

Title (en)

Use of a cast aluminium alloy for the production of cylinder heads in combustion engines

Title (de)

Verwendung einer Aluminium-Gusslegierung zur Herstellung von Zylinderköpfen für Verbrennungsmotoren

Title (fr)

Utilisation d'un alliage d'aluminium de fonderie pour la production de têtes de cylindres dans les moteurs à combustion

Publication

EP 1972696 A1 20080924 (DE)

Application

EP 08002909 A 20080216

Priority

DE 102007012423 A 20070315

Abstract (en)

The aluminum casting alloy has the following composition, all expressed in percentages by weight: silicon 4.5-6.0, magnesium 0.20-0.55, titanium 0-0.20, iron less than 0.30, manganese 2/3 of the iron content at most, copper 0.10-0.45, zinc less than 0.07, The remainder is aluminum and inevitable impurities individually amounting to 0.03 at most, and collectively 0.1 at most. An alternative composition of the alloy is specified using the following percentages by weight: magnesium 0.25-0.45, titanium 0.05-0.10, iron less than 0.15 and/or copper 0.15-0.35.

Abstract (de)

Eine thermoschockbeständige Aluminium-Gusslegierung besteht aus: 4,5 bis 6,0 Gew.% Silizium, 0,20 bis 0,55 Gew.% Magnesium, 0 bis 0,20 Gew.% Titan, weniger als 0,30 Gew.% Eisen, Mangan max. 2/3 des Eisengehaltes, 0,10 bis 0,45 Gew.% Kupfer, weniger als 0,07 Gew.% Zink, Aluminium als Rest sowie unvermeidbare Verunreinigungen einzeln max. 0,03 Gew.%, insgesamt max. 0,1 Gew.%.

IPC 8 full level

C22C 21/02 (2006.01)

CPC (source: EP)

C22C 21/02 (2013.01); **C22C 21/04** (2013.01)

Citation (applicant)

- JP S5956559 A 19840402 - MITSUBISHI ALUMINIUM
- JP H11217647 A 19990810 - KOBE STEEL LTD
- JP H05208296 A 19930820 - KOBE STEEL LTD
- EP 1715084 A1 20061025 - SHOWA DENKO KK [JP]

Citation (search report)

- [X] JP S5956559 A 19840402 - MITSUBISHI ALUMINIUM
- [X] JP H11217647 A 19990810 - KOBE STEEL LTD
- [X] JP H05208296 A 19930820 - KOBE STEEL LTD
- [X] EP 1715084 A1 20061025 - SHOWA DENKO KK [JP]
- [A] JP 2001303163 A 20011031 - TOYOTA CENTRAL RES & DEV, et al
- [A] JP S63100151 A 19880502 - HITACHI METALS LTD

Cited by

EP2455505A1; CN112575230A; CN107868889A; DE102009032588A1

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