

Title (en)  
HIGH HARDNESS ABRASION RESISTANT STEEL WITH EXCELLENT TOUGHNESS AND CUTTING CRACK RESISTANCE, AND METHOD FOR MANUFACTURING SAME

Title (de)  
HOCHHARTER ABRIEBFESTER STAHL MIT HERVORRAGENDER FESTIGKEIT UND SCHNEIDRISSBESTÄNDIGKEIT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
ACIER DE HAUTE DURETÉ RÉSISTANT À L'ABRASION AVEC UNE TÉNACITÉ ET UNE RÉSISTANCE À LA FISSURATION DE COUPE EXCELLENTE, ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 3392364 B1 20200729 (EN)**

Application  
**EP 16875937 A 20161122**

Priority  
• KR 20150179009 A 20151215  
• KR 2016013491 W 20161122

Abstract (en)  
[origin: EP3392364A1] The present invention relates to a high hardness abrasion resistant steel having excellent toughness and cutting crack resistance, and a method for manufacturing the same. A high hardness abrasion resistant steel according to one aspect of the present invention has a composition containing, by weight ratio, 2.1 to 4.0% of Mn, 0.15 to 0.2% of C, 0.02 to 0.5% of Si, 0.2 to 0.7% of Cr, the remainder being Fe and other unavoidable impurities, has a microstructure in which the prior austenite grain size is 25  $\mu\text{m}$  or less and martensite is the main structure, and satisfies the condition where  $\text{Ac3-Ac1}$  is 100 °C or less.

IPC 8 full level  
**C22C 38/38** (2006.01); **C21D 1/18** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01)

CPC (source: EP US)  
**C21D 1/18** (2013.01 - EP US); **C21D 6/002** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/02** (2013.01 - EP US); **C21D 8/0205** (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 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US); **C21D 2211/001** (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 3392364 A1 20181024; EP 3392364 A4 20181024; EP 3392364 B1 20200729**; CN 108368589 A 20180803; CN 108368589 B 20201020; JP 2019504192 A 20190214; JP 6691967 B2 20200513; KR 101736621 B1 20170530; US 2019010571 A1 20190110; WO 2017104995 A1 20170622

DOCDB simple family (application)  
**EP 16875937 A 20161122**; CN 201680073115 A 20161122; JP 2018530497 A 20161122; KR 20150179009 A 20151215; KR 2016013491 W 20161122; US 201616062566 A 20161122