

ABSTRACT

HIGH-MN STEEL AND PRODUCTION METHOD THEREFOR

5 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%
10 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
15 high-Mn steel has an average KAM value of 0.3 or more.

(Fig. 1)