

Title (en)

ALUMINUM-SILICON CASTING ALLOY FOR MONOLITHIC CYLINDER CRANKCASES

Title (de)

ALUMINIUM-SILIZIUM-GUSSLEGIERUNG FÜR MONOLITHISCHE ZYLINDERKURBELGEHÄUSE

Title (fr)

ALLIAGE POUR COULÉE À BASE D'ALUMINIUM ET DE SILICIUM POUR CARTERS DE VILEBREQUINS CYLINDRIQUES ET MONOLITHIQUES

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Application

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Priority

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Abstract (en)

[origin: WO2009043549A1] A prior art aluminum-silicon casting alloy for monolithic cylinder crankcases is made of a hypereutectic aluminum-silicon alloy of the AlSi17Cu4Mg type known as Alusil, comprising phases of primary silicon and one or more phases for improving resistance to wear. In an aluminum-silicon alloy according to the invention, the additional phases or mixed crystals are formed by one or more of the following measures: a) adding up to 0.3 percent by weight each of one or more elements from a list I containing at least the elements titanium, vanadium, chromium, cobalt, nickel, and zirconium, up to a maximum of 1.5 percent by weight; b) adding 0.3 to 2.5 percent by weight each of one or more elements from a list II containing at least the elements titanium, vanadium, chromium, (nickel,) and cobalt, up to a maximum of 5 percent by weight; and c) increasing the copper content to a range of 7.0 to 10.0 percent by weight.

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