

Title (en)  
STEEL MATERIAL

Title (de)  
STAHLMATERIAL

Title (fr)  
MATÉRIAU EN ACIER

Publication  
**EP 4130317 A4 20230517 (EN)**

Application  
**EP 20928920 A 20200401**

Priority  
JP 2020014975 W 20200401

Abstract (en)  
[origin: EP4130317A1] Provided is a steel material having excellent SSC resistance. The steel material of the present disclosure includes a chemical composition consisting of, in mass%, C: 0.035% or less, Si: 1.00% or less, Mn: 1.00% or less, P: 0.030% or less, S: 0.0050% or less, sol. Al: 0.005 to 0.100%, N: 0.001 to 0.020%, Ni: 5.00 to 7.00%, Cr: 10.00 to 14.00%, Cu: 1.50 to 3.50%, Mo: 1.00 to 4.00%, V: 0.01 to 1.00%, Ti: 0.02 to 0.30%, Co: 0.01 to 0.50%, Ca: 0.0003 to 0.0030%, O: 0.0050% or less, W: 0 to 1.50%, Nb: 0 to 0.50%, B: 0 to 0.0050%, Mg: 0 to 0.0050%, and rare earth metals (REM): 0 to 0.020%, with the balance being Fe and impurities, in which a total number density of Mn sulfide having an equivalent circular diameter of 1.0  $\mu\text{m}$  or more and Ca sulfide having an equivalent circular diameter of 2.0  $\mu\text{m}$  or more is 0.50 pieces/mm<sup>2</sup> or less.

IPC 8 full level  
**C22C 38/44** (2006.01); **C21D 1/18** (2006.01); **C21D 1/22** (2006.01); **C21D 1/60** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/52** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP US)  
**C21D 1/18** (2013.01 - EP); **C21D 1/22** (2013.01 - EP); **C21D 1/25** (2013.01 - EP); **C21D 1/60** (2013.01 - EP); **C21D 6/004** (2013.01 - EP); **C21D 8/105** (2013.01 - EP); **C21D 9/08** (2013.01 - US); **C21D 9/085** (2013.01 - EP); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/004** (2013.01 - EP); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/42** (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 38/50** (2013.01 - EP US); **C22C 38/52** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); **C21D 2211/004** (2013.01 - EP); **C21D 2211/008** (2013.01 - EP)

Citation (search report)  
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Designated contracting state (EPC)  
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Designated extension state (EPC)  
BA ME

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KH MA MD TN

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**EP 4130317 A1 20230208**; **EP 4130317 A4 20230517**; BR 112022019162 A2 20221122; CN 115698358 A 20230203; CN 115698358 B 20230829; JP 7364962 B2 20231019; JP WO2021199368 A1 20211007; MX 2022012281 A 20221027; US 2023175107 A1 20230608; WO 2021199368 A1 20211007

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