

Title (en)  
STEEL SHEET FOR FUEL TANKS AND PROCESS FOR MANUFACTURING THE SHEET

Title (de)  
STAHLBLECH FÜR BRENNSTOFFTANKS UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
TÔLE D'ACIER POUR RÉSERVOIRS DE COMBUSTIBLE ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 2233610 A4 20140409 (EN)**

Application  
**EP 08854204 A 20081128**

Priority  
• JP 2008072107 W 20081128  
• JP 2007307416 A 20071128

Abstract (en)  
[origin: EP2233610A1] A steel sheet for fuel tanks includes a Zn-Ni alloy electroplating layer disposed on at least one surface thereof and a chromate coating disposed on the alloy electroplating layer. The change in amount of chromium in the chromate coating immersed in boiling water for 30 minutes is 2% or less of the amount of chromium in the chromate coating not immersed in boiling water. An L-value indicating the color tone of the steel sheet is 55 or more. The difference between the maximum and minimum of the L-value is three or less. The chromating solution can be obtained in such a manner that a chromating solution is applied onto the alloy electroplating layer and then heated. The chromating solution contains chromic acid having a mass ratio (trivalent chromium) / (total chromium) of greater than 0.5, phosphoric acid having a mass ratio (phosphoric acid) / (total chromium) of 0.1 to 5.0, and an organic reducing agent. The steel sheet has a good appearance and excellent long-term corrosion resistance to fuels such as gasoline, alcohols, and alcohol-blended gasoline.

IPC 8 full level  
**C23C 22/33** (2006.01); **C23C 28/00** (2006.01); **C25D 5/48** (2006.01); **C25D 3/56** (2006.01); **C25D 7/06** (2006.01)

CPC (source: EP)  
**C23C 22/33** (2013.01); **C23C 28/321** (2013.01); **C23C 28/345** (2013.01); **C23C 28/3455** (2013.01); **C25D 5/48** (2013.01); **C25D 3/565** (2013.01); **C25D 7/0614** (2013.01)

Citation (search report)  
• [X1] WO 2005087981 A1 20050922 - JFE STEEL CORP [JP], et al  
• [IA] WO 0032843 A1 20000608 - PO HANG IRON & STEEL [KR], et al  
• [I] EP 0913252 A1 19990506 - KAWASAKI STEEL CO [JP], et al  
• [I] EP 0844316 A1 19980527 - SUMITOMO METAL IND [JP]  
• See references of WO 2009069830A1

Cited by  
EP2644751A4; US2022227105A1; US12031201B2; US10144196B2; US10253386B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2233610 A1 20100929; EP 2233610 A4 20140409; EP 2233610 B1 20160608**; BR PI0819870 A2 20150616; BR PI0819870 B1 20190730; CN 101878325 A 20101103; CN 101878325 B 20120718; JP 2009127126 A 20090611; JP 5315677 B2 20131016; MX 2010005154 A 20100601; WO 2009069830 A1 20090604

DOCDB simple family (application)  
**EP 08854204 A 20081128**; BR PI0819870 A 20081128; CN 200880118382 A 20081128; JP 2007307416 A 20071128; JP 2008072107 W 20081128; MX 2010005154 A 20081128