

Title (en)  
STEEL ALLOY FOR A LOW-ALLOY, HIGH-STRENGTH STEEL

Title (de)  
STAHLLEGIERUNG FÜR EINEN NIEDRIG LEGIERTEN, HOCHFESTEN STAHL

Title (fr)  
ALLIAGE D'ACIER POUR UN ACIER FAIBLEMENT ALLIÉ À HAUTE RÉSISTANCE

Publication  
**EP 2895635 A1 20150722 (DE)**

Application  
**EP 13789475 A 20130828**

Priority

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- DE 2013000519 W 20130828

Abstract (en)  
[origin: WO2014040585A1] The invention relates to a low-alloy, high-strength, carbide-free bainitic steel for producing bands, sheets and tubes having the following chemical composition (in % by weight): 0.10 - 0.70 C; 0.25 - 4.00 Si; 0.05 - 3.00 Al; 1.00 - 3.00 Mn; 0.10 - 2.00 Cr; 0.001 - 0.50 Nb; 0.001 - 0.025 N; max. 0.15 P; max. 0.05 S; remainder iron having steel production-related impurities to one or more elements from Mo, Ni, Co, W, Nb, Ti or V and Zr are optionally added and rare earths provided that in order to avoid primary precipitations of Al the condition  $Al \times N < 5 \times 10^{-3}$  (% by weight) and in order to suppress cementite formation the condition  $Si + Al > 4 \times C$  (% by weight) are satisfied.

IPC 8 full level  
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CPC (source: EP RU 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 38/22** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP RU US); **C22C 38/34** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP RU US); **C22C 38/48** (2013.01 - RU); **C22C 38/58** (2013.01 - RU); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US)

Citation (search report)  
See references of WO 2014040585A1

Cited by  
CN110662849A; CN109536843A

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Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2014040585 A1 20140320**; AR 092556 A1 20150422; AU 2013314787 A1 20150430; AU 2018201165 A1 20180322; AU 2018201165 B2 20190926; BR 112015005216 A2 20220726; CA 2881686 A1 20140320; CL 2015000634 A1 20151120; DK 2895635 T3 20190520; EP 2895635 A1 20150722; EP 2895635 B1 20190306; ES 2729562 T3 20191104; JP 2015533942 A 20151126; JP 6513568 B2 20190515; KR 102079612 B1 20200220; KR 20150070150 A 20150624; MX 2015003103 A 20151022; PE 20151042 A1 20150727; PL 2895635 T3 20190830; RU 2015113522 A 20161110; RU 2620216 C2 20170523; SI 2895635 T1 20190628; TR 201903460 T4 20190422; TW 201432061 A 20140816; UA 116111 C2 20180212; US 2015267282 A1 20150924; US 2020131608 A1 20200430; ZA 201502450 B 20160928

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**DE 2013000519 W 20130828**; AR P130103281 A 20130913; AU 2013314787 A 20130828; AU 2018201165 A 20180216; BR 112015005216 A 20130828; CA 2881686 A 20130828; CL 2015000634 A 20150313; DK 13789475 T 20130828; EP 13789475 A 20130828; ES 13789475 T 20130828; JP 2015531464 A 20130828; KR 20157009568 A 20130828; MX 2015003103 A 20130828; PE 2015000339 A 20130828; PL 13789475 T 20130828; RU 2015113522 A 20130828; SI 201331451 T 20130828; TR 201903460 T 20130828; TW 102132420 A 20130909; UA A201503379 A 20130828; US 201314428286 A 20130828; US 201815898890 A 20180219; ZA 201502450 A 20150413