

Title (en)

HIGH-STRENGTH COLD-ROLLED STEEL PLATE AND METHOD FOR PRODUCING SAME

Title (de)

HOCHFESTE KALTGEWALZTE STAHLPLATTE UND VERFAHREN ZU DEREN HERSTELLUNG

Title (fr)

TÔLE EN ACIER LAMINÉE À FROID HAUTEMENT RÉSISTANTE, ET PROCÉDÉ DE FABRICATION DE CELLE-CI

Publication

EP 3263728 B1 20190911 (EN)

Application

EP 15883094 A 20151221

Priority

- JP 2015038506 A 20150227
- JP 2015006347 W 20151221

Abstract (en)

[origin: EP3263728A1] Provided are a high-strength cold-rolled steel sheet excellent in terms of elongation (EL) and hole expansion ratio (») having a low yield ratio (YR) and a method for manufacturing the steel sheet. The steel sheet has a chemical composition containing, by mass%, C: 0.15% to 0.25%, Si: 1.0% to 2.0%, Mn: 1.8% to 2.5%, P: 0.10% or less, S: 0.010% or less, Al: 0.10% or less, N: 0.010% or less, and the balance being Fe and inevitable impurities, and a multi-phase microstructure including ferrite having an average crystal grain diameter of 5 µm or less in an amount of 30% to 55% in terms of volume fraction, retained austenite having an average crystal grain diameter of 2 µm or less in an amount of 5% to 15% in terms of volume fraction, and tempered martensite having an average crystal grain diameter of 2 µm or less in an amount of 30% to 60% in terms of volume fraction, in which the number of grains of the retained austenite existing in an area of 1000 µm² is 10 or more.

IPC 8 full level

C21D 6/00 (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/18** (2006.01)

CPC (source: EP KR US)

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Cited by

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