

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

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Application
EP 16875937 A 20161122

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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 µm or less and martensite is the main structure, and satisfies the condition where Ac3-Ac1 is 100 °C or less.

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Citation (search report)
• [I] JP 2004300474 A 20041028 - JFE STEEL KK
• [A] WO 2015115086 A1 20150806 - JFE STEEL CORP [JP]
• [A] WO 2014156079 A1 20141002 - JFE STEEL CORP [JP]
• [A] EP 2881486 A1 20150610 - BAOSHAN IRON & STEEL [CN]
• [A] WO 2014045552 A1 20140327 - JFE STEEL CORP [JP]
• See references of WO 2017104995A1

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