

Title (en)
ALUMINIUM BASE ALLOYS CONTAINING LITHIUM, COPPER AND MAGNESIUM

Publication
EP 0164294 B1 19890118 (FR)

Application
EP 85420044 A 19850313

Priority
FR 8404482 A 19840315

Abstract (en)
[origin: US4752343A] The present invention relates to Al-base alloys essentially containing Li, Cu and Mg, and having high specific characteristics and a high degree of ductility. Their composition is as follows (% by weight): -Li 1.7 to 2.9 -Cu 1.5 to 3.4 - <IMAGE> -Mg 1.2 to 2.7 -Fe ≤ 0.20 -Si ≤ 0.06 -Cr 0 to 0.3 -Mn 0 to 1.0 -Zr 0 to 0.2 -Ti 0 to 0.1 -Be 0 to 0.01 -Other elements (impurities) -each ≤ 0.05 -total ≤ 0.15 -balance: Al - The heat treatment comprises a homogenization step at about theta (DEG C.)=535-5 (% Mg) which practically dissolves the compounds Al-Cu (Li-Mg); a solution treatment at between theta +10 DEG C.; a quenching step; and a tempering step at from 170 DEG to 220 DEG C. for a period ranging from 8 to 48 hours. The mechanical strength and ductility characteristics obtained are equivalent to those of conventional alloys 2000 or 7000.

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IPC 8 full level
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Citation (examination)
ALUMINUM-LITHIUM ALLOYS II, PROCEEDINGS OF THE SECOND INTERNATIONAL ALUMINUM-LITHIUM CONFERENCE SPONSORED BY THE NONFERROUS METALS COMMITTEE OF THE METALLURGICAL SOCIETY OF AIME, 12-14 april 1983, Monterey, California, W.S. MILLER et al.: "Development of lithium-containing aluminium alloys for the ingot metallurgy production route", p. 343. Alloy C9

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US 71069185 A 19850311; BR 8501143 A 19850314; CA 476315 A 19850312; DE 3567677 T 19850313; EP 85420044 A 19850313; ES 541146 A 19850311; FR 8404482 A 19840315; IL 7456285 A 19850311; JP 10537688 A 19880427; JP 5154785 A 19850314