

Title (en)

METHOD OF PRODUCING A HIGH-ENERGY HYDROFORMED STRUCTURE FROM AN AL-MG-SC ALLOY

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER HOCHENERGETISCHEN HYDROGEFORMTEN STRUKTUR AUS EINER AL-MG-SC-LEGIERUNG

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE STRUCTURE HYDROFORMÉE À HAUTE ÉNERGIE À PARTIR D'UN ALLIAGE D'AL-MG-SC

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Application

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Abstract (en)

[origin: WO2020108932A1] The invention relates to a method of producing an integrated monolithic aluminium structure, the method comprising the steps of: (a) providing an AlMgSc-series aluminium alloy rolled product with a predetermined thickness of at least 2mm; (b) optionally pre-machining of the aluminium alloy rolled product to an intermediate machined structure; (c) high-energy hydroforming of the plate or optional intermediate machined structure against a forming surface of a rigid die having a contour in accordance with a desired curvature of the integrated monolithic aluminium structure, the high energy forming causing the plate or the intermediate machined structure to conform to the contour of the forming surface to at least one of a uniaxial curvature and a biaxial curvature; (d) annealing and cooling of the high-energy hydroformed structure; (e) machining into a near-final or final integrated monolithic aluminium structure.

IPC 8 full level

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