

Title (en)

Use of an extremely resistant steel alloy for producing steel pipes with high resistance and good plasticity

Title (de)

Verwendung einer hochfesten Stahllegierung zur Herstellung von Stahlrohren mit hoher Festigkeit und guter Umformbarkeit

Title (fr)

Utilisation d'un alliage d'acier très solide destiné à la fabrication de tuyaux en acier très résistants et ayant une bonne déformabilité

Publication

EP 2009120 A3 20090819 (DE)

Application

EP 08011681 A 20080627

Priority

DE 102007030207 A 20070627

Abstract (en)

[origin: EP2009120A2] The steel alloy comprises 0.06-0.15 wt.% of carbon, 1-0 wt.% of silicon, 0.7-2.2 wt.% of manganese, 0.1-0.8 wt.% of chromium, 0.2 wt.% or less of molybdenum, 0.1 wt.% or less of aluminum, 0.2wt.% of vanadium, 0.02 wt.% or less of nitrogen, 0.06 wt.% of niobium, 0.2 wt.% or less of copper, and 0.2 wt.% or less of nickel. 0.001-0.004 wt.% of boron, 0.001-0.05 wt.% of titanium, 0.2 wt.% or less of tungsten, and 0.15 wt.% or less of tungsten are also provided. Iron and remainder have impurities, where the sum of silicon, manganese, chrome and copper is 3-4%.

IPC 8 full level

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CPC (source: EP)

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C22C 38/58 (2013.01)

Citation (search report)

- [X] US 2003047258 A1 20030313 - SAKATA KEI [JP], et al
- [X] JP 2003342687 A 20031203 - NIPPON STEEL CORP
- [A] EP 0576107 A1 19931229 - MANNESMANN AG [DE]
- [A] JP H11279693 A 19991012 - NIPPON STEEL CORP
- [A] EP 0940476 A1 19990908 - KAWASAKI STEEL CO [JP]
- [A] US 2004050445 A1 20040318 - OHGAMI MASAHIRO [JP], et al
- [A] US 2003196735 A1 20031023 - SUGIURA NATSUOKO [JP], et al
- [X] KATSUMATA M ET AL: "DEVELOPMENT OF HIGH STRENGTH AND HIGH TOUGHNESS LOW CARBON - LOW ALLOY STEEL FOR HOT FORGED PARTS", KOBELCO TECHNOLOGY REVIEW, KOBE STEEL, KOBE, JP, no. 11, 1 June 1991 (1991-06-01), pages 29 - 32, XP001038795, ISSN: 0913-4794

Cited by

EP2765014A1; CN113423854A; CN108474080A; US11384415B2; WO2020094684A1; WO2013139514A1; WO2017085135A1

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