

Title (en)

FORGED ALUMINUM ALLOY MATERIAL AND METHOD FOR PRODUCING SAME

Title (de)

GESCHMIEDETES ALUMINIUMLEGIERUNGSMATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

MATÉRIAU D'ALLIAGE D'ALUMINIUM FORGÉ ET SON PROCÉDÉ DE FABRICATION

Publication

**EP 2811042 A4 20160608 (EN)**

Application

**EP 13744215 A 20130110**

Priority

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- JP 2013050314 W 20130110

Abstract (en)

[origin: EP2811042A1] Provided is an aluminum alloy forged material comprising an excess amount of Si and a large quantity of a strength-increasing element such as Cu or Mn, and by which high strength and high toughness can be stably obtained even if the forged material is thinned, and also provided is a method for producing the same. A forged material constituted from an aluminum alloy which contains prescribed quantities of Mg, Si, Cu, Fe, Ti and B and further contains one or more elements selected from among Mn, Cr and Zr, with the remainder comprising Al and inevitable impurities, wherein the electrical conductivity measured at 20 °C on the surface of the aluminum alloy is greater than 42.5 % IACS but not more than 46.0 % IACS, and the forged aluminum alloy material has 0.2% proof stress of 360 MPa or more and Charpy impact value of 6 J/cm<sup>2</sup> or more.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [I] JP H09249951 A 19970922 - NIPPON LIGHT METAL CO
- [I] JP H07145440 A 19950606 - MITSUBISHI ALUMINIUM
- [I] US 5240519 A 19930831 - KAMIO HAJIME [JP], et al
- [I] JP 2011225988 A 20111110 - KOBE STEEL LTD
- [I] JP 2000144296 A 20000526 - KOBE STEEL LTD
- [I] EP 0987344 A1 20000322 - KOBE STEEL LTD [JP]
- See references of WO 2013114928A1

Cited by

EP2921567A4; EP3214191A1; EP4275812A1; WO2023218058A1; EP3464659B1; EP3464659B2

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