Effect of zinc on the corrosion of SS 304 in H_2O_2

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Zinc injection has been proven to be an effective protocol for corrosion mitigation in nuclear industry. However, the role of zinc ions in this process is still not fully understood. In the present research, effort has been made to investigate the zinc effect on the corrosion of SS 304 specimens immersed in H_2O_2 solutions with addition of zinc. The surface morphology and chemical composition of the material after immersion were studied using SEM-EDX. The results have shown that zinc injection helps maintain the chemical composition of the steel alloy, thus minimizing the change in mechanical properties of the material in the corrosive environment.

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