

ABSTRACT

STEEL AND METHOD OF PRODUCING SAME

The steel of the present disclosure contains, in mass%, C: 0.100 % to 0.700 %, Si: 0.05 % to 1.00 %, Mn: 20.0 % to 40.0 %, P: $\leq$ 0.030 %, S: $\leq$ 0.0050 %, Al: 0.01 % to 5.00 %, Cr: 0.5 % to 7.0 %, N: 0.0050 % to 0.0500 %, O: $\leq$ 0.0050 %, Ti: $\leq$ 0.005 %, Nb: $\leq$ 0.005 %, and at least one selected from Ca: 0.0005 % to 0.0100 %, Mg: 0.0005 % to 0.0100 %, and REM: 0.0010 % to 0.0200 %, and has a microstructure with austenite as matrix, where an average grain size is 50 μ m or less, a cleanliness of sulfide inclusion is less than 1.0 %, a yield strength is 400 MPa or more, and a percent brittle fracture after a Charpy impact test at -269 °C is less than 5 %.

No Suitable Figure