Title (en)

High-strength and high-toughness aluminum-based alloy

Title (de)

Hochfeste Legierung auf Aluminumbasis mit hoher Zähigkeit

Title (fr)

Alliage à base d'aluminium à haute résistance mécanique et haute ténacité

Publication

EP 0540054 B1 19970611 (EN)

Application

EP 92118759 A 19921102

Priority

JP 28791891 A 19911101

Abstract (en)

[origin: EP0540054A1] An alloy having a composition represented by the general formula, AlaNibXcMd, wherein X is at least one element selected from the group consisting of La, Ce, Mm, Ti and Zr; M is at least one element selected from the group consisting of Fe, Co, Y, Nb, Hf, Ta and W; and a, b, c and d are, in atomic percentages, 85 & a & 94.4, 5 & b & 10, 0.5 & c & 3 and 0.1 & d & 2. The aluminum-based alloy has a high strength and a high toughness and can maintain the excellent characteristics provided by quench solidification even when subjected to thermal influence at the time of working. In addition, the alloy material has a high specific strength due to minimized addition of elements having a high specific gravity.

IPC 1-7

C22C 45/08; C22C 21/00

IPC 8 full level

C22C 21/00 (2006.01); **C22C 45/08** (2006.01)

CPC (source: EP)

C22C 21/00 (2013.01); **C22C 45/08** (2013.01)

Cited by

US6316100B1; CN107829048A

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0540054 A1 19930505; **EP 0540054 B1 19970611**; DE 69220324 D1 19970717; DE 69220324 T2 19980122; JP H05125499 A 19930521

DOCDB simple family (application)

EP 92118759 A 19921102; DE 69220324 T 19921102; JP 28791891 A 19911101