

Title (en)

AL-MG-SI ENERGY ABSORPTION EXTRUSION COMPONENT AND METHOD OF MAKING THEREOF

Title (de)

AL-MG-SI ENERGIEABSORBIERENDES STRANGPRESSBAUTEIL UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

COMPOSANT D'EXTRUSION A ABSORPTION D'ENERGIE AL-MG-SI ET SON PROCEDE DE FABRICATION

Publication

EP 4249142 A2 20230927 (EN)

Application

EP 23173415 A 20200703

Priority

- US 201962872384 P 20190710
- US 202016860797 A 20200428
- EP 20183958 A 20200703

Abstract (en)

The present invention relates to an aluminum 6XXX (Al-Mg-Si) alloy extrusion component exhibiting a superior combination of strength and energy absorption for crash management applications in automotive markets and for other applications where energy absorption is a critical property. These components provide yield strengths greater than 260 MPa, and preferably greater than 280 MPa, while simultaneously providing energy absorption per unit cross-sectional area of greater than 20 kJ/mm² using the defined crush testing parameters in the present specification.

IPC 8 full level

B21C 29/00 (2006.01)

CPC (source: CN EP US)

B21C 23/002 (2013.01 - CN EP US); **B21C 23/142** (2013.01 - EP); **B21C 29/003** (2013.01 - CN EP); **B21C 31/00** (2013.01 - CN);
C22C 21/02 (2013.01 - CN EP); **C22C 21/04** (2013.01 - EP); **C22C 21/08** (2013.01 - CN EP US); **C22F 1/002** (2013.01 - CN);
C22F 1/043 (2013.01 - CN); **C22F 1/047** (2013.01 - CN); **C22F 1/05** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3763844 A1 20210113; EP 3763844 B1 20230607; EP 3763844 C0 20230607; CN 112210699 A 20210112; EP 4249142 A2 20230927;
EP 4249142 A3 20231108; US 2021010109 A1 20210114

DOCDB simple family (application)

EP 20183958 A 20200703; CN 202010659712 A 20200709; EP 23173415 A 20200703; US 202016860797 A 20200428