

Title (en)

Zinc alloys suitable for zinc die casting or pressure die casting and production process thereof

Title (de)

Zinklegierungen für den Zinkguss oder Zinkdruckguss und Verfahren zu deren Herstellung

Title (fr)

Alliage de zinc pour le moulage ou le moulage sous pression et son procédé de fabrication

Publication

EP 1270752 A1 20030102 (DE)

Application

EP 02011128 A 20020518

Priority

DE 10131344 A 20010628

Abstract (en)

[origin: DE10131344C1] Zinc alloy contains (in wt. %): 0.01-6 aluminum, 0.01-1.5 copper, 0.001-0.06 magnesium, 0.001-0.2 silicon, 0.002-0.05 titanium, and 0.0002-0.005 boron, and a balance of zinc. An Independent claim is also included for a process for the production of the zinc alloy in the form of pigs, sheets, strips or wires, comprising reacting a fine zinc alloy containing (in wt.%) 0.1-4.2 aluminum, 0.03-1.5 copper, 0.001-0.06 magnesium and 0.002-0.04 silicon with an aluminum-titanium-boron pre-alloy and optionally a silicon and/or chromium alloy and then processing to pigs, sheets, strips or wires. Preferred Features: The zinc alloy contains additionally contains up to 0.2 wt.% chromium. The alloy preferably contains 0.004-0.07 titanium, and 0.0002-0.005 boron.

Abstract (de)

Die Zinklegierung für den Zinkguss oder Zinkdruckguss enthalten außer Zink und den darin enthaltenden unvermeidlichen Verunreinigungen 0,01 bis 6 Gew.-% Aluminium, 0,01 bis 1,5 Gew.-% Kupfer, 0,001 bis 0,06 Gew.-% Magnesium, 0,001 bis 0,2 Gew.-% Silizium sowie 0,002 bis 0,05 Gew.-% Titan, 0,002 bis 0,005 Gew.-% Bor und ggf. bis zu 0,2 Gew.-% Chrom.

IPC 1-7

C22C 1/02; **C22C 18/00**

IPC 8 full level

C22C 1/03 (2006.01); **C22C 18/04** (2006.01)

CPC (source: EP)

C22C 1/03 (2013.01); **C22C 18/04** (2013.01)

Citation (search report)

- [XA] US 4609529 A 19860902 - SKENAZI ANDRE [BE], et al
- [Y] US 4166153 A 19790828 - FERCKE WILHELM [DE]
- [A] DE 2142685 A1 19730301 - METALLGESELLSCHAFT AG
- [XY] PATENT ABSTRACTS OF JAPAN vol. 015, no. 038 (C - 0800) 30 January 1991 (1991-01-30)
- [XA] PORTER, FRANK C.: "Zinc Handbook : properties, processing, and use in design", 1991, MARCEL DEKKER, INC., NEW YORK, ISBN: 0-8247-8340-9, XP002205317
- [A] SKENAZI, A. F. ET AL: "Some recent developments in the improvement of the mechanical properties of zinc foundry alloys", METALL (BERLIN) (1983), 37(9), 898-902, XP001098179

Cited by

US2022042143A1; WO2006024055A1; WO2005087961A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1270752 A1 20030102; **EP 1270752 B1 20061115**; AT E345402 T1 20061215; DE 10131344 C1 20021121; DE 50208679 D1 20061228; ES 2275773 T3 20070616

DOCDB simple family (application)

EP 02011128 A 20020518; AT 02011128 T 20020518; DE 10131344 A 20010628; DE 50208679 T 20020518; ES 02011128 T 20020518