Title (en)

High-strength aluminum-based alloy, and compacted and consolidated material thereof

Title (de)

Hochfestige Legierung auf Aluminiumbasis und verdichteter und verfestigter Werkstoff daraus

Title (fr)

Alliage à base d'aluminium à haute résistance mécanique et matériau comprimé et stabilisé à partir de cet alliage

Publication

EP 0577944 B1 19970305 (EN)

Application

EP 93107285 A 19930505

Priority

JP 12190892 A 19920514

Abstract (en)

[origin: EP0577944A1] An aluminum-based alloy having a high strength, a high heat resistance, an excellent toughness and a high specific strength, which has a composition represented by any one of the following general formulae: AlbalNiaM1b, AlbalNiaM1bM2c, AlbalNia M1bQd, and AlbalNiaM1bM2cQd, wherein M1 represents at least one element selected from among V, Cr, Mn, Co and Mo, M2 represents at least one element selected from among Nb, Ta and Hf, Q represents at least one element selected from among Mg, Cu and Zn and a, b, c and d are, in atomic %, 5 </= a </= 10, 0.1 </= b </= 5, 0.1 </= c </= 5 and 0.01 </= d </= 4. Compacted and consolidated materials are produced by compacting and consolidating a quench-solidified aluminum-based alloy represented by any one of the above-defined formulae. <IMAGE>

IPC 1-7

C22C 21/00; C22F 1/04

IPC 8 full level

B22F 9/02 (2006.01); **C22C 1/04** (2006.01); **C22C 21/00** (2006.01); **C22C 45/08** (2006.01)

CPC (source: EP)

C22C 1/0416 (2013.01); **C22C 21/00** (2013.01); **C22C 45/08** (2013.01)

Citation (examination)

CHEMICAL ABSTRACTS, vol. 104, no. 4, 27 January 1986, Columbus, Ohio, US; abstract no. 22818r, NAKATANI, Y., OHNISHI,T., HATANAKA,T., KOZIMA H. 'STRUCTURE AND MECHANICAL PROPERTIES OF UNIDIRECTIONALLY SOLIDIFIED TERNARY AL- 6%NI-X (TI,CU,MG,FE,CR AND MN) ALLOYS' "abstract" & KEIKINZOKU vol. 10, no. 34, 1984, JAPAN pages 578 - 584

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