

Title (en)
A HIGH-STRENGTH AL-MG-SI ALUMINIUM ALLOY AND ITS MANUFACTURING PROCESS

Title (de)
HOCHFESTE AL-MG-SI-ALUMINIUMLEGIERUNG UND DEREN HERSTELLUNGSVERFAHREN

Title (fr)
ALLIAGE D'ALUMINIUM AL-MG-SI À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE FABRICATION

Publication
EP 3214191 B1 20200819 (EN)

Application
EP 17468001 A 20170302

Priority
SI 201600063 A 20160304

Abstract (en)
[origin: EP3214191A1] The subject of the invention is a high-strength Al-Mg-Si aluminium alloy and its manufacturing process. The alloy contains 1.3-1.7 wt. % of Si, 0.14-0.25 wt. % of Fe, up to 0.75 wt. % of Cu, 0.7-0.8 wt. % of Mn, 0.85-1.1 wt. % of Mg, 0.15-0.25 wt. % of Cr, up to 0.2 wt. % of Zn, up to 0.1 wt. % of Ti, 0.15-0.25 wt. % of Zr, and other elements up to 0.15 wt. % (single element up to 0.05 wt. %), and the rest being Al. The manufacturing process includes the charge preparing, melting, melt holding, semi-continuous billet casting or continuous bar casting, homogenizing, cutting of the billets, extruding, forming, and heat treatment. The alloy is produced with high mechanical properties, good formability and corrosion resistance, lower energy consumption, and environmental protection during production and application.

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

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Cited by
CN117737490A; CN113186434A; CN116555608A; RU2754541C1; CN114892048A; CN113070648A; CN113817941A; CN115094355A; DE102020001116A1

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