold (2). The filling space (10) is then filled with a free-flowing filling material (F) and metal melt is poured into the casting mold (2). In conjunction with the pouring in of the metal melt, the casting mold begins to radiate heat. As a result of the input of heat by means of the metal melt, the binder of the mold material begins to evaporate and to burn. The binder thus loses the effect thereof and the casting mold (2) disintegrates. According to the invention, the filling material (F) has such a low bulk density that a gas flow (S1, S2) can flow through the filling material packing formed from the filling material (F) in the filling space. During the filling of the filling space, the filling material (F) has a minimum temperature, proceeding from which the temperature of the filling material (F) rises due to process heat, which is formed by the heat radiated by the casting mold (2) and by the heat released during the burning of the binder, to above a limit temperature at which the binder evaporating out ignites and burns.

IPC 8 full level

B22D 29/00 (2006.01); **B22C 9/02** (2006.01); **B22C 21/00** (2006.01)

CPC (source: CN EP KR RU US)

B22C 5/06 (2013.01 - KR); **B22C 5/085** (2013.01 - KR); **B22C 9/02** (2013.01 - EP KR US); **B22C 9/046** (2013.01 - CN EP US); **B22C 9/10** (2013.01 - EP KR US); **B22C 9/108** (2013.01 - EP US); **B22D 29/003** (2013.01 - EP KR US); **B22D 30/00** (2013.01 - EP KR US); **B22D 45/005** (2013.01 - EP KR US); **C21D 9/0068** (2013.01 - EP US); **B22C 5/06** (2013.01 - EP US); **B22C 5/085** (2013.01 - EP US); **B22C 9/00** (2013.01 - RU); **B22D 29/00** (2013.01 - RU)

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 102014110826 A1 20160204; BR 112016023696 A2 20170822; BR 112016023696 B1 20210831; BR 112016023696 B8 20211116; CA 2948750 A1 20160204; CA 2948750 C 20180102; CN 106536083 A 20170322; CN 106536083 B 20180928; DK 3119545 T3 20191202; EP 3119545 A1 20170125; EP 3119545 B1 20190828; EP 3597329 A1 20200122; EP 3597329 B1 20240103; EP 3597329 C0 20240103; ES 2759264 T3 20200508; HR P20192115 T1 20200221; HU E046428 T2 20200330; JP 2017525570 A 20170907; JP 6275324 B2 20180207; KR 101845505 B1 20180518; KR 20170028392 A 20170313; MX 2016012496 A 20170109; MX 361595 B 20181210; PL 3119545 T3 20200331; PL 3597329 T3 20240708; PT 3119545 T 20191209; RS 59702 B1 20200131; RS 65376 B1 20240430; RU 2645824 C1 20180228; SI 3119545 T1 20200131; US 2017198366 A1 20170713; US 9890439 B2 20180213; WO 2016016035 A1 20160204; ZA 201606111 B 20170927

DOCDB simple family (application)

DE 102014110826 A 20140730; BR 112016023696 A 20150720; CA 2948750 A 20150720; CN 201580040068 A 20150720; DK 15738697 T 20150720; EP 15738697 A 20150720; EP 19193631 A 20150720; EP 2015066546 W 20150720; ES 15738697 T 20150720; HR P20192115 T 20191126; HU E15738697 A 20150720; JP 2017505184 A 20150720; KR 20177002882 A 20150720; MX 2016012496 A 20150720; PL 15738697 T 20150720; PL 19193631 T 20150720; PT 15738697 T 20150720; RS P20191524 A 20150720; RS P20240402 A 20150720; RU 2016141603 A 20150720; SI 201531007 T 20150720; US 201515315079 A 20150720; ZA 201606111 A 20160902