

Title (en)  
STEEL MATERIAL, AND STEEL MATERIAL MANUFACTURING METHOD

Title (de)  
STAHLMATERIAL UND STAHLMATERIALHERSTELLUNGSVERFAHREN

Title (fr)  
MATÉRIAU EN ACIER ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 3575428 A4 20200722 (EN)**

Application  
**EP 18745316 A 20180122**

Priority  
• JP 2017009977 A 20170124  
• JP 2018001750 W 20180122

Abstract (en)  
[origin: EP3575428A1] A steel material that has a yield strength in a range of 965 to 1069 MPa (140 ksi grade) and also have excellent SSC resistance are provided. The steel material according to the present disclosure contains a chemical composition consisting of, in mass%, C: more than 0.50 to 0.80%, Si: 0.05 to 1.00%, Mn: 0.05 to 1.00%, P: 0.025% or less, S: 0.0100% or less, Al: 0.005 to 0.100%, Cr: 0.20 to 1.50%, Mo: 0.25 to 1.50%, Ti: 0.002 to 0.050%, B: 0.0001 to 0.0050%, N: 0.002 to 0.010% and O: 0.0100% or less, with the balance being Fe and impurities. The steel material contains an amount of dissolved C within a range of 0.010 to 0.060 mass%. The steel material also has a yield strength within a range of 965 to 1069 MPa, and a yield ratio of the steel material is 90% or more.

IPC 8 full level  
**C21D 6/00** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP RU US)  
**C21D 6/004** (2013.01 - EP); **C21D 6/005** (2013.01 - EP); **C21D 6/008** (2013.01 - EP); **C21D 8/00** (2013.01 - RU); **C21D 8/005** (2013.01 - US); **C21D 8/02** (2013.01 - RU); **C21D 8/10** (2013.01 - RU); **C21D 8/105** (2013.01 - EP US); **C21D 9/085** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP); **C22C 38/24** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/32** (2013.01 - EP RU); **C22C 38/42** (2013.01 - US); **C22C 38/44** (2013.01 - US); **C22C 38/46** (2013.01 - US); **C22C 38/48** (2013.01 - US); **C22C 38/50** (2013.01 - US); **C22C 38/52** (2013.01 - US); **C22C 38/54** (2013.01 - EP RU US)

Citation (search report)  
• [IA] WO 2016093161 A1 20160616 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & EP 3231884 A1 20171018 - NIPPON STEEL & SUMITOMO METAL CORP [JP]  
• [A] EP 2403970 A1 20120111 - VALLOUREC MANNESMANN OIL & GAS [FR]  
• [AD] JP 2012026030 A 20120209 - JFE STEEL CORP  
• [A] EP 2865775 A1 20150429 - NIPPON STEEL & SUMITOMO METAL CORP [JP]  
• See references of WO 2018139400A1

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