

Title (en)  
HIGH-STRENGTH ALUMINIUM ALLOY PRODUCTS AND METHOD FOR THE PRODUCTION THEREOF

Title (de)  
PRODUKTE AUS HOCHFESTER ALUMINIUMLEGIERUNG UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
PRODUITS EN ALLIAGE D ' ALUMINIUM A HAUTE TENACITE ET PROCEDE D ' ELABORATION

Publication  
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Application  
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Abstract (en)  
[origin: US2010006186A1] Process for manufacturing aluminium alloy products, with high toughness and fatigue resistance comprising: (a) preparing an aluminium alloy bath, (b) adding a refining agent containing particles of AlTiC type phases into the bath, (c) casting an as-cast form such as an extrusion ingot, a forging ingot or a rolling ingot, (d) hot transforming the as-cast form, possibly after scalping, to form a blank or a product with final thickness, (e) optionally cold transforming the blank to a final thickness, (f) applying a solution heat treatment and quenching the product output from (d) or (e), followed by relaxation by controlled stretching with permanent elongation between 0.5 and 5%, and optionally annealing, wherein the quantity of refining agent is chosen such that the average casting grain size of the as-cast form is more than 500 µm. The present invention may be used, for example, to manufacture fuselage sheet or light-gauge plates made with 6056 alloy.

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