

Title (en)

STEEL SHEET FOR NITRIDING AND PRODUCTION METHOD THEREFOR

Title (de)

STAHLBLECH ZUM NITRIEREN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE D'ACIER POUR NITRURATION ET PROCÉDÉ DE PRODUCTION DE CELLE-CI

Publication

**EP 2955242 B1 20170503 (EN)**

Application

**EP 14779834 A 20140320**

Priority

- JP 2013076824 A 20130402
- JP 2014001603 W 20140320

Abstract (en)

[origin: EP2955242A1] Provided is a steel sheet for nitriding having excellent formability and punchability. A steel sheet for nitriding has a composition including, in percent by mass, 0.02% to 0.08% of C, 0.1% or less of Si, 0.2% to 1.8% of Mn, 0.05% or less of P, 0.02% or less of S, 0.01% to 0.06% of Al, 0.5% to 1.5% of Cr, 0.01% or less of N, and the balance being Fe and incidental impurities; and has a microstructure including ferrite as a main phase and pearlite and/or bainite as a secondary phase. The ferrite has a fraction of 70% or more in the entire microstructure and an average grain diameter of 5 to 25  $\mu\text{m}$ . An average length of the major axis of cementite present in the secondary phase in a cross section in the rolling direction of the steel sheet is 3.0  $\mu\text{m}$  or less.

IPC 8 full level

**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/36** (2006.01); **C22C 38/38** (2006.01); **C23C 8/26** (2006.01); **C23C 8/32** (2006.01)

CPC (source: EP US)

**C21D 6/002** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/36** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US); **C23C 8/26** (2013.01 - EP US); **C23C 8/32** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C21D 2211/009** (2013.01 - EP US)

Cited by

EP3561111A4; US11649515B2

Designated contracting state (EPC)

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