

## ABSTRACT

### HIGH-Mn STEEL AND PRODUCTION METHOD THEREFOR

5            Provided is a method of further imparting excellent ductility to  
high-Mn steel exhibiting excellent low-temperature toughness in a base metal  
and a heat-affected zone after welding. The high-Mn steel has a chemical  
composition containing, in mass%, C: 0.10 % to 0.70 %, Si: 0.05 % to 1.0 %,  
Mn: 15 % to 30 %, P: 0.030 % or less, S: 0.0070 % or less, Al: 0.01 % to 0.07  
10   %, Cr: 0.5 % to 7.0 %, N: 0.0050 % to 0.0500 %, O: 0.0050 % or less, Ti: less  
than 0.005 %, and Nb: less than 0.005 %, with the balance being Fe and  
inevitable impurities, has a microstructure containing austenite as a matrix  
phase, and, in the microstructure, nonmetallic inclusions with an area fraction  
of less than 5.0 %, and exhibits a yield stress of 400 MPa or more and an  
15   absorbed energy (vE<sub>-196</sub>) of 100 J or more.