

Title (en)

METHOD FOR MANUFACTURING PRODUCTS MADE OF MAGNESIUM-LITHIUM-ALUMINUM ALLOY

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PRODUKTEN AUS EINER MAGNESIUM-LITHIUM-ALUMINIUM-LEGIERUNG

Title (fr)

PROCÉDÉ DE FABRICATION DE PRODUITS EN ALLIAGE ALUMINIUM, MAGNÉSIUM, LITHIUM

Publication

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Application

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Abstract (en)

[origin: WO2016051060A1] The invention relates to a wrought product made of aluminum alloy having the composition, in percentage by weight, of Mg: 4.0-5.0; Li: 1.0-1.8; Mn: 0.3-0.5; Zr: 0.05-0.15; Ag:  $\leq 0.5$ ; Fe:  $\leq 0.1$ ; Ti:  $<0.15$ ; Si:  $\leq 0.05$ ; other elements  $\leq 0.05$  each and  $\leq 0.15$  in association; the remainder is aluminum. The invention further relates to a method for manufacturing such a wrought product, in which an unprocessed form of aluminum alloy is poured, which has the composition, in percentage by weight, of Mg: 4.0-5.0; Li: 1.0-1.8; Mn: 0.3-0.5; Zr: 0.05-0.15; Ag:  $\leq 0.5$ ; Fe:  $\leq 0.1$ ; Ti:  $<0.15$ ; Si:  $\leq 0.05$ ; other elements  $\leq 0.05$  each and  $\leq 0.15$  in association; the remainder is aluminum. Optionally, said unprocessed form is homogenized; said unprocessed form is hot-worked to obtain a hot-worked product; optionally, said hot-worked product is placed in a solution at a temperature of 360°C to 460°C, preferably of 380°C to 420°C, for 15 minutes to 8 hours; said hot-worked product is quenched; optionally, said hot-worked and quenched product is straightened, optionally, the worked product is cold-worked under controlled conditions to obtain permanent cold working of 1 to 10 %, preferably 2 to 6%, most preferably 3 to 5%; said worked and quenched product is tempered. The invention also relates to the use of said wrought product to produce aircraft structural elements.

IPC 8 full level

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