

Title (en)

IMPROVED METHOD FOR PROCESSING SHEET METAL MADE OF AN AL-CU-LI ALLOY

Title (de)

VERBESSERTES VERFAHREN ZUM BEARBEITEN VON METALLBLECHEN AUS EINER AL-CU-LI-LEGIERUNG

Title (fr)

PROCÉDÉ DE TRANSFORMATION AMÉLIORÉ DE TÔLES EN ALLIAGE AL-CU-LI

Publication

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Application

EP 12788613 A 20121012

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Abstract (en)

[origin: WO2013054013A1] The invention relates to a method for manufacturing a rolled product, in particular for the aeronautical industry, containing an aluminum alloy having a composition of 2.1 to 3.9 wt % of Cu, 0.7 to 2.0 wt % of Li, 0.1 to 1.0 wt % of Mg, 0 to 0.6 wt % of Ag, 0 to 1 wt % of Zn, at most 0.20 wt % of Fe + Si, at least one element selected from Zr, Mn, Cr, Se, Hf and Ti, the quantity of said element, if selected, being 0.5 to 0.18 wt % for Zr, 0.1 to 0.6 wt % for Mn, 0.05 to 0.3 wt % for Cr, 0.02 to 0.2 wt % for Se, 0.05 to 0.5 wt % for Hf, and 0.01 to 0.15 wt % for Ti, the other elements constituting at most 0.05 wt % each and 0.15 wt % total, the remainder being aluminum, said method involving flattening and/or pulling with a total deformation of at least 0.5% and less than 3%, and a short heat treatment in which the sheet metal reaches a temperature of between 130 and 170°C for 0.1 to 13 hours. The invention makes it possible, in particular, to simplify the process for shaping sheet metal for fuselages, and to improve the trade-off between static mechanical strength and damage tolerance properties.

IPC 8 full level

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See references of WO 2013054013A1

Cited by

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