

Title (en)
DUAL PHASE STEEL WITH IMPROVED PROPERTIES

Title (de)
ZWEIPHASENSTAHL MIT VERBESSERTEN EIGENSCHAFTEN

Title (fr)
ACIER À DEUX PHASES À PROPRIÉTÉS AMÉLIORÉES

Publication
EP 3245310 A2 20171122 (EN)

Application
EP 16706031 A 20160114

Priority
• US 201562103286 P 20150114
• US 2016013338 W 20160114

Abstract (en)
[origin: US2016201159A1] A method for processing a dual phase steel sheet. The method includes heating the steel sheet to a first temperature (T1), cooling the steel sheet to a second temperature (T2), transitioning the steel sheet to a third temperature (T3), and cooling the steel sheet to room temperature. T1 is at least above the temperature at which the steel sheet transforms to austenite and ferrite. T2 is below the martensite start temperature (Ms). The cooling rate to T2 is sufficiently rapid to transform at least some austenite to martensite.

IPC 8 full level
C22C 38/04 (2006.01); **C21D 8/04** (2006.01)

CPC (source: CN EP KR US)
C21D 1/18 (2013.01 - CN); **C21D 6/002** (2013.01 - EP KR US); **C21D 6/005** (2013.01 - EP KR US); **C21D 6/008** (2013.01 - EP KR US); **C21D 8/0478** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - CN EP KR US); **C22C 38/04** (2013.01 - KR); **C22C 38/06** (2013.01 - EP US); **C22C 38/22** (2013.01 - CN EP KR US); **C22C 38/24** (2013.01 - EP KR US); **C22C 38/26** (2013.01 - CN EP KR US); **C22C 38/28** (2013.01 - EP KR US); **C22C 38/32** (2013.01 - EP US); **C22C 38/38** (2013.01 - CN EP KR US); **C23C 2/06** (2013.01 - US); **C23C 2/26** (2013.01 - CN EP KR US); **C21D 2211/002** (2013.01 - CN); **C21D 2211/005** (2013.01 - CN); **C21D 2211/008** (2013.01 - CN)

Citation (search report)
See references of WO 2016115303A2

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)
US 2016201159 A1 20160714; AU 2016206736 A1 20170713; AU 2016206736 B2 20190214; BR 112017014686 A2 20180109; CA 2972470 A1 20160721; CA 2972470 C 20191022; CN 107109586 A 20170829; CN 110218942 A 20190910; CO 2017006995 A2 20170920; EP 3245310 A2 20171122; JP 2018508653 A 20180329; KR 20170095363 A 20170822; KR 20200003264 A 20200108; MX 2017009192 A 20180430; PH 12017501293 A1 20180129; RU 2017123566 A 20190214; RU 2017123566 A3 20190214; TW 201641715 A 20161201; TW 201812053 A 20180401; TW I605137 B 20171111; TW I653342 B 20190311; UA 119189 C2 20190510; WO 2016115303 A2 20160721; WO 2016115303 A3 20160909

DOCDB simple family (application)
US 201614995409 A 20160114; AU 2016206736 A 20160114; BR 112017014686 A 20160114; CA 2972470 A 20160114; CN 201680005651 A 20160114; CN 201910572454 A 20160114; CO 2017006995 A 20170712; EP 16706031 A 20160114; JP 2017536960 A 20160114; KR 20177019775 A 20160114; KR 20197038576 A 20160114; MX 2017009192 A 20160114; PH 12017501293 A 20170714; RU 2017123566 A 20160114; TW 105101117 A 20160114; TW 106132495 A 20160114; UA A201707087 A 20160114; US 2016013338 W 20160114