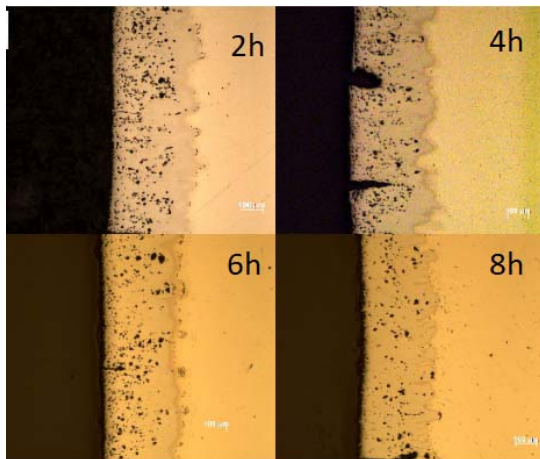


Cross section of aluminized layer and research on zinc corrosion resistance

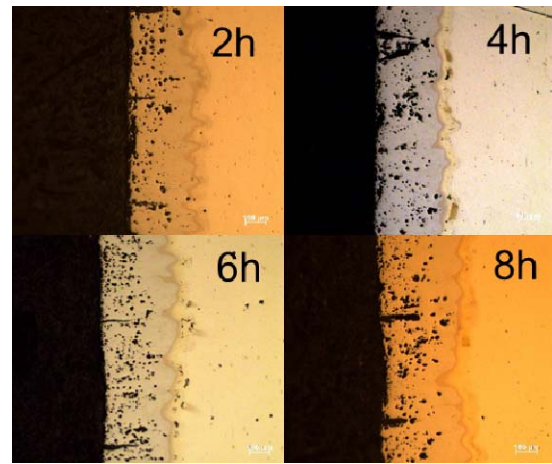
resistance

Conduct muffle furnace diffusion treatment and vacuum diffusion treatment on the sample after hot dip aluminizing treatment, and study the influence of treatment process on the structure and corrosion performance of the aluminizing layer

The use of low-carbon steel for aluminizing treatment can achieve good corrosion resistance. The following is a cross-sectional view of the diffusion layer after aluminizing treatment and diffusion using different methods

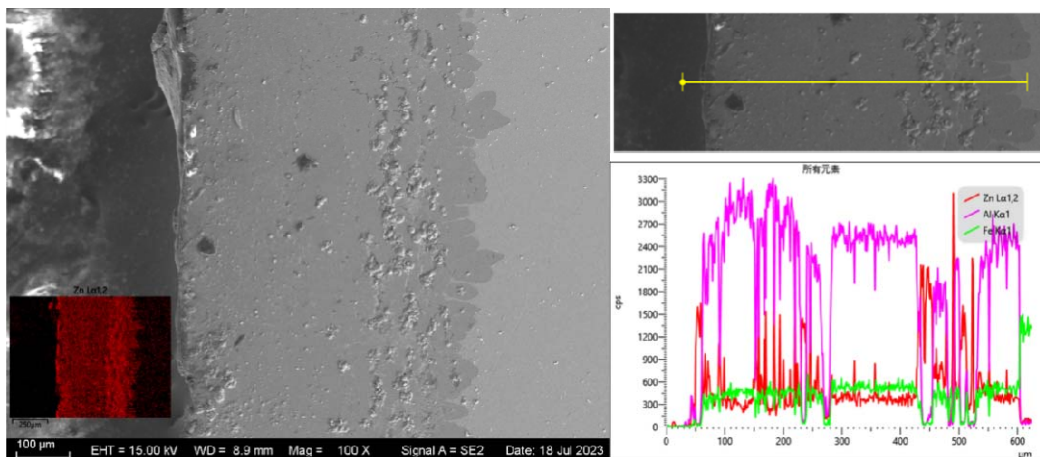


Cross section view of infiltration layer after vacuum furnace 800 °C insulation for different time treatments



Cross section view of infiltration layer after different time treatment at 800 °C insulation in muffle furnace

Zinc corrosion resistance test after after aluminizing treatment



There is a clear layering between the left zinc and the right substrate, and there is no reaction between the zinc and the Fe Al phase on the surface of the infiltration layer

After aluminizing low-carbon steel, diffusion treatment can significantly increase the thickness of the layer and form a transition layer between the layer and the substrate. Under the process of muffle furnace for 6 hours, the molten zinc test can effectively prevent the intrusion of molten zinc; Compared to other temperature processes in the muffle furnace, the infiltration layer structure under the 800 °C process is better and the diffusion is more uniform. Therefore, considering the muffle furnace, 800 °C, 6h is the optimal diffusion process for carbon steel.

aluminizing treatment test of zinc pot sink roll



The roller neck without aluminizing treatment has severe adhesion of zinc dross

The roller neck after aluminizing treatment has almost no adhesion of zinc dross



Serious dross at the web plate of the sink roll end face



The end face web plate of the zinc pot roller after aluminizing treatment has almost no dross



Implementing aluminizing treatment on the impeller of the zinc pump can effectively prevent dross and prevent zinc corrosion