

Title (en)

Highly conductive aluminium alloy for electrically conductive products

Title (de)

Hochleitfähige Aluminiumlegierung für elektrisch leitfähige Produkte

Title (fr)

Alliage d'aluminium hautement conducteur pour produits conducteurs électriques

Publication

EP 2527479 B1 20140212 (DE)

Application

EP 11167951 A 20110527

Priority

EP 11167951 A 20110527

Abstract (en)

[origin: EP2527479A1] Aluminum alloy for electrically conductive products, comprises (in wt.%) silicon (0.25-0.7), iron (0.25-0.7), copper (less than 0.1), manganese (0.25-0.7), magnesium (0.25-0.7), chromium (= 0.1), zinc (= 0.1), titanium (= 0.1), aluminum (not > 0.05) and unavoidable impurities (not > 0.05), where the total amount of aluminum and unavoidable impurities is 0.15 wt.%. The difference in weights of silicon and iron, silicon and manganese, and silicon and magnesium, are = 0.1 wt.%, respectively. Independent claims are also included for: (1) a strip or sheet comprising the aluminum alloy, where the strip or sheet after a back annealing at 250[deg] C for 1-4 hours, exhibits yield strength of greater than 140 MPa and an electrical conductivity of greater than 31 MV/minute, preferably greater than 31.5 MS/minute at room temperature; and (2) producing the strip made of the aluminum alloy, comprising producing a rolling ingot made of corresponding aluminum alloy, homogenizing the rolling ingot for 2-12 hours at 550-610[deg] C, cooling the rolling ingot to 380-500[deg] C and maintaining the rolling ingot for at least 1 hour, hot rolling the rolling ingot subsequently at 280-500[deg] C, optionally subjecting to a hot strip annealing at 280-380[deg] for greater than 1 hour, and subsequently optionally cold rolling to final thickness.

IPC 8 full level

C22C 21/00 (2006.01); **C22C 21/08** (2006.01); **C22F 1/04** (2006.01); **C22F 1/05** (2006.01); **H01B 1/02** (2006.01)

CPC (source: EP)

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Cited by

CN115612899A; CN115198213A; CN103556016A; EP2871642A1; CN106164311A; US10199522B2; US10047424B2

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DOCDB simple family (publication)

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DOCDB simple family (application)

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