Application of environmentally friendly descaling process in Continuous Hot-dip Galvanizing Production of strip steel

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Abstract Before hot-dip galvanizing, the descaling process is used to remove the oxide scale on the surface of the hot rolled strip, which affects the surface quality of the galvanized sheet. At present, acid pickling is the most widely used descaling process, but it has problems such as acid mist pollution, high investment and maintenance costs. Eco-Pickled Surface (EPS) is a new environmentally friendly descaling technology, but its application in the production of hot-dip galvanizing for continuous hot rolled strip steel. The effect and mechanism of four different descaling processes, namely acid pickling, EPS, EPS+fiber brush process (EPS+plus), and dry shot blasting, on the quality of hot-dip galvanizing of Q235B hot rolled strip steel was investigated. It found that the quality of galvanized steel plate treated by EPS and EPS+plus process is better than that of pickling and dry shot blasting process treated samples, and the EPS and EPS+plus process can fully meet the galvanizing quality requirements of hot rolled strip in actual production.

Keywords: Hot-dip galvanizing; Eco-Pickled Surface technology; Hot rolled strip; Descaling technology

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