Title (en)

PROCESSES FOR PRODUCTION OF STEEL SHEETS FOR CANS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON STAHLBLECHEN FÜR BECHER

Title (fr)

PROCÉDÉ POUR LA FABRICATION DE FEUILLES D'ACIER POUR BOÎTES MÉTALLIQUES

Publication

EP 2123780 B1 20151202 (EN)

Application

EP 08711889 A 20080219

Priority

- JP 2008053125 W 20080219
- JP 2007041065 A 20070221

Abstract (en)

[origin: EP2123780A1] A high-strength tin mill black plate is manufactured so as to have a tensile strength of 550 to 650 MPa and a total elongation of 5% or more in such a manner that hot rolling is performed at a finishing temperature higher than or equal to an Ar 3 transformation point, cold rolling is performed, and recovery annealing is performed at a temperature 20°C to 200°C lower than a recrystallization starting temperature. Furthermore, a tin mill black plate is manufactured so as to have a tensile strength of 550 to 700 MPa and a total elongation of 4% or more and be capable of being manufactured by annealing at the same temperature as that of an ordinary tin mill black plate in such a manner that a steel sheet containing at least one of 0.001% to 0.05% Nb and 0.0001% to 0.005% B.

IPC 8 full level

C22C 38/04 (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/06** (2006.01)

CPC (source: EP KR)

C21D 8/02 (2013.01 - EP); **C21D 8/0426** (2013.01 - KR); **C21D 8/0436** (2013.01 - KR); **C21D 8/0473** (2013.01 - KR); **C21D 9/46** (2013.01 - EP); **C21D 9/48** (2013.01 - KR); **C22C 38/004** (2013.01 - KR); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP KR)

Citation (examination)

WO 03031670 A1 20030417 - NIPPON STEEL CORP [JP]

Citation (opposition)

Opponent : TATA STEEL

- EP 2123780 A1 20091125 - JFE STEEL CORP [JP]
- US 3264144 A 19660802 - FRAZIER ROBERT H, et al
- US 3950190 A 19760413 - LAKE PETER B
- US 4067754 A 19780110 - ELIAS JAMES A, et al
- JP H06248332 A 19940906 - NIPPON STEEL CORP
- JP H08127816 A 19960521 - NIPPON STEEL CORP
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- MEYER: "Columbium, Titanium and Vanadium in Normalised, Thermomechanically Treated and Cold-Rolled Steels", HEISTERKAMP, MÜSCHENBORN, MICROALLOYING, vol. 75, pages 153 - 167
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- RECRYSTALLIZATION AND RELATED ANNEALING PHENOMENA, 2004, pages 169 - 172 and 215
- "ASTM E140-02, Standard Hardness Conversion Tables for Metals, Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness", SUPERFICIAL HARDNESS, KNOOP HARDNESS, AND SCLEROSCOPE HARDNESS, 2002

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Designated contracting state (EPC)

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

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