Title (en)

Aluminium alloy for superplastic deformation.

Title (de)

Aluminiumlegierung für superplastische Umformung.

Title (fr)

Alliage d'aluminium pour déformation superplastique.

Publication

EP 0297035 A1 19881228 (DE)

Application

EP 88810378 A 19880609

Priority

CH 235987 A 19870623

Abstract (en)

[origin: US4874578A] An aluminium alloy suitable as a material for superplastic forming contains 0.8-2.5% or iron, 3.5-6.0% of magnesium, 0.1-0.6% of manganese, 0.05-0.5% of zirconium, at most 6.0% of zinc, at most 3.0% of copper, at most 0.3% of silicon, at most 0.05% of titanium and at most 0.05% of chromium, the remainder being aluminium of commercial purity. The alloy can be processed to give superplastically formable sheets without separate thermomechanical pretreatment.

Abstract (de)

Eine als Werkstoff für superplastische Umformung geeignete Aluminiumlegierung enthält 0,8 - 2,5 % Eisen, 3,5 - 6,0 % Magnesium, 0,1 - 0,6 % Mangan, 0,05 - 0,5 % Zirkon, max. 6,0 % Zink, max. 3,0 % Kupfer, max. 0,3 % Silicium, max. 0,05 % Titan, max. 0,05 % Chrom, sowie als Rest Aluminium handelsüblicher Reinheit. Die Legierung lässt sich ohne besondere thermomechanische Vorbehandlung zu superplastisch umformbaren Blechen verarbeiten.

IPC 1-7

C22C 21/06

IPC 8 full level

C22C 21/06 (2006.01)

CPC (source: EP US)

C22C 21/06 (2013.01 - EP US); Y10S 420/902 (2013.01 - EP US)

Citation (search report)

- [Y] US 4021271 A 19770503 - ROBERTS SIDNEY G
- [Y] FR 2214755 A1 19740819 - BRITISH ALUMINIUM CO LTD [GB]
- [A] DE 2242235 A1 19730308 - SHOWA DENKO KK
- [A] JOURNAL OF MATERIALS SCIENCE, Band 22, Nr. 1, 1987, Seiten 137-143, Chapman and Hall Ltd; A. JUHASZ et al.: "Superplasticity of aluminium alloys grain-refined by zirconium"

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Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

EP 88810378 A 19880609; AT 88810378 T 19880609; DE 3866969 T 19880609; NO 882735 A 19880621; US 20908188 A 19880620