Title (en)

METHOD FOR PRODUCING AN ENGINE COMPONENT, ENGINE COMPONENT, AND USE OF AN ALUMINUM ALLOY

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES MOTORBAUTEILS, MOTORBAUTEIL UND VERWENDUNG EINER ALUMINIUMLEGIERUNG

Title (fr)

PROCÉDÉ DE FABRICATION D'UN COMPOSANT DE MOTEUR, COMPOSANT DE MOTEUR ET UTILISATION D'UN ALLIAGE D'ALUMINIUM

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Application

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Abstract (en)

[origin: WO2015173172A1] The invention relates to a method for producing an engine component, in particular a piston for an internal combustion engine, wherein an aluminum alloy is cast in the gravity die casting process and wherein the aluminum alloy has 7 to < 14.5 wt% silicon, > 1.2 to ≤ 4 wt% nickel, > 3.7 to < 10 wt% copper, < 1 wt% cobalt, 0.1 to 1.5 wt% magnesium, 0.1 to ≤ 0.7 wt% iron, 0.1 to ≤ 0.7 wt% manganese, > 0.1 to < 0.5 wt% zirconium, ≥ 0.1 to ≤ 0.3 wt% vanadium, 0.05 to 0.5 wt% titanium, and 0.004 to ≤ 0.05 wt% phosphorus as alloying elements and aluminum and unavoidable contaminants as the remainder. The aluminum alloy can optionally comprise beryllium, wherein the calcium content is limited to a low level. The invention further relates to an engine component, in particular a piston for an internal combustion engine, wherein the engine component is composed at least partially of an aluminum alloy, and to the use of an aluminum alloy to produce an engine component, in particular a piston of an internal combustion engine.

IPC 8 full level

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