

Title (en)
PRODUCTS IN ALUMINIUM-COPPER-LITHIUM ALLOY

Title (de)
PRODUKTE AUS ALUMINIUM-KUPFER-LITHIUM-LEGIERUNG

Title (fr)
PRODUITS EN ALLIAGE ALUMINIUM-CUIVRE-LITHIUM

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Abstract (en)
[origin: WO2010055225A1] The invention relates to a process for manufacturing an extruded, rolled and/or forged product based on an aluminium alloy in which: a bath of liquid metal is produced that comprises 2.0 to 3.5 wt% Cu, 1.4 to 1.8 wt% Li, 0.1 to 0.5 wt% Ag, 0.1 to 1.0 wt% Mg, 0.05 to 0.18 wt% Zr, 0.2 to 0.6 wt% Mn and at least one element chosen from Cr, Sc, Hf and Ti, the amount of said element, if it is chosen, being 0.05 to 0.3 wt% in the case of Cr and Sc, 0.05 to 0.5 wt% in the case of Hf and 0.01 to 0.15 wt% in the case of Ti, the balance being aluminium and inevitable impurities; an unwrought product is cast from the liquid metal bath and said unwrought product is homogenized at a temperature between 515°C and 525°C so that the time equivalent to 520°C for the homogenization is between 5 and 20 hours. The products obtained by the process according to the invention represent a particularly advantageous compromise between static mechanical strength and damage tolerance and are useful in particular in the aeronautical construction field.

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