

Title (en)
HIGH STRENGTH ALUMINUM ALLOYS

Title (de)
HOCHFESTE ALUMINIUMLEGIERUNGEN

Title (fr)
ALLIAGES D'ALUMINIUM À HAUTE RÉSISTANCE

Publication
EP 3117018 A4 20171213 (EN)

Application
EP 15760680 A 20150311

Priority

- US 201461951309 P 20140311
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- US 2015019867 W 20150311

Abstract (en)

[origin: WO2015138551A1] The invention is a class of new 6XXX series high strength aluminum alloys with a fine grain structure and methods of manufacture and extrusion. Aluminum alloys of the invention comprise from about 0.90 percent to about 1.2 percent by weight silicon, up to about 0.5 percent by weight iron, from about 0.05 percent to about 0.3 percent by weight copper, up to about 0.75 percent by weight manganese, from about 0.70 percent to about 1.0 percent by weight magnesium, up to about 0.25 percent by weight chromium, up to about 0.05 percent by weight zinc, up to about 0.1 percent by weight titanium, with the balance consisting essentially of aluminum. The alloys are cast and homogenized, then extruded, quenched and artificially aged to produce a fine grain crystallization in the final aluminum product exhibiting superior yield strength and elongation properties.

IPC 8 full level
C22C 21/08 (2006.01); **C22C 21/02** (2006.01); **C22F 1/043** (2006.01)

CPC (source: EP KR US)
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Citation (search report)

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- [X] FR 2360684 A1 19780303 - ALUMINUM CO OF AMERICA [US]
- [X] EP 0104139 A1 19840328 - ALUSUISSE [CH]
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- [A] GRYDIN O ET AL: "Influence of Hot Deformation on Mechanical Properties and Microstructure of a Twin-Roll Cast Aluminium Alloy EN AW-6082", JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, ASM INTERNATIONAL, MATERIALS PARK, OH, US, vol. 23, no. 3, 7 December 2013 (2013-12-07), pages 937 - 943, XP035372458, ISSN: 1059-9495, [retrieved on 20131207], DOI: 10.1007/S11665-013-0816-4
- See references of WO 2015138551A1

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