

Title (en)
THICK STEEL PLATE

Title (de)
DICKE STAHLPLATTE

Title (fr)
PLAQUE D'ACIER ÉPAISSE

Publication
EP 3447162 B1 20201230 (EN)

Application
EP 17786057 A 20170421

Priority
• JP 2016085147 A 20160421
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Abstract (en)
[origin: EP3447162A1] A thick steel plate is provided that has a chemical composition comprising, by mass%, C: 0.01-0.20%, Si: 0.10-0.25%, Mn: 1.30-2.50%, P: 0.01% or less, S: 0.0010-0.0100%, Ti: 0.005-0.030%, Al: 0.003% or less, O: 0.0010-0.0050%, N: 0.0100% or less, Cu: 0-0.50%, Ni: 0-1.50%, Cr: 0-0.50%, Mo: 0-0.50%, V: 0-0.10%, Nb: 0-0.05%, and the balance: Fe and impurities, and which contains in the steel a composite inclusion in which MnS is present around a Ti oxide. An area fraction of MnS in a cross-section of the composite inclusion is 10% or more and less than 90%, the proportion which MnS accounts for in the peripheral length of the composite inclusion is 10% or more, and the number density of composite inclusions that have a grain diameter in a range of 0.5-5.0 μm is in a range of 10-100 per mm^2 . The thick steel plate exhibits excellent HAZ low-temperature properties during high heat input welding.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/02** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/18** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR)
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