

Vacuum chambers elements made of aluminum alloy

Abstract

- 5 The invention relates to a vacuum chamber element obtained by machining and surface treatment of a plate of thickness at least equal to 10 mm of aluminum alloy, composed as follows (as a percentage by weight), Si: 0.4 – 0.7; Mg: 0.4 - 0.7; Ti 0.01 - < 0.15, Fe < 0.25; Cu < 0.04; Mn < 0.4; Cr 0.01 - < 0.1; Zn < 0.04; other elements < 0.05 each and < 0.15 in total, the rest aluminum. The invention also relates to a manufacturing method for a
- 10 vacuum chamber element wherein successively a plate with a thickness of at least 10 mm of aluminum alloy of series 5XXX or series 6XXX is provided, said plate is machined to a vacuum chamber element, said element is degreased and/or pickled, it is anodized at a temperature of between 10 and 30°C with a solution comprising 100 to 300g/l of sulfuric acid and 10 to 30g/l of oxalic acid and 5 to 30 g/l of at least one polyol, optionally the
- 15 anodized product is hydrated in deionized water at a temperature of at least 98°C preferably for a period of at least about 1h. Products according to the invention have an improved property homogeneity and an advantageous resistance to corrosion.

(No Suitable Figure)