Title (en)

Moulded steel piston for combustion engines

Title (de)

Gegossener Stahlkolben für Verbrennungsmotoren

Title (fr)

Piston en acier coulé pour moteurs à combustion

Publication

EP 2184120 A1 20100512 (DE)

Application

EP 09014391 A 20070612

Priority

- EP 07725968 A 20070612
- DE 102006030699 A 20060630

Abstract (en)

The steel piston for combustion engines, comprises an upper part with combustion trough and circular wall (5), and a lower part with large end bearing (8). The upper part has cool channels (4) having partial breakthrough or openings for piston interior and/or the circular wall. The cool channels are formed by a molded steel tube and outwardly terminate with openings (7) for circular wall by a sealing part, which is formed by a sheet metal or steel ring. The steel of the piston and the tube has different composition. The steel piston for combustion engines, comprises an upper part with combustion trough and circular wall (5), and a lower part with large end bearing (8). The upper part has cool channels (4) having partial breakthrough or openings for piston interior and/or the circular wall. The cool channels are formed by a molded steel tube and outwardly terminate with openings (7) for circular wall by a sealing part, which is formed by a sheet metal or steel ring. The steel of the piston and the tube has different composition. An intermediate layer is arranged between the piston and the tube and has a composition, which is different from the composition of the piston. The wall (9) of the large end bearing has a bearing shell formed by a sprue part, which is formed by high wear resistant steel. The piston upper part is a forging. The upper and lower parts of the piston are connected together by friction welding. An independent claim is included for a procedure for single and uniform material steel piston.

Abstract (de)

Stahlkolben für Verbrennungsmotoren, der zumindest ein Kolbenoberteil (12) mit Verbrennungsmulde (11) und Ringwand (5) sowie ein Kolbenunterteil (13) mit Pleuellager (8) umfasst, wobei der Stahlkoben aus einer Edelstahllegierung einstückig und materialeinheitlich über ein Niederdruckgussverfahren gegossen ist.

IPC 8 full level

B22D 15/02 (2006.01); **C22C 38/00** (2006.01); **C22C 38/42** (2006.01); **C22C 38/58** (2006.01); **F02F 3/00** (2006.01); **F02F 3/22** (2006.01)

CPC (source: EP US)

B22D 15/02 (2013.01 - EP US); **B22D 18/04** (2013.01 - EP US); **B22D 19/0072** (2013.01 - EP US); **B22D 19/16** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **F02F 3/20** (2013.01 - EP US); **F02F 3/22** (2013.01 - EP US); **F02F 3/26** (2013.01 - EP US); F02F 3/10 (2013.01 - EP US); F02F 2003/0061 (2013.01 - EP US); F02F 2200/06 (2013.01 - EP US); F05C 2253/12 (2013.01 - EP US); Y10T 29/49249 (2015.01 - US)

Citation (applicant)

- DE 10244513 A1 20040408 - MAHLE GMBH [DE], et al
- EP 1612395 A1 20060104 - HITACHI METALS LTD [JP], et al

Citation (search report)

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Designated contracting state (EPC)

DE FR IT

DOCDB simple family (publication)

DE 102006030699 A1 20080103; **DE 102006030699 B4 20141002**; DE 502007005685 D1 20101230; DE 502007006278 D1 20110224; EP 2035170 A2 20090318; EP 2035170 B1 20101117; EP 2184120 A1 20100512; EP 2184120 B1 20110112; JP 2009541590 A 20091126; JP 2013014845 A 20130124; US 2009178640 A1 20090716; US 8528513 B2 20130910; WO 2008000347 A2 20080103; WO 2008000347 A3 20080221

DOCDB simple family (application)

DE 102006030699 A 20060630; DE 502007005685 T 20070612; DE 502007006278 T 20070612; EP 07725968 A 20070612; EP 09014391 A 20070612; EP 2007005155 W 20070612; JP 2009516931 A 20070612; JP 2012180654 A 20120816; US 30272307 A 20070612