

Title (en)

AN AL-SI-MG-ZN-CU ALLOY FOR AEROSPACE AND AUTOMOTIVE CASTINGS

Title (de)

AL-SI-MG-ZN-CU-LEGIERUNG FÜR GUSSTEILE FÜR LUFT- UND RAUMFAHRT UND KRAFTFAHRZEUGE

Title (fr)

ALLIAGE AL-SI-MG-ZN-CU POUR PIÈCES COULÉES UTILISÉES DANS L'AÉROSPATIALE ET L'INDUSTRIE AUTOMOBILE

Publication

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Application

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Priority

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Abstract (en)

[origin: MX2007001008A] The present invention provides an aluminum casting alloy with a composition including 4% - 9% Si; 0.1% - 0.7% Mg; less than or equal to 5% Zn; less than 0.15% Fe; less than 4% Cu; less than 0.3% Mn; less than 0.05% B; less than 0.15% Ti; and the remainder consisting essentially of aluminum. The inventive AlSiMg composition provides increased mechanical properties (Tensile Yield Strength and Ultimate Tensile Strength) in comparison to similarly prepared E357 alloy at room temperature and high temperature. The present invention also includes a shaped casting formed from the inventive composition and a method of forming a shaped casting from the inventive composition.

IPC 8 full level

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Citation (search report)

- [XA] US 2003155049 A1 20030821 - BERGSMA S CRAIG [US]
- [XI] US 5879478 A 19990309 - LOUE WILLEM [FR], et al
- [XAI] JP H10158771 A 19980616 - SHOWA DENKO KK, et al
- [XAI] JP H0835030 A 19960206 - SHOWA DENKO KK, et al
- [XAI] JP H0748643 A 19950221 - SHOWA ALUMINUM CORP
- [XAI] WO 0071772 A1 20001130 - NASA [US]
- [XAI] JP 2001073056 A 20010321 - KOBE STEEL LTD
- [XAI] JP 2001262262 A 20010926 - ISUZU MOTORS LTD
- [XAI] JP S56163234 A 19811215 - NIPPON KEIKINZOKU SOUGOU KENKY
- See references of WO 2006014948A2

Cited by

CN115627393A

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