

Title (en)
PROCESS FOR MANUFACTURING HIGH MANGANESE CONTENT STEEL WITH HIGH MECHANICAL RESISTANCE AND FORMABILITY, AND STEEL SO OBTAINABLE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES HOCH MANGAN STAHL MIT GUTER VERFORMBARKEIT UND GUTEN ZUGEIGENSCHAFTEN

Title (fr)
PROCÉDÉ DE FABRICATION D'UN ACIER À HAUTE TENEUR EN MANGANÈSE PRÉSENTANT UNE RÉSISTANCE MÉCANIQUE ET UNE APTITUDE AU FORMAGE ÉLEVÉES, ET ACIER OBTENU PAR LE PROCÉDÉ

Publication
EP 2649214 B1 20161207 (EN)

Application
EP 11820814 A 20111207

Priority
• IT RM20100641 A 20101207
• IT 2011000401 W 20111207

Abstract (en)
[origin: WO2012077150A2] The subject of the present invention is a process for the production of an austenitic steel with high mechanical resistance and formability. The proposed steel has the following chemical composition in percentage by weight: C 0.2-1.5; Mn 10-25; optionally Ni<2; 0.05-2.00; Al 0.01-2.0; N<0.1; P+Sn+Sb+As<0.2; S+Se+Te<0.5; and optionally Nb+Co<1 and/or Re+W<1, the balance being Fe apart from unavoidable impurities, and is subjected to a specific recrystallization annealing treatment. Another subject of the present invention is the so obtainable austenitic steel product and the use thereof in the automotive industry. Figure 2 shows the microstructure - of a TWIP steel according to the invention after deformation - wherein the geminates presence is observed.

IPC 8 full level
C22C 38/04 (2006.01); **C21D 6/00** (2006.01); **C21D 8/04** (2006.01)

CPC (source: EP KR)
C21D 6/00 (2013.01 - KR); **C21D 6/005** (2013.01 - EP); **C21D 8/04** (2013.01 - KR); **C21D 8/0473** (2013.01 - EP); **C21D 9/561** (2013.01 - EP); **C22C 38/001** (2013.01 - EP); **C22C 38/002** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP); **C22C 38/08** (2013.01 - EP); **C22C 38/60** (2013.01 - EP); **C21D 9/48** (2013.01 - EP); **C21D 2211/001** (2013.01 - EP)

Cited by
EP3173504A1; WO2017081072A1; US11247252B2; EP3095889A1; WO2016188948A1; US10774395B2

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)
WO 2012077150 A2 20120614; WO 2012077150 A3 20121122; CN 103339279 A 20131002; CN 103339279 B 20160928; EP 2649214 A2 20131016; EP 2649214 B1 20161207; IT 1403129 B1 20131004; IT RM20100641 A1 20120608; KR 20140025324 A 20140304

DOCDB simple family (application)
IT 2011000401 W 20111207; CN 201180066940 A 20111207; EP 11820814 A 20111207; IT RM20100641 A 20101207; KR 20137017367 A 20111207