

Title (en)
High-strength aluminum alloy and method of manufacturing same

Title (de)
Hochfester Aluminiumlegierung und Verfahren zur Herstellung

Title (fr)
Alliage à base d'aluminium présentant une bonne résistance mécanique et procédé pour sa fabrication

Publication
EP 0688880 A1 19951227 (EN)

Application
EP 95103195 A 19950306

Priority
JP 8251194 A 19940329

Abstract (en)
A high-strength aluminum alloy has an aluminum-base matrix, ultra-fine TiB-base particles dispersed in the aluminum-base matrix and having a maximum particle diameter of 50nm, and fine TiB-base particles dispersed in the aluminum-base matrix and having a maximum particle diameter of 1.2 μm. The aluminum-base matrix is composed of Al and Ti, the fine TiB-base particles are composed of Ti and B and free of Fe or Fe and Si, and the ultra-fine TiB-base particles are composed of Ti and B and contain Fe or Fe and Si.

IPC 1-7
C22C 21/00; C22C 1/03

IPC 8 full level
C22C 1/10 (2006.01); **C22C 1/03** (2006.01); **C22C 21/00** (2006.01); **C22C 32/00** (2006.01)

CPC (source: EP)
C22C 1/03 (2013.01); **C22C 21/00** (2013.01); **C22C 32/0073** (2013.01)

Citation (search report)

- [A] US 5055256 A 19911008 - SIGWORTH GEOFFREY [US], et al
- [X] REIF, W., SCHNEIDER, W.: "Investigations for interpretation of the process of grain refinement of aluminium by AlTiB master alloys", GIESSEREI FOSCHUNG, GIESSEREI-VERLAG G.M.B.H., DÜSSELDORF, vol. 32, no. 2, DE, pages 53 - 60
- [X] PATENT ABSTRACTS OF JAPAN vol. 6, no. 127 (C - 113) 13 July 1982 (1982-07-13)
- [A] CANTOR, B., KIM, W.T., BRIFFITH, W.D., JOLLY, M.R.: "TEM characterization of melt spun Al-3Ti-1B and Al-5Ti-1B alloys", INTERNATIONAL JOURNAL OF RAPID SOLIDIFICATION, vol. 7, no. 4, GB, pages 245 - 254
- [A] PATENT ABSTRACTS OF JAPAN vol. 12, no. 398 (C - 538) 21 October 1988 (1988-10-21)
- [A] PATENT ABSTRACTS OF JAPAN vol. 11, no. 361 (C - 459) 25 November 1987 (1987-11-25)
- [A] PATENT ABSTRACTS OF JAPAN vol. 3, no. 7 (C - 034) 24 January 1979 (1979-01-24)

Cited by
CN105483451A; CN109811161A; US6290748B1; WO9811266A1; WO9630550A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0688880 A1 19951227; JP H07268510 A 19951017

DOCDB simple family (application)
EP 95103195 A 19950306; JP 8251194 A 19940329