

Title (en)

FABRICATION METHOD OF STRIPS AND SHEETS MADE OF ZN-CU-TI ALLOYS DESIGNED FOR BUILDING INDUSTRY

Title (de)

VERFAHREN ZUR HERSTELLUNG VON BÄNDERN UND BLECHEN AUS ZN-CU-TI LEGIERUNGEN FÜR DIE BAUINDUSTRIE

Title (fr)

MÉTHODE DE FABRICATION DE BANDES ET FEUILLES D'ALLIAGES ZN-CU-TI POUR LE SECTEUR DE LA CONSTRUCTION

Publication

EP 3187616 A1 20170705 (EN)

Application

EP 15460143 A 20151231

Priority

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Abstract (en)

A fabrication method of flat-rolled products designed for building industry, made of Zn-Cu-Ti alloy with a chemical composition in accordance with EN-988 standard, composed of at least two basic steps - continuous casting process of metal strip and non-integrated rolling process of finished product in form of sheets, wherein after casting step the metal strip with a thickness from 4 mm to 16 mm and width from 500 mm to 2000 mm is heated up to a temperature ranging from 240°C to 270°C before starting the rolling operation and is being rolled in at least five roll passes until the finished product is obtained. The reduction ratios in the last four roll passes of the rolling process are > 40 % and < 50 % and the rolling rate is not less than 100 mm/min. The sheet temperature following the last roll pass amounts to at least 100 °C (#¥ 100 °C). The Zn-Cu-Ti contains from 0,08 wt. % to 0,24 wt. % Cu, from 0,06 wt. % to 0,12 wt. % Ti, not more than 0,015 wt. % Al and rest Zn and tramp elements such as Cd, Fe, Pb and Sn. The finished product is susceptible to plastic strain in low temperatures #¥ +10 °C.

IPC 8 full level

C22F 1/16 (2006.01); **C22C 18/02** (2006.01)

CPC (source: EP)

C22F 1/165 (2013.01)

Citation (applicant)

- GB 1191994 A 19700513 - CENTRE NAT RECH METALL [BE]
- US 4051887 A 19771004 - GROTH VOLKER, et al
- PL 195433 A1 19780731 - REGIONALNY ZWIAZEK SPOLDZIELNI
- PL 195253 B1 20070831 - ZAKLADY METALURGICZNE SILESIA [PL]

Citation (search report)

- [AD] US 4051887 A 19771004 - GROTH VOLKER, et al
- [A] G. BOCZKAL ET AL: "The brittleness of Zn-Cu-Ti Sheet Alloys", ARCHIVES OF METALLURGY AND MATERIALS, vol. 60, no. 3, 12 September 2015 (2015-09-12), XP055302946, DOI: 10.1515/amm-2015-0384

Cited by

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