

Title (en)  
AUSTENITE STEEL MATERIAL HAVING SUPERIOR DUCTILITY

Title (de)  
AUSTENITSTAHL MATERIAL MIT ERHÖHTER DEHNBARKEIT

Title (fr)  
MATÉRIAU D'ACIER AUSTÉNITIQUE À DUCTILITÉ SUPÉRIEURE

Publication  
**EP 2520684 B1 20161026 (EN)**

Application  
**EP 10841225 A 20101228**

Priority  
• KR 20100133641 A 20101223  
• KR 20090132105 A 20091228  
• KR 2010009393 W 20101228

Abstract (en)  
[origin: EP2520684A2] Provided is an austenite steel having excellent ductility including 8 wt% to 15 wt% of manganese (Mn), 3 wt% or less (excluding 0 wt%) of copper (Cu), a content of carbon (C) satisfying relationships of  $33.5C + Mn \leq 25$  and  $33.5C - Mn \geq 23$ , and iron (Fe) as well as unavoidable impurities as a remainder. According to an aspect of the present invention, austenite is stabilized and generation of carbides in a network form at austenite grain boundaries is inhibited by adding copper (Cu) favorable to inhibition of carbide formation with respect to manganese and appropriately controlling contents of carbon and manganese, and thus, high economic efficiency may also be achieved while ductility and wear resistance are improved.

IPC 8 full level  
**C22C 38/04** (2006.01); **C22C 38/18** (2006.01)

CPC (source: EP US)  
**C22C 38/04** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US)

Cited by  
EP3561120A4; EP2940171A4; EP2940173A4; US9945014B2; US10041156B2; US11566308B2

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 2520684 A2 20121107; EP 2520684 A4 20150114; EP 2520684 B1 20161026; EP 2520684 B9 20170104**; CA 2785318 A1 20110707; CA 2785318 C 20140610; CN 102906294 A 20130130; JP 2013515864 A 20130509; JP 5668081 B2 20150212; US 2012288396 A1 20121115; WO 2011081393 A2 20110707; WO 2011081393 A3 20111110

DOCDB simple family (application)  
**EP 10841225 A 20101228**; CA 2785318 A 20101228; CN 201080064846 A 20101228; JP 2012547009 A 20101228; KR 2010009393 W 20101228; US 201013519343 A 20101228