

Title (en)

ULTRA HIGH-STRENGTH STRUCTURAL STEEL AND METHOD FOR PRODUCING ULTRA HIGH-STRENGTH STRUCTURAL STEEL

Title (de)

ULTRAHOCHFESTER BAUSTAHL UND VERFAHREN ZUR HERSTELLUNG DES ULTRAHOCHFESTEN BAUSTAHLS

Title (fr)

ACIER STRUCTUREL À ULTRA-HAUTE RÉSISTANCE ET PROCÉDÉ DE PRODUCTION D'UN ACIER STRUCTUREL À ULTRA-HAUTE RÉSISTANCE

Publication

EP 2646582 A1 20131009 (EN)

Application

EP 11815448 A 20111201

Priority

- FI 20106275 A 20101202
- FI 2011051066 W 20111201

Abstract (en)

[origin: WO2012072884A1] The invention relates to an ultra high- strength structural steel, which is produced by hot- rolling as a sheet-like steel product. The invention relates to the production of a direct quenched and ultra high-strength structural steel, whose composition, as percentages by weight, comprises C: 0.07 - 0.12 %, Si: 0.1- 0.7 %, Mn: 0.5 - 2.0 %, Ni : 0.8 - 4.5 %, Cu: 0.25 - 3.0 %, Cr: 0.5 - 1.6 %, Mo: < 0.8 %, and Ti: ? 0.04 % as well as iron, unavoidable impurities and residual contents. The invention also relates especially to an ultra high-strength structural steel, whose composition comprises above said elements, wherein, in addition to high strength, the structural steel is also excellently weldable and possesses excellent impact toughness properties.

IPC 8 full level

C21D 1/18 (2006.01); **C21D 8/02** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP FI)

C21D 1/18 (2013.01 - EP); **C21D 6/005** (2013.01 - FI); **C21D 8/0226** (2013.01 - EP FI); **C22C 38/42** (2013.01 - EP FI); **C22C 38/44** (2013.01 - EP); **C22C 38/50** (2013.01 - EP FI); **C21D 2211/008** (2013.01 - EP)

Citation (search report)

See references of WO 2012072884A1

Cited by

WO2019124776A1; KR20190076765A

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

DOCDB simple family (publication)

WO 2012072884 A1 20120607; **WO 2012072884 A9 20140828**; CN 103348020 A 20131009; CN 103348020 B 20161109;
EP 2646582 A1 20131009; EP 2646582 B1 20191030; ES 2761839 T3 20200521; FI 20106275 A0 20101202; FI 20106275 A 20120603;
RU 2013129002 A 20150110; RU 2586953 C2 20160610

DOCDB simple family (application)

FI 2011051066 W 20111201; CN 201180066512 A 20111201; EP 11815448 A 20111201; ES 11815448 T 20111201; FI 20106275 A 20101202;
RU 2013129002 A 20111201