

Title (en)

CORE AND MEHTOD FOR THE PRODUCTION OF A CORE

Title (de)

GIESSKERN UND VERFAHREN ZUR HERSTELLUNG EINES GIESSKERNS

Title (fr)

NOYAU DE COULÉE ET PROCÉDÉ DE FABRICATION D'UN NOYAU DE COULÉE

Publication

**EP 3166740 A1 20170517 (DE)**

Application

**EP 15753438 A 20150706**

Priority

- DE 102014109598 A 20140709
- IB 2015001121 W 20150706

Abstract (en)

[origin: WO2016005806A1] The invention relates to a core (1) made of a molding sand, the grains of which are conglomerated by a binder, said core (1) being used for forming a cooling duct (41, 42, 43, 44) in a cylinder block (26) for an internal combustion engine. Also disclosed are a use of a core (1) and a method for producing a core (1). The core (1) of the invention can be produced in a simple and safe manner and makes it possible to use a casting process to create even ducts that are no more than 3 mm wide at the narrowest point thereof. To achieve said aim, the core (1) comprises a supporting portion (2), two neck portions (11, 12) which project from a lateral surface (10) of the supporting portion (2) and are located at a distance from one another, and at least one bridge portion (15, 16) which is retained by the neck portions (11, 12) at a distance from the supporting portion (2) and which has a minimum thickness (dmin) of no more than 3 mm in a region (23, 24) between the neck portions (11, 12), said minimum thickness (dmin) being defined as the distance between the lateral surfaces (17, 18) of the at least one bridge portion; furthermore, at least in the region of the bridge portion (15, 16), the core (1) is made of a molding sand of which the grains have a maximum mean diameter of 0.35 mm.

IPC 8 full level

**B22C 9/10** (2006.01); **F02F 1/14** (2006.01); **F02F 7/00** (2006.01)

CPC (source: CN EP KR US)

**B22C 1/22** (2013.01 - CN EP US); **B22C 9/10** (2013.01 - CN EP KR US); **B22C 9/108** (2013.01 - EP KR US); **B22C 9/24** (2013.01 - EP US); **F02F 1/10** (2013.01 - EP US); **F02F 1/14** (2013.01 - EP KR US); **F02F 7/0007** (2013.01 - KR); **F02F 2200/00** (2013.01 - US)

Citation (search report)

See references of WO 2016005806A1

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)

**WO 2016005806 A1 20160114**; CN 107073563 A 20170818; CN 107073563 B 20190402; DE 102014109598 A1 20160114; EP 3166740 A1 20170517; EP 3166740 B1 20200603; ES 2814149 T3 20210326; HU E050240 T2 20201130; JP 2017521256 A 20170803; JP 6246954 B2 20171213; KR 101889053 B1 20180920; KR 20170023185 A 20170302; PL 3166740 T3 20201116; US 10850321 B2 20201201; US 2017173670 A1 20170622

DOCDB simple family (application)

**IB 2015001121 W 20150706**; CN 201580037301 A 20150706; DE 102014109598 A 20140709; EP 15753438 A 20150706; ES 15753438 T 20150706; HU E15753438 A 20150706; JP 2016573499 A 20150706; KR 20177003414 A 20150706; PL 15753438 T 20150706; US 201515324411 A 20150706