

Title (en)  
MARTENSITIC STEEL AND METHOD OF MANUFACTURING A MARTENSITIC STEEL

Title (de)  
MARTENSITISCHER STAHL UND VERFAHREN ZUR HERSTELLUNG EINES MARTENSITISCHEN STAHLS

Title (fr)  
ACIER MARTENSITIQUE ET PROCÉDÉ DE FABRICATION D'UN ACIER MARTENSITIQUE

Publication  
**EP 4053301 A1 20220907 (EN)**

Application  
**EP 21159990 A 20210301**

Priority  
EP 21159990 A 20210301

Abstract (en)  
A martensitic steel, consisting of, in % in weight:C: 0.30 to 0.80%, Si: 2.50 to 4.50%, Mn: 1.00 to 2.50%, Al: 0.40 to 1.50%, Cr: 0.1 to 2.00%, V: 0.01 to 0.40%, Ti: 0.005 to 0.35%, and optionally one or more of Nb: less than 0.35%, Zr: less than 0.35%, Ta: less than 0.35%, P: less than 0.25%, S: less than 0.25%, Co: less than 0.50%, Mo: less than 0.90%, W: less than 0.90%, Ni: less than 0.50%, Cu: less than 0.50%, N: less than 0.050%, Ca: less than 0.10%, Mg: less than 0.10%, Ce: less than 0.10%, La: less than 0.10%, B: less than 0.10%, the balance Fe and impurities, and comprising one or more intermetallic phases based on an Al-Fe-Mn-Si system.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 1/06** (2006.01); **C21D 1/25** (2006.01); **C21D 6/00** (2006.01); **C21D 9/18** (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 38/28** (2006.01);  
**C22C 38/34** (2006.01)

CPC (source: EP US)  
**C21D 1/06** (2013.01 - EP); **C21D 1/25** (2013.01 - EP); **C21D 6/002** (2013.01 - EP); **C21D 6/005** (2013.01 - EP); **C21D 6/008** (2013.01 - EP);  
**C21D 8/0257** (2013.01 - US); **C21D 9/18** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP); **C22C 38/02** (2013.01 - EP);  
**C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP); **C22C 38/22** (2013.01 - EP);  
**C22C 38/24** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US); **C22C 38/38** (2013.01 - US);  
**C21D 2211/008** (2013.01 - EP US)

Citation (search report)  
• [I] US 2013025747 A1 20130131 - KUBOTA MANABU [JP], et al  
• [A] US 2011002807 A1 20110106 - SAITO HAJIME [JP], et al  
• [A] US 6723182 B1 20040420 - BAHMILLER ARTHUR J [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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 4053301 A1 20220907**; BR 112023017680 A2 20230926; US 2024141465 A1 20240502; WO 2022183265 A1 20220909

DOCDB simple family (application)  
**EP 21159990 A 20210301**; BR 112023017680 A 20220226; BR 2022050066 W 20220226; US 202218279840 A 20220226