Title (en)

CHARACTERIZATION METHOD OF FORMABILITY PROPERTIES OF ZINC ALLOY COATING ON A METAL SUBSTRATE

Title (de)

CHARAKTERISIERUNGSVERFAHREN VON FORMBARKEITSEIGENSCHAFTEN EINER ZINKLEGIERUNGSBESCHICHTUNG AUF EINEM METALLSUBSTRAT

Title (fr)

PROCÉDÉ DE CARACTÉRISATION DE PROPRIÉTÉS DE FORMABILITÉ D'UN REVÊTEMENT D'ALLIAGE DE ZINC SUR UN SUBSTRAT MÉTALLIQUE

Publication

EP 4022102 A1 20220706 (EN)

Application

EP 20764085 A 20200831

Priority

- EP 19194662 A 20190830
- EP 2020074218 W 20200831

Abstract (en)

[origin: WO2021038102A1] The present invention relates to a method for the characterisation of formability properties of a zinc alloy coating on a metal substrate and a metal substrate comprising a zinc alloy coating. The method for the characterisation of formability properties of a zinc alloy coating on a metal substrate, the zinc alloy coating containing one or more alloying elements selected from the group consisting of Mg, Al, Ni each with a content of at least 0.3 weight % and at most 10 weight %, optionally one or more additional elements selected from the group consisting of Si, Sb, Pb, Ti, Ca, Mn, Sn, La, Ce, Cr, or Bi, wherein the content by weight of each additional element in the metallic coating is less than 0.3 weight %, inevitable impurities, the remainder being zinc, the zinc alloy coating having a microstructure comprising a primary zinc phase and binary eutectic and/or ternary eutectic phases, wherein Electron Backscatter Diffraction (EBSD) is used to determine a crystallographic orientation-dependent strain hardening exponent (n) of the zinc alloy coating microstructure.

IPC 8 full level

C22C 18/00 (2006.01); **C23C 2/06** (2006.01); **C23C 22/40** (2006.01)

CPC (source: EP KR)

C22C 18/00 (2013.01 - EP); **C22C 18/04** (2013.01 - EP KR); **C23C 2/06** (2013.01 - EP KR); **C23C 30/00** (2013.01 - EP KR)

Citation (search report)

See references of WO 2021038102A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2021038102 A1 20210304; EP 4022102 A1 20220706; KR 20220054384 A 20220502

DOCDB simple family (application)

EP 2020074218 W 20200831; EP 20764085 A 20200831; KR 20227010436 A 20200831