

Title (en)  
FERRITIC STAINLESS STEEL SHEET HAVING EXCELLENT HEAT RESISTANCE

Title (de)  
FERRITISCHES EDELSTAHLBLECH MIT HERVORRAGENDER WÄRMEBESTÄNDIGKEIT

Title (fr)  
FEUILLE D'ACIER INOXYDABLE FERRITIQUE AVEC UNE EXCELLENTE RÉSISTANCE À LA CHALEUR

Publication  
**EP 2915894 B1 20200304 (EN)**

Application  
**EP 13851279 A 20131030**

Priority  
• JP 2012239148 A 20121030  
• JP 2013079461 W 20131030

Abstract (en)  
[origin: EP2915894A1] The present invention provides a Sn-containing ferritic stainless steel sheet having excellent heat resistance. The ferritic stainless steel contains, in terms of mass %, 0.015% or less of C, 1.5% or less of Si, 1.5% or less of Mn, 0.035% or less of P, 0.015% or less of S, 13-21% of Cr, 0.01-0.50% of Sn, 0.05-0.60% of Nb and 0.020% or less of N, with the remainder consisting of Fe and unavoidable impurities. The ferritic stainless steel satisfies formula 1 and formula 2, and has a grain boundary Sn concentration of 2 atom % or less when subjected to a heat treatment at 600-750°C in which the value of L, as shown in formula 3, is  $1.91 \times 10^4$  or higher.  $8 \# \text{ Cl} = (\text{Ti} + 0.52\text{Nb}) / (\text{C} + \text{N}) \# 26$  (formula 1)  $\text{GBSV} = \text{Sn} + \text{Ti} - 2\text{Nb} - 0.3\text{Mo} - 0.2 \# 0$  (formula 2)  $L = (273 + T) (\log(t) + 20)$  (formula 3) T: Temperature (°C), t: time (h)

IPC 8 full level  
**C21D 9/46** (2006.01); **C21D 1/26** (2006.01); **C21D 8/04** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/30** (2006.01); **C22C 38/32** (2006.01); **C22C 38/40** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/52** (2006.01); **C22C 38/54** (2006.01); **C22C 38/60** (2006.01); **F01N 13/16** (2010.01)

CPC (source: EP US)  
**C21D 1/26** (2013.01 - EP US); **C21D 6/002** (2013.01 - EP US); **C21D 6/004** (2013.01 - US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/0463** (2013.01 - EP US); **C21D 8/0473** (2013.01 - EP US); **C21D 9/08** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/004** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/008** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/30** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/40** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/60** (2013.01 - EP US); **F01N 13/16** (2013.01 - EP US); **C21D 9/48** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/52** (2013.01 - EP US); **C22C 38/54** (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 2915894 A1 20150909**; **EP 2915894 A4 20161026**; **EP 2915894 B1 20200304**; BR 112015009634 A2 20170704; BR 112015009634 B1 20190820; CN 104769144 A 20150708; CN 104769144 B 20171010; ES 2787353 T3 20201015; JP 6223351 B2 20171108; JP WO2014069543 A1 20160908; KR 101690441 B1 20161227; KR 20150056656 A 20150526; TW 201422828 A 20140616; TW I504763 B 20151021; US 2015292068 A1 20151015; WO 2014069543 A1 20140508

DOCDB simple family (application)  
**EP 13851279 A 20131030**; BR 112015009634 A 20131030; CN 201380056855 A 20131030; ES 13851279 T 20131030; JP 2013079461 W 20131030; JP 2014544565 A 20131030; KR 20157010546 A 20131030; TW 102139702 A 20131030; US 201314439456 A 20131030