

Title (en)
Aluminium cast alloy

Title (de)
Aluminium-Gusslegierung

Title (fr)
Alliage d' aluminium coulé

Publication
EP 1719820 A3 20061227 (DE)

Application
EP 06405188 A 20060428

Priority
CH 7952005 A 20050503

Abstract (en)
[origin: EP1719820A2] Aluminum alloy for casting parts with a high capacity for absorbing kinetic energy by plastic deformation comprises (wt.%): silicon (8-12.4) manganese (0.1-3), magnesium (not >0.2), iron (not >0.5), copper (not >0.5), zinc (not >0.5), titanium (not >0.5), zirconium (not >0.5), silver (not >3), tellurium (0.05-3), impurities (not >0.02 individually, not >0.2 in total) and aluminum (to 100). Aluminum alloy for casting parts with a high capacity for absorbing kinetic energy by plastic deformation comprises (wt.%): silicon (8-12.4) manganese (0.1-3), magnesium (not >0.2), iron (not >0.5), copper (not >0.5), zinc (not >0.5), titanium (not >0.5), zirconium (not >0.5), silver (not >3), tellurium (0.05-3), impurities (not >0.02 individually, not >0.2 in total) and aluminum (to 100). The alloy can also include beryllium (0.0025-0.008 wt.%) for scratch resistance, gallium phosphide and/or indium phosphide (1-250 ppm phosphorus) for grain size reduction, and titanium and boron, added as an aluminum prealloy containing 1-2 wt.% titanium and 1-2 wt.% boron, for grain size reduction. An independent claim is also included for a cast (especially die cast) part made of an alloy as above.

IPC 8 full level
C22C 21/02 (2006.01); **C22F 1/043** (2006.01)

CPC (source: EP)
C22C 21/06 (2013.01); **C22F 1/043** (2013.01)

Citation (search report)
• [Y] SU 445704 A1 19741005
• [XY] EP 1443122 A1 20040804 - RHEINFELDEN ALUMINIUM GMBH [DE]
• [X] EP 0687742 A1 19951220 - RHEINFELDEN ALUMINIUM GMBH [DE]

Cited by
DE102009032588A1; DE102013002632B4; DE102010055011A1; CN115896504A; DE102019205267B3; CN113909448A; CN102899539A; US11655148B2; DE102021114484A1; WO2020207708A1; WO2010124835A1; DE102021131973A1; WO2023099080A1; DE102021131935A1; WO2023099520A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1719820 A2 20061108; EP 1719820 A3 20061227

DOCDB simple family (application)
EP 06405188 A 20060428