Title (en)

HIGH-STRENGTH STEEL SHEET AND PROCESS FOR PRODUCING SAME

Title (de)

HOCHFESTES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FEUILLE D'ACIER À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2796584 A1 20141029 (EN)

Application

EP 12860717 A 20121129

Priority

- JP 2011276997 A 20111219
- JP 2012007663 W 20121129

Abstract (en)

Provided are a high-strength steel sheet, excellent in formability, having a TS of 600 MPa to 700 MPa, an El of 25% or more, and a » of 80% or more and a method for producing the same. A high-strength steel sheet has a composition containing 0.10% to 0.18% C, more than 0.5% to 1.5% Si, 0.5% to 1.5% Mn, 0.05% or less P, 0.005% or less S, and 0.05% or less Al on a mass basis, the remainder being Fe and inevitable impurities and also has a microstructure containing ferrite and pearlite. The volume fraction of the ferrite is 70% to 97%. The volume fraction of the pearlite is 3% or more. The volume fraction of cementite present at grain boundaries of the ferrite is 2% or less. The sum of the volume fractions of phases other than the ferrite, the pearlite, and the cementite is less than 3%. The average grain size of the ferrite is 7 µm or less.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 9/46** (2006.01); **C22C 38/06** (2006.01); **C22C 38/28** (2006.01); C21D 8/04 (2006.01)

CPC (source: EP US)

C21D 8/0226 (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 8/0426** (2013.01 - EP US); **C21D 8/0463** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/00** (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 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/18** (2013.01 - EP US); C21D 1/26 (2013.01 - US); C21D 2211/005 (2013.01 - EP US); C21D 2211/009 (2013.01 - EP US)

Cited by

WO2021185514A1

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)

EP 2796584 A1 20141029; **EP 2796584 A4 20151014**; **EP 2796584 B1 20180307**; CN 104011240 A 20140827; CN 104011240 B 20161123; IN 1170KON2014 A 20151016; JP 2013127099 A 20130627; JP 5316634 B2 20131016; KR 101624439 B1 20160525; KR 20140100994 A 20140818; US 2014332123 A1 20141113; WO 2013094130 A1 20130627

DOCDB simple family (application)

EP 12860717 A 20121129; CN 201280063029 A 20121129; IN 1170KON2014 A 20140530; JP 2011276997 A 20111219; JP 2012007663 W 20121129; KR 20147018870 A 20121129; US 201214363166 A 20121129