

Title (en)  
STAINLESS STEEL SHEET FOR PARTS AND PROCESS FOR MANUFACTURING THE SAME

Title (de)  
BLECH AUS NICHTROSTENDEM STAHL FÜR TEILE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
FEUILLE EN ACIER INOXYDABLE POUR PIÈCES ET PROCÉDÉ DE FABRICATION DE CELLE-CI

Publication  
**EP 2048256 B1 20211110 (EN)**

Application  
**EP 07791595 A 20070730**

Priority  
• JP 2007064910 W 20070730  
• JP 2006206250 A 20060728

Abstract (en)  
[origin: EP2048256A1] The present invention provides a stainless steel sheet which is capable of exhibiting favorable strength and ductility and of improving workability (formability, etchability) and fatigue property. The invention also provides a method for producing the stainless steel sheet with low cost and stable supply. The present invention is a stainless steel sheet for parts, which consists essentially of: 0.01-0.08 mass % of C, 0.1-2.0 mass % of Si, 3.0 mass % or less of Mn, 10.0-20.0 mass % of Cr, 3.0-12.0 mass % of Ni, and 0.02-0.24 mass % of N, to total mass of the stainless steel as 100 mass %, Md value derived from the formula:  $Md = 500 - 458 \#C + N - 9 \#Si + Mn - 14 \#Cr - 20 \#Ni$  by substituting values in mass % of the above respective components to be contained in the stainless steel sheet satisfying within the range of 0 to 80, and the remainder including chemical composition as inevitable impurities, among compounds formed by the above components, indwelling content of the compounds whose maximum diameter is 20  $\mu m$  or more being 30 or less per 5 g (mass) of the stainless steel, and the metallographic structure of the entire stainless steel being a mixed structure of recrystallized grain and unrecrystallized portion.

IPC 8 full level  
**C22C 38/02** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/40** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP)  
**C21D 6/004** (2013.01); **C21D 8/0436** (2013.01); **C21D 8/0452** (2013.01); **C21D 9/46** (2013.01); **C22C 38/001** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/40** (2013.01); **C22C 38/46** (2013.01); **C22C 38/48** (2013.01); **C22C 38/50** (2013.01); **C21D 8/0236** (2013.01); **C21D 8/0252** (2013.01)

Cited by  
EP4177369A4; US11486017B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2048256 A1 20090415**; **EP 2048256 A4 20160713**; **EP 2048256 B1 20211110**; CN 101490298 A 20090722; CN 101490298 B 20111116; JP 4475352 B2 20100609; JP WO2008013305 A1 20091217; WO 2008013305 A1 20080131

DOCDB simple family (application)  
**EP 07791595 A 20070730**; CN 200780027652 A 20070730; JP 2007064910 W 20070730; JP 2008526850 A 20070730