

Title (en)

MULTI-PART COOLED PISTON FOR AN INTERNAL COMBUSTION ENGINE

Title (de)

MEHRTEILIGEN GEKÜHLTEN KOLBEN FÜR EINEN VERBRENNUNGSMOTOR

Title (fr)

PISTON REFROIDI COMPOSE DE PLUSIEURS PARTIES POUR MOTEUR A COMBUSTION INTERNE

Publication

EP 1546535 B1 20110831 (DE)

Application

EP 03769200 A 20030919

Priority

- DE 0303114 W 20030919
- DE 10244512 A 20020925

Abstract (en)

[origin: US6698391B1] A multipart cooled piston for a combustion engine comprises a piston upper part of steel comprising a combustion bowl and a ring wall with ring belt, and a piston lower part comprising a box-shaped piston skirt, pin bosses for receiving the piston pin connecting the piston to the connecting rod, and pin boss supports connected to the piston skirt, an inexpensive manufacture with high form stability and improved cooling system is to be achieved in that a cooling channel formed in the piston upper part has holes spread over its circumference towards the piston crown, with the piston material present between such holes forming supporting ribs that each form sections of an all-round ring rib radially to the longitudinal piston axis (K), in that the piston lower part has an annular and all-round carrier rib connected to the pin boss supports, and in that the piston upper part and the piston lower part are non-detachably connected by means of the ring rib and the carrier rib.

IPC 8 full level

F02F 3/00 (2006.01); **F02F 3/22** (2006.01)

CPC (source: EP KR US)

F02F 3/00 (2013.01 - KR); **F02F 3/003** (2013.01 - EP US); **F02F 3/0084** (2013.01 - EP US); **F02F 3/22** (2013.01 - EP KR US); **F05C 2201/0448** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

US 6698391 B1 20040302; BR 0314963 A 20050802; BR 0314963 B1 20120821; CN 100353046 C 20071205; CN 1685143 A 20051019; DE 10244512 A1 20040415; EP 1546535 A1 20050629; EP 1546535 B1 20110831; HK 1078917 A1 20060324; JP 2006500505 A 20060105; KR 20050057574 A 20050616; WO 2004029442 A1 20040408

DOCDB simple family (application)

US 27025502 A 20021011; BR 0314963 A 20030919; CN 03822843 A 20030919; DE 0303114 W 20030919; DE 10244512 A 20020925; EP 03769200 A 20030919; HK 05110760 A 20051125; JP 2004538728 A 20030919; KR 20057005107 A 20050324