

Title (en)
HIGH-HARDNESS STEEL SHEET, AND MANUFACTURING METHOD THEREOF

Title (de)
STAHLBLECH MIT HOHER HÄRTE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TÔLE D'ACIER À DURETÉ ÉLEVÉE ET SON PROCÉDÉ DE FABRICATION

Publication
EP 4324954 A2 20240221 (EN)

Application
EP 24150998 A 20160818

Priority
• KR 20150117985 A 20150821
• EP 16839505 A 20160818
• KR 2016009079 W 20160818

Abstract (en)
The objective of one aspect of the present invention is to provide a high-hardness steel sheet and a manufacturing method, the high-hardness steel sheet having Brinell hardness of 500 HB or more by setting a steel composition according to a minimum carbon content relation (1). Another aspect of the present invention relates to, as a high-hardness steel sheet having Brinell hardness of 500 HB or more and to be manufactured by comprising a process of cooling a hot rolled steel sheet, a high-hardness steel sheet having a minimum carbon (C) content which meets the following relation (1), having a microstructure comprising 95 vol% or more of martensite phase, and having Brinell hardness of 500 HB or more; and a manufacturing method therefor. $C_{\text{minimum carbon content}} \geq 0.481 - 0.104Mn - 0.035Si - 0.088Cr - 0.054Ni - 0.035Mo - 0.0003C.R.$ (wherein Mn, Si, Cr, Ni and Mo are a value representing the content of each element by wt%, and C.R. is a value represent cooling rate during cooling a hot rolled steel sheet and the unit thereof is °C /sec)

IPC 8 full level
C22C 38/06 (2006.01)

CPC (source: EP US)
C21D 1/18 (2013.01 - EP US); **C21D 8/02** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (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); **C21D 2211/002** (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

DOCDB simple family (publication)
EP 3339464 A1 20180627; **EP 3339464 A4 20180808**; **EP 3339464 B1 20240703**; CN 107923023 A 20180417; CN 107923023 B 20200424; EP 4324954 A2 20240221; EP 4324954 A3 20240522; JP 2018528325 A 20180927; JP 6843119 B2 20210317; KR 101696094 B1 20170113; US 2018237875 A1 20180823; WO 2017034216 A1 20170302

DOCDB simple family (application)
EP 16839505 A 20160818; CN 201680047778 A 20160818; EP 24150998 A 20160818; JP 2018509544 A 20160818; KR 20150117985 A 20150821; KR 2016009079 W 20160818; US 201615751591 A 20160818