

Title (en)
STEEL SHEET AND METHOD TO MANUFACTURE IT

Title (de)
STAHLFLACHPRODUKT UND VERFAHREN ZUR HERSTELLUNG EINES STAHLFLACHPRODUKTS

Title (fr)
TÔLE D'ACIER ET MÉTHODE POUR SON OBTENTION

Publication
EP 2855717 A1 20150408 (DE)

Application
EP 13726583 A 20130605

Priority
• DE 102012104894 A 20120605
• EP 2013061628 W 20130605

Abstract (en)
[origin: WO2013182621A1] The invention relates to a steel and a sheet steel product produced therefrom, which have optimized mechanical properties and can be produced inexpensively without recourse having to be made to expensive alloying elements which are subject to great fluctuations in respect of their procurement costs. The steel and the sheet steel product have, according to the invention, the following composition (in % by weight): C: 0.12 - 0.18%; Si: 0.05 - 0.2%; Mn: 1.9 - 2.2%; Al: 0.2 - 0.5%; Cr: 0.05 - 0.2%; Nb: 0.01 - 0.06%; balance Fe and production-related unavoidable impurities including contents of phosphorus, sulphur, nitrogen, molybdenum, boron, titanium, nickel and copper, with the proviso that their contents are in each case: P: <= 0.02%, S: <= 0.003%, N: <= 0.008%, Mo: <= 0.1%, B: <= 0.0007%, Ti: <= 0.01%, Ni: <= 0.1%, Cu: <= 0.1%. The invention likewise relates to a process for producing a sheet steel product which consists of a steel according to the invention.

IPC 8 full level
C21D 6/00 (2006.01); **C21D 6/02** (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C21D 9/46** (2006.01); **C21D 9/52** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/22** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 6/002 (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 6/02** (2013.01 - EP KR US); **C21D 8/02** (2013.01 - KR); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0236** (2013.01 - EP KR US); **C21D 8/0247** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 8/0405** (2013.01 - EP US); **C21D 8/0426** (2013.01 - EP US); **C21D 8/0436** (2013.01 - EP US); **C21D 8/0447** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C21D 9/52** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (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 - KR); **C22C 38/28** (2013.01 - EP KR US); **C22C 38/32** (2013.01 - EP KR US); **C22C 38/38** (2013.01 - KR); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **C23C 2/02** (2013.01 - EP KR US); **C23C 2/0224** (2022.08 - EP KR US); **C23C 2/024** (2022.08 - EP KR US); **C23C 2/06** (2013.01 - EP KR US); **C23C 2/40** (2013.01 - EP US); **C23F 17/00** (2013.01 - US); **C25D 7/0614** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US)

Designated contracting state (EPC)
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

DOCDB simple family (publication)
WO 2013182621 A1 20131212; CN 104520448 A 20150415; CN 104520448 B 20170811; CN 104583424 A 20150429; CN 104583424 B 20170308; EP 2855717 A1 20150408; EP 2855717 B1 20200122; EP 2855718 A1 20150408; EP 2855718 B1 20190515; JP 2015525292 A 20150903; JP 2015525293 A 20150903; JP 6310452 B2 20180411; JP 6374864 B2 20180815; KR 102073441 B1 20200204; KR 102073442 B1 20200204; KR 20150023566 A 20150305; KR 20150028267 A 20150313; US 2015122377 A1 20150507; US 2015152533 A1 20150604; US 9976205 B2 20180522; WO 2013182622 A1 20131212

DOCDB simple family (application)
EP 2013061628 W 20130605; CN 201380029895 A 20130605; CN 201380029968 A 20130605; EP 13726583 A 20130605; EP 13726805 A 20130605; EP 2013061629 W 20130605; JP 2015515517 A 20130605; JP 2015515518 A 20130605; KR 20147037107 A 20130605; KR 20147037108 A 20130605; US 201314406001 A 20130605; US 201314406047 A 20130605