

Title (en)
HOT-DIPPED GALVANIZED STEEL SHEET

Title (de)
FEUERVERZINKTES STAHLBLECH

Title (fr)
TÔLE D'ACIER ALLIÉ GALVANISÉE PAR IMMERSION À CHAUD

Publication
EP 4130319 A4 20230315 (EN)

Application
EP 21776766 A 20210323

Priority
• JP 2020057273 A 20200327
• JP 2021011993 W 20210323

Abstract (en)
[origin: EP4130319A1] A hot-dip zinc-plated steel sheet includes a steel sheet, a boundary layer that is provided on a surface of the steel sheet, and a hot-dip zinc-plated layer that is provided on a surface of the boundary layer. In a surface layer region of the steel sheet, an average grain size is 4.0 μm or less and a standard deviation of grain sizes is 2.0 μm or less. In the boundary layer, a maximum Al concentration is 0.30 mass % or more.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/38** (2006.01); **C22C 38/50** (2006.01); **C22C 38/58** (2006.01); **C23C 2/06** (2006.01)

CPC (source: EP KR US)
B32B 15/013 (2013.01 - US); **C21D 8/0205** (2013.01 - EP); **C21D 8/021** (2013.01 - EP); **C21D 8/0226** (2013.01 - EP); **C21D 8/0278** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 38/001** (2013.01 - US); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - US); **C22C 38/08** (2013.01 - EP US); **C22C 38/10** (2013.01 - US); **C22C 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/24** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP); **C22C 38/38** (2013.01 - EP US); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - KR); **C22C 38/48** (2013.01 - KR); **C22C 38/50** (2013.01 - EP KR); **C22C 38/54** (2013.01 - KR); **C22C 38/58** (2013.01 - EP KR); **C23C 2/06** (2013.01 - EP KR)

Citation (search report)
• [X] US 2017314116 A1 20171102 - KAWATA HIROYUKI [JP], et al
• [X] WO 2019026116 A1 20190207 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & US 2020230918 A1 20200723 - MORISHITA ATSUSHI [JP], et al
• [X] WO 2019026113 A1 20190207 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & US 2020156349 A1 20200521 - MORISHITA ATSUSHI [JP], et al
• See also references of WO 2021193632A1

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
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