

Title (en)

Strong, formable, isotropic aluminium alloys for deep drawing

Title (de)

Zum Tiefziehen geeignete hochfeste verformbare isotropische Legierungen auf Aluminiumbasis

Title (fr)

Alliages d'al pour emboutissage-étirage résistants, formables et isotropes

Publication

EP 0504077 B1 19961009 (FR)

Application

EP 92420073 A 19920312

Priority

- CA 2077315 A 19920901
- FR 9103662 A 19910314

Abstract (en)

[origin: EP0504077A1] Al-based alloys intended for deep drawing and/or drawing and exhibiting high mechanical strength characteristics as well as good isotropy (low distortion wedge content) and good cold processability. The alloys according to the invention have the following compositions by weight (%): (I) (II) Fe \leq 0.25 from 0.7 to 1.5 Si \leq 0.25 \leq 0.4 Mn from 0.8 to 1.6 \leq 0.8 Mg from 0.7 to 2.5 from 1.5 to 3 Cu from 0 to 0.6 from 0 to 0.6 Cr from 0 to 0.35 from 0 to 0.35 Ti from 0 to 0.1 from 0 to 0.1 V from 0 to 0.1 from 0 to 0.1 Remainder Al and unavoidable remainder Al and unavoidable impurities: impurities Each \leq 0.05% \leq 0.05 Total \leq 0.15% \leq 0.15 They are particularly well-suited for the manufacture of drawn cans, particularly beverage cans, which are lighter and/or stronger with an increased saving of material, the manufacturing range being wholly comparable with that of the conventional alloys (3004/3104), with optional omission of the intermediate annealing operations.

IPC 1-7

C22C 21/06; **C22C 21/00**; **C22F 1/047**

IPC 8 full level

C22C 21/00 (2006.01); **C22C 21/06** (2006.01); **C22F 1/047** (2006.01)

CPC (source: EP)

C22C 21/00 (2013.01); **C22C 21/06** (2013.01); **C22F 1/047** (2013.01)

Citation (examination)

- CHEMICAL ABSTRACTS, vol. 101, no. 16, 15 Octobre 1984, Columbus, Ohio, US; abstract no. 135619H, 'ALUMINIUM ALLOY SHEET FOR FORMING' page 301 ;colonne 2 ; & JP-A-5 976 864 (NIPPON LIGHT METAL CO LTD) 2 Mai 1984
- CHEMICAL ABSTRACTS, vol. 100, no. 12, 12 Mars 1984, Columbus, Ohio, US; abstract no. 90038D, 'HARD ALUMINIUM ALLOY SHEET OF LOW EARING RATIO FOR CAN BODIES' page 268 ;colonne 1 ; & JP-A-58 126 967 (KOBE STEEL LTD) 28 Juillet 1983
- R.E Sanders,A.B. Trageser,C.S. Rollings "Recycling of Lightweight Aluminum Containers: Present and Future Perspectives", Second International Symposium Recycling of Metals and Engineered Materials, TMS, 1990, pp 187-201.
- S. Tsuschida et H. Tanaka "Aluminium Alloys for D & I Can Stocks", Sumitomo Light Metal Technical Reports, vol. 41, No 40,octobre 1990, pp 40-54.

Cited by

EP0547175A4; FR2703072A1; GB2330590A; GB2330590B; FR2707669A1; CN1043580C; WO9801593A1; WO9502708A1; EP4050115A1; WO2022179856A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0504077 A1 19920916; **EP 0504077 B1 19961009**; CA 2077315 A1 19940302; CA 2077315 C 20000808; DE 504077 T1 19941103; EP 0666330 A2 19950809; EP 0666330 A3 19960717; ES 2051258 T1 19940616; ES 2051258 T3 19961201; GR 940300046 T1 19940729

DOCDB simple family (application)

EP 92420073 A 19920312; CA 2077315 A 19920901; DE 92420073 T 19920312; EP 95105950 A 19920312; ES 92420073 T 19920312; GR 940300046 T 19940729