

Title (en)
ALUMINIUM ALLOY STRIPS FOR HEAT EXCHANGERS

Title (de)
BLECH AUS ALUMINIUM-LEGIERUNG FÜR WÄRMETAUSCHER

Title (fr)
BANDES EN ALLIAGE D'ALUMINIUM POUR ECHANGEURS THERMIQUES

Publication
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Application
EP 02790555 A 20021112

Priority

- FR 0203866 W 20021112
- FR 0114948 A 20011119

Abstract (en)

[origin: FR2832497A1] The invention concerns aluminium alloy strips less than 0.3 mm thick for making heat exchangers, consisting of (wt. %): Si<1.0, Fe<1.0, Cu<0.8, Mg<1.0, Mn<1.8, Zn<2.0, In<0.2, Sn<0.2, Bi<0.2, Ti<0.2, Cr<0.25, Zr<0.25, Si+Fe+Mn+Mg>0.8, other elements <0.05, each and <0.15 in total, having between the surface and half the thickness a difference of corrosion potential, measured relative to a saturated calomel electrode in accordance with the ASTM G69 standard, of at least 10 mV. The invention also concerns a method for making such strips by continuous casting in conditions promoting formation of segregations in the strip core, optionally hot rolling, cold rolling optionally with one or several intermediate or final annealing(s) of 1 to 20 hours at a temperature between 200 and 450 DEG C. The fins or separators made from the inventive strips have enhanced resistance to perforating corrosion.

[origin: FR2832497A1] Aluminum alloy strip with a thickness of less than 3 mm for the fabrication of brazed heat exchangers has the following composition, by wt %: Si less than 1.0; Cu less than 0.5; Fe less than 0.7; Mg less than 0.1; Mn : 0.8 - 1.5; Zn less than 2.0; In less than 0.2; Sn less than 0.2; Bi less than 0.2; Ti less than 0.2; Cr less than 0.25; Zr less than 0.25; and other elements less than 0.05 each and less than 0.15 in total. The aluminum alloy strip has a corrosion potential difference of at least 10 mV between its surface and its mid-thickness, measured with respect to a calomel saturated electrode according to the ASTM G69 Standard. An Independent claim is also included for a method for the fabrication of this aluminum alloy strip.

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Citation (examination)

- WO 0153553 A1 20010726 - ALCAN INT LTD [CA], et al
- US 5954117 A 19990921 - GODINHO WILTON D [CN]

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WO2023187301A1; FR3134119A1

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