

Title (en)
METHOD FOR PRODUCING HIGH-STRENGTH STEEL PLATE

Title (de)
VERFAHREN ZUR HERSTELLUNG VON HOCHFESTEM STAHLBLECH

Title (fr)
PROCÉDÉ DE PRODUCTION DE TÔLE D'ACIER À HAUTE RÉSISTANCE

Publication
EP 3109330 A1 20161228 (EN)

Application
EP 15751393 A 20150203

Priority
• JP 2014028030 A 20140218
• JP 2015000460 W 20150203

Abstract (en)
Provided are a high-strength steel sheet that has excellent chemical conversion treatability and corrosion resistance after electrodeposition coating even when the content of Si or Mn is high and a method for manufacturing the high-strength steel sheet. When a steel sheet containing, by mass %, 0.03% to 0.35% C, 0.01% to 0.50% Si, 3.6% to 8.0% Mn, 0.01% to 1.0% Al, 0.10% or less P, and 0.010% or less S, the remainder being Fe and inevitable impurities is continuously annealed, the steel sheet is heated at a heating rate of 7 °C/s or more in a temperature range corresponding to an annealing furnace inside temperature of 450°C to A°C (where 500 #≦ A #≦ 600), the maximum end-point temperature of the steel sheet in an annealing furnace is 600°C to 700°C, the transit time of the steel sheet in a temperature range corresponding to a steel sheet temperature of 600°C to 700°C is 30 seconds to 10 minutes, and the concentration of hydrogen in an atmosphere is 20% by volume or more in a heating step.

IPC 8 full level
C21D 9/46 (2006.01); **C21D 1/76** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 1/26 (2013.01 - EP KR US); **C21D 1/76** (2013.01 - EP KR US); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/0473** (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/00** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/008** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/08** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US); **C22C 38/58** (2013.01 - KR); **C22C 38/60** (2013.01 - EP US); **C25F 1/06** (2013.01 - EP US); **C21D 9/561** (2013.01 - EP US)

Cited by
US11421296B2

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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

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EP 3109330 A1 20161228; **EP 3109330 A4 20170322**; **EP 3109330 B1 20180822**; CN 106029919 A 20161012; JP 2015151595 A 20150824; JP 6032221 B2 20161124; KR 20160122813 A 20161024; MX 2016010669 A 20161108; US 2017067131 A1 20170309; WO 2015125422 A1 20150827

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