

Title (en)

PROCESS FOR MANUFACTURING THIN SHEETS MADE OF 7XXX ALUMINUM ALLOY SUITABLE FOR SHAPING AND ASSEMBLY

Title (de)

VERFAHREN ZUR HERSTELLUNG DÜNNER BLECHE AUS EINER 7XXX-ALUMINIUMLEGIERUNG ZUR FORMGEBUNG UND MONTAGE

Title (fr)

PROCEDE DE FABRICATION DE TOLES MINCES EN ALLIAGE D'ALUMINIUM 7XXX APTES A LA MISE EN FORME ET A L'ASSEMBLAGE

Publication

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Application

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Abstract (en)

[origin: WO2020016506A1] The invention relates to the process for manufacturing a rolled product based on an aluminum alloy in particular for the automotive industry wherein, successively, a bath of liquid metal made from an aluminum-based alloy comprising 4 to 7% by weight of Zn, 0 to 3.0% by weight of Cu, 1.5 to 3.5% by weight of Mg, at most 0.50% by weight of Fe, at most 0.40% by weight of Si, at least one element chosen from Zr, Mn, Cr, Sc, Hf and Ti, the amount of said element, if it is chosen, being 0.05 to 0.18% by weight for Zr, 0.1 to 0.6% by weight for Mn, 0.05 to 0.3% by weight for Cr, 0.02 to 0.2% by weight for Sc, 0.05 to 0.5% by weight for Hf and from 0.005 to 0.15% by weight for Ti, the other elements being at most 0.05% by weight each and 0.15% by weight in total, the remainder being aluminum, is produced; a rolling plate is cast from said bath of liquid metal; said rolling plate is hot-rolled and optionally cold-rolled to give a sheet, said sheet is solution-heat-treated and quenched; a heat treatment is carried out wherein said sheet reaches a temperature between 60 and 120 °C for 8 to 16 hours and preferably between 80 and 100 °C for 10 to 14 h, the product heat-treated in this way is aged for at least 30 days at ambient temperature. The invention also relates to the products obtained by this process and the use thereof for the manufacture of a motor vehicle.

IPC 8 full level

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