

Title (en)

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

Title (de)

Hochfeste 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:  $\text{AlbalNiaM1b}$ ,  $\text{AlbalNiaM1bM2c}$ ,  $\text{AlbalNiaM1bQd}$ , and  $\text{AlbalNiaM1bM2cQd}$ , 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 %,  $5 \leq a \leq 10$ ,  $0.1 \leq b \leq 5$ ,  $0.1 \leq c \leq 5$  and  $0.01 \leq d \leq 4$ . 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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