Title (en)

METHOD OF MANUFACTURING AN ALUMINIUM ALLOY PLATE FOR VACUUM CHAMBER ELEMENTS

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER ALUMINIUMLEGIERUNGSPLATTE FÜR VAKUUMKAMMERELEMENTE

Title (fr)

PROCÉDÉ DE FABRICATION DE PLAQUE D'ALUMINIUM POUR CHAMBRES À VIDE

Publication

EP 3922743 B1 20240724 (EN)

Application

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Priority

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Abstract (en)

[origin: EP3922743A1] The invention relates to a method of manufacturing an aluminium alloy plate for vacuum chamber elements, the method comprising the steps of: (a) providing a rolling feedstock material of an Al-Mg-Si aluminium alloy having a composition comprising of, in wt.%, Mg 0.80%-1.05%, Si 0.70%-1.0%, Mn 0.70%-0.90%, Fe up to 0.20%, Zn up to 0.08%, Cu up to 0.05%, Cr up to 0.03%, Ti up to 0.06%, unavoidable impurities and balance aluminium; (b)homogenizing of the rolling feedstock at a temperature in a range of 550-595°C; (c) hot-rolling of the homogenized rolling feedstock in one or more rolling steps to a hot-rolled plate having a thickness of at least 10 mm; (d) solution heat-treatment (SHT") of the hot rolled plate at a temperature in a range of 540-590°C; (e) rapid cooling the SHT plate; (f) stretching of the cooled SHT plate to obtain a permanent elongation from 1-5%; (g) artificial ageing of the stretched plate.

IPC 8 full level

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