

Title (en)

HIGH-MN STEEL AND PRODUCTION METHOD THEREFOR

Title (de)

STAHL MIT HOHEM MN-GEHALT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER RICHE EN MN ET SON PROCÉDÉ DE PRODUCTION

Publication

EP 3677700 B1 20230510 (EN)

Application

EP 18851150 A 20180829

Priority

- JP 2017168857 A 20170901
- JP 2018032022 W 20180829

Abstract (en)

[origin: EP3677700A1] Provided is high-Mn steel excellent in low-temperature toughness which can suppress costs of materials and production, the steel including: a chemical composition containing, in mass%, C: 0.100% or more and 0.700% or less, Si: 0.05% or more and 1.00% or less, Mn: 20.0% or more and 35.0% or less, P: 0.030% or less, S: 0.0070% or less, Al: 0.01% or more and 0.07% or less, Cr: 0.5% or more and 7.0% or less, N: 0.0050% or more and 0.0500% or less, O: 0.0050% or less, Ti: 0.0050% or less, and Nb: 0.0050% or less with the balance being Fe and inevitable impurities; and a microstructure having austenite as a matrix phase, in which the microstructure has a Mn segregation portion with a Mn concentration of 16% or more and 38% or less, and the high-Mn steel has an average KAM value of 0.3 or more.

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 38/38** (2006.01)

CPC (source: EP KR)

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Cited by

EP4249621A4; US11959157B2

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EP 3677700 A1 20200708; **EP 3677700 A4 20200708**; **EP 3677700 B1 20230510**; BR 112020003351 A2 20200818; CN 111051553 A 20200421; CN 111051553 B 20220412; JP 2021036077 A 20210304; JP 6856129 B2 20210407; JP 7063364 B2 20220509; JP WO2019044928 A1 20200326; KR 102355570 B1 20220125; KR 20200033901 A 20200330; MY 194444 A 20221130; PH 12020550068 A1 20210208; SG 11202001418Y A 20200330; WO 2019044928 A1 20190307

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EP 18851150 A 20180829; BR 112020003351 A 20180829; CN 201880055742 A 20180829; JP 2018032022 W 20180829; JP 2019539597 A 20180829; JP 2020184625 A 20201104; KR 20207004808 A 20180829; MY PI2020000867 A 20180829; PH 12020550068 A 20200228; SG 11202001418Y A 20180829