

Title (en)
STEEL SHEET FOR CONTINUOUS CAST ENAMELING WITH EXCELLENT RESISTANCE TO FISHSCALING AND PROCESS FOR PRODUCING THE SAME

Title (de)
STAHLBLECH FÜR STRANGGUSSEMAILLIERUNG MIT HERVORRAGENDEM WIDERSTAND GEGENÜBER FISCHSCHUPPENBILDUNG UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TOLE EN ACIER POUR EMAILLAGE PAR COULAGE CONTINU AVEC UNE GRANDE RESISTANCE A L'ECAILLAGE ET SON PROCEDE DE PRODUCTION

Publication
EP 1950317 B1 20160330 (EN)

Application
EP 06823434 A 20061109

Priority
• JP 2006322786 W 20061109
• JP 2005325441 A 20051109

Abstract (en)
[origin: EP1950317A1] The present invention provides a continuously cast enameled steel sheet with remarkably excellent fishscale resistance improving the ability to form spaces in the steel sheet so as to increase the hydrogen trap ability, and a method of production of the same, comprising a steel having as ingredients, by mass%, C: 0.010% or less, Mn: 0.03 to 1.30%, Si: 0.100% or less, Al: 0.030% or less, N: 0.0055% or less, P: 0.035% or less, S: 0.08% or less, O: 0.005 to 0.085%, and B: 0.0003 to 0.0250% and including in the steel sheet not integral or integral oxides differing in mass concentration of B or Mn. The ratio of the maximum concentration and minimum concentration is made 1.2 or more. When not integral, they are present with a straight line distance between centers of the oxides differing in concentration of 0.10 µm to 20 µm and with an angle of the line connecting the centers of the two oxides of within ±10° from the rolling direction.

IPC 8 full level
C22C 38/00 (2006.01); **B22D 11/124** (2006.01); **C21C 7/04** (2006.01); **C21C 7/06** (2006.01); **C21D 9/46** (2006.01); **C22C 38/60** (2006.01); **C23D 5/00** (2006.01)

CPC (source: EP KR US)
B22D 11/124 (2013.01 - EP KR US); **C21C 7/04** (2013.01 - EP KR US); **C21C 7/06** (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP KR US); **C22C 38/004** (2013.01 - KR); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - KR); **C22C 38/32** (2013.01 - EP KR US); **C23D 5/00** (2013.01 - EP US)

Cited by
EP2003221A4; EA024029B1; EP2684972A4; US10344360B2; WO2012136270A1; WO2021091878A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1950317 A1 20080730; EP 1950317 A4 20100324; EP 1950317 B1 20160330; CN 101356295 A 20090128; CN 101356295 B 20120704; ES 2568678 T3 20160503; JP 4954889 B2 20120620; JP WO2007055400 A1 20090430; KR 101019225 B1 20110304; KR 20080058477 A 20080625; PT 1950317 E 20160603; TW 200718789 A 20070516; TW I346710 B 20110811; US 2009047168 A1 20090219; WO 2007055400 A1 20070518

DOCDB simple family (application)
EP 06823434 A 20061109; CN 200680050708 A 20061109; ES 06823434 T 20061109; JP 2006322786 W 20061109; JP 2007544239 A 20061109; KR 20087011276 A 20061109; PT 06823434 T 20061109; TW 95141493 A 20061109; US 8460906 A 20061109