

Title (en)
STEEL PRODUCT FOR HIGH HEAT INPUT WELDING AND METHOD FOR PRODUCTION THEREOF

Title (de)
STAHLPRODUKT ZUM SCHWEISSEN MIT HOHEM WÄRMEEINTRAG UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
ACIER POUR SOUDURES A FORT APPORT THERMIQUE ET SON PROCEDE DE PRODUCTION

Publication
EP 1533392 A4 20051207 (EN)

Application
EP 02763002 A 20020904

Priority
JP 0208977 W 20020904

Abstract (en)
[origin: WO2004022807A1] A steel plate which has a composition in mass %: C: 0.03 to 0.15 %, Si: 0.05 to 0.25 mass %, Mn: 0.5 to 2.0 %, P: 0.03 mass % or less, S: 0.0005 to 0.0030 %, Al: 0.005 to 0.1 %, Ti: 0.004 to 0.03 mass %, N: 0.0020 to 0.0070 mass %, Ca: 0.0005 to 0.0030 mass %, Ca, O and S: respective contents satisfying the following formula (1) $0.3 \leq \text{ACR} \leq 0.8$ (1) wherein $\text{ACR} = (\text{Ca} - (0.18 + 130 \times \text{Ca}) \times \text{O}) / 1.25 / \text{S}$, and Ca, O and S represent the contents (mass %) of respective elements, and balance: Fe and inevitable impurities; and a method for producing the steel plate. The steel plate exhibits excellent toughness in a heat-affected zone when subjected to a high heat input welding of more than 400 KJ/cm.

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IPC 8 full level
C21D 8/02 (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/14** (2006.01); **C22C 38/18** (2006.01)

CPC (source: EP KR)
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Citation (search report)

- [A] EP 1143023 A1 20011010 - NIPPON STEEL CORP [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 011, no. 133 (C - 418) 25 April 1987 (1987-04-25)
- [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 10 30 November 1995 (1995-11-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 010, no. 362 (C - 389) 4 December 1986 (1986-12-04)
- See references of WO 2004022807A1

Cited by
US8728257B2; EP3561106A4; EP2412839A4; EP2272994A4; US9757780B2; CN108603267A; EP3378962A4; US11326238B2

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