Title (en)

ALUMINUM ALLOY FORGING MATERIAL AND METHOD FOR MANUFACTURING SAME

Title (de)

SCHMIEDEMATERIAL AUS ALUMINIUMLEGIERUNG UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

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

Publication

EP 4151764 A4 20240501 (EN)

Application

EP 21804469 A 20210428

Priority

- JP 2020084577 A 20200513
- JP 2021016908 W 20210428

Abstract (en)

[origin: EP4151764A1] Provided are a 6000-series aluminum alloy forging material having high strength and exceptional toughness (excellent ductility), and an efficient method for manufacturing the same. This aluminum alloy forging material is characterized by being formed from a 6000-series aluminum alloy, having a Cu content of 0.2-1.0 wt.%, the composition of the 6000-series aluminum alloy satisfying relational expressions (1) and (2), and having deposits at the base metal crystal grain boundary, specifically Al-(Fe,Mn,Cr)-Si-type crystalline deposits at the base metal crystal grain boundary. (1) Si (at%)>_2Mg (at%) and (2) 0.2≤surplus Si (wt%)+Mn (wt%)+Cr (wt%)≤1.7.

IPC 8 full level

C22C 21/02 (2006.01); **C22C 21/08** (2006.01); **C22F 1/043** (2006.01); **C22F 1/047** (2006.01); **C22F 1/05** (2006.01)

CPC (source: EP KR US)

C22C 21/02 (2013.01 - EP KR US); **C22C 21/06** (2013.01 - KR); **C22C 21/08** (2013.01 - EP); **C22F 1/043** (2013.01 - EP US); **C22F 1/047** (2013.01 - EP); **C22F 1/05** (2013.01 - EP KR)

Citation (search report)

- [XI] US 2017247782 A1 20170831 - MATSUMOTO KATSUSHI [JP], et al
- [XI] US 2016355914 A1 20161208 - TAKEMURA HIDEKI [JP]
- [X] JP 2000144296 A 20000526 - KOBE STEEL LTD
- [A] US 2014261909 A1 20140918 - SHIH HENRY [TW], et al
- See references of WO 2021230080A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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