

Title (en)

Engine cylinder block manufacture

Title (de)

Verfahren zur Herstellung eines Brennkraftmaschinengehäuses

Title (fr)

Procédé de fabrication d'un bloc-cylindres d'un moteur à combustion interne

Publication

**EP 1222981 A1 20020717 (EN)**

Application

**EP 01300276 A 20010112**

Priority

EP 01300276 A 20010112

Abstract (en)

An internal combustion engine cylinder block 11 is manufactured as a casting by supplying pre-formed cylinder liners 12 of centrifugal cast iron and casting aluminium alloy around the outer periphery of the liners 12 to form a cylinder block casting 13. In this condition the block casting 13 includes an as-cast head face 14 which is flush with an end face of each liner. In a first machining operation, a face mill which rotates about an axis which is substantially perpendicular to the head face 14 is fed axially in line with the axis of each liner 12 to machine a recess 22 in the head face 14 concentric with the liner 12. In a second machining operation, another face mill which also rotates about an axis which is substantially perpendicular to the head face 14 is fed laterally relative to the cylinder block 11 to machine the as-cast head face 14. This produces a finished head face 32 and reduces the depth of the recess 22 to a second predetermined depth D2, the face mill 31 removing an amount of metal D1-D2. The finished recess 22 accommodates and radially supports a thickened annular portion of a head gasket. <IMAGE>

IPC 1-7

**B22D 19/00**; **F02F 7/00**

IPC 8 full level

**B22D 19/00** (2006.01); **F02F 7/00** (2006.01)

CPC (source: EP)

**B22D 19/0009** (2013.01); **F02F 7/0095** (2013.01)

Citation (applicant)

- US 5361823 A 19941108 - KUHN JOHN W [US], et al
- US 1880643 A 19321004 - WOOLSON LIONEL M

Citation (search report)

- [DA] US 5361823 A 19941108 - KUHN JOHN W [US], et al
- [DA] US 1880643 A 19321004 - WOOLSON LIONEL M
- [A] DE 19857390 C1 20000406 - DAIMLER CHRYSLER AG [DE]
- [A] US 4917062 A 19900417 - TAPPER THOMAS E [US], et al
- [A] FR 2789613 A1 20000818 - PEUGEOT CITROEN AUTOMOBILES SA [FR]

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**EP 1222981 A1 20020717**; **EP 1222981 B1 20060927**; DE 60123372 D1 20061109; DE 60123372 T2 20070802

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