

HIGH-GRADE NON-ORIENTED SILICON STEEL AND PRODUCTION METHOD THEREFOR

ABSTRACT

5 The present invention discloses a high-grade non-oriented silicon steel and a
production method thereof. The non-oriented silicon steel includes the following
chemical components in percent by mass: 0.002-0.004% of C, not greater than
0.003% of S, 1.4-1.7% of Si, 0.7-0.95% of Mn, not greater than 0.03% of P, 0.015-
0.035% of Sn; and $11 \times ([\text{Si}] - 1.4\%) = 14 \times ([\text{Mn}] - 0.7\%)$. In the production method
10 of the non-oriented silicon steel, the heating temperature of a continuous casting
billet is 1,120-1,150°C; the finishing temperature in finish rolling is $890 \pm 15^\circ\text{C}$;
the rolling reduction of the last pass of finish rolling is not less than 30%, the total
rolling reduction of the last two passes of finish rolling is not less than 50%, and
the coiling temperature is $650 \pm 20^\circ\text{C}$; normalizing treatment is avoided before
15 acid continuous rolling; and the obtained non-oriented silicon steel is excellent in
magnetic performance, and free of surface corrugated defect, and meets the
requirement for low-cost high-grade non-oriented silicon steel.

The most illustrative drawings: Figure 1