

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 A1 19930505 (EN)

Application

EP 92118759 A 19921102

Priority

JP 28791891 A 19911101

Abstract (en)

An alloy having a composition represented by the general formula, $AlaNi_bXcMd$, 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 21/00; **C22C 45/08**

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)

Citation (search report)

- [XP] EP 0475101 A1 19920318 - YOSHIDA KOGYO KK [JP]
- [A] FR 2651246 A1 19910301 - MASUMOTO TSUYOSHI [JP], et al
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- [A] EP 0445684 A1 19910911 - YOSHIDA KOGYO KK [JP]
- [XP] CHEMICAL ABSTRACTS, vol. 118 Columbus, Ohio, US; abstract no. 10386, HORIMURA, HIROYUKI 'Manufacture of aluminum alloys having high strength and toughness'
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