

ABSTRACT

The present application relates to the technical field of steel smelting, in particular to a corrosion-resistant steel bar and a preparation method therefor, in percentage by weight, the corrosion-resistant steel bar comprises 0.03% to 0.15% of C, 0.8% to 2.0% of Si, 0.8% to 2.0% of Mn, 0.10% to 0.50% of Cu, 0.08% to 0.2% of P, 0.005% to 0.01% of S, 0 to 0.1% of Nb, 0 to 0.2% of V, 0 to 0.1% of Ti, 0 to 0.1% of Al, and the balance of Fe and inevitable impurities; wherein, $0.6 \leq \text{Si/Mn} \leq 2.0$, $0.25\% \leq (\text{Cu} + \text{P} + \text{S}) \leq 0.62\%$. Through the design of Si, Mn, Cu, P, S and other alloying elements in a correlated manner, considering the strengthening function and corrosion resistance function of each element, the present application solves the problem that the corrosion resistance, mechanical properties and cost of the prior art cannot be achieved together, and overcomes the technical bias in the prior art that Cr, Ni or Mo must be added for improving the corrosion resistance.

No Figure