Title (en)

METHOD OF MANUFACTURING A 7XXX-SERIES ALUMINIUM ALLOY PLATE PRODUCT HAVING IMPROVED FATIGUE FAILURE RESISTANCE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES PLATTENPRODUKTS AUS ALUMINIUMLEGIERUNG DER SERIE 7XXX MIT VERBESSERTER ERMÜDUNGSBRUCHFESTIGKEIT

Title (fr)

PROCÉDÉ DE FABRICATION D'UN PRODUIT PLAT EN ALLIAGE D'ALUMINIUM DE SÉRIE 7XXX PRÉSENTANT UNE MEILLEURE RÉSISTANCE À LA RUPTURE PAR FATIGUE

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Application

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Priority

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Abstract (en)

[origin: WO2019238509A1] The invention relates to a method of manufacturing an 7xxx-seriesaluminium alloy plate product having improved fatigue failure resistance, the method comprising the steps of (a) casting an ingot made of an aluminium alloy of the 7xxx-series comprising (in wt.%): Zn 5 to 9, Mg 1 to 3, Cu 0 to 3,balance aluminium and incidental elements and impurities;(b) homogenizing and/or preheating the cast ingot; (c) hot rolling the ingot into a plate product by rolling the ingot with multiple rolling passes, characterized in that when the intermediate thickness of the plate is between 80 and 220 mm,at least a high reduction hot rolling pass is carried out with a thickness reduction of at least 25%,wherein the plate product has a final thickness of less than 75 mm. The invention is also related to an aluminium alloy plate product and an aerospace structural member produced by this method.

IPC 8 full level

C22C 21/10 (2006.01); **C22F 1/053** (2006.01)

CPC (source: EP KR RU US)

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Citation (opposition)

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DOCDB simple family (publication)

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