Title (en)

STEEL PRODUCT FOR OIL WELL HAVING HIGH STRENGTH AND BEING EXCELLENT IN RESISTANCE TO SULFIDE STRESS CRACKING

Title (de)

STAHLPRODUKT FÜR EINE ÖLBOHRLOCHWAND MIT HOHER FESTIGKEIT UND AUSGEZEICHNETER SCHWEFEL INDUZIERTER SPANNUNGSRISSKOROSSIONSBESTÄNDIG

Title (fr)

PRODUIT EN ACIER POUR PUITS DE PETROLE, DOTE D'UNE GRANDE SOLIDITE ET D'UNE EXCELLENTE RESISTANCE A LA CORROSION FISSURANTE PROVOQUEE PAR L'HYDROGENE SULFURE

Publication

EP 1197571 A4 20020911 (EN)

Application

EP 00922970 A 20000502

Priority

- JP 0002917 W 20000502
- JP 12549799 A 19990506

Abstract (en)

[origin: EP1197571A1] This invention provides a high-strength steel material for an oil well, excellent in strength and SSC resistance, and having a yield strength of at least 120 ksi. The steel material contains C: 0.10 to 0.40%, Si </= 0.5%, Mn </= 0.5%, P </= 0.015%, S </= 0.0050%, Mo: 0.5 to 2.5%, A1: 0.005 to 0.1%, Ti: 0.005 to 0.1% and at least 3.4 times N, Nb: 0.01 to 0.1%, N </= 0.01% and B: 0.0005 to 0.0050%, wherein the yield strength expressed by ksi and the Mo content satisfy the following relation (1), the balance of the C, Mn and Mo contents satisfies the following relation (2), and the steel material may contain, whenever necessary, at least one of Cr </= 0.2%, W </= 0.5%, V: 0.01 to 0.3%, Zr: 0.001 to 0.01%, Ca: 0.001 to 0.01%, Mg: 0.001 to 0.01% and REM: 0.001 to 0.01%. <DF NUM="(1)"> alpha = Mo - 0.15YS >/= -18.9 </DF> <DF NUM="(2)"> beta = 2.7C + Mn + 2Mo >/= 2.0 </DF> <IMAGE>

IPC 1-7

C22C 38/00; C22C 38/14; C22C 38/32; C21D 6/00

IPC 8 full level

C21D 1/18 (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01)

CPC (source: EP US)

C21D 1/18 (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US)

Citation (search report)

- [X] EP 0828007 A1 19980311 - SUMITOMO METAL IND [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 02 31 March 1995 (1995-03-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 409 (P - 931) 11 September 1989 (1989-09-11)
- See references of WO 0068450A1

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EP3153597A4; FR2942808A1; EA019473B1; EP1911857A4; EP3133182A4; NO343352B1; US7670547B2; US10233520B2; US9394594B2; WO2010100020A1

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DOCDB simple family (application)

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