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THE INHIBITION OF ALUMINIUM CORROSION IN HYDROCHLORIC ACID SOLUTION BY HYDROXYETHYLCELLULOSE

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ABSTRACT

Corrosion inhibition of aluminium AA1060 in 1.0M HCl and 1.5M HCl by HEC was investigated using weight loss method under atmospheric exposure. The results revealed that HEC inhibited the rate of corrosion attack on the metal in HCl medium. Corrosion rates increased with increase in acid concentration. The inhibition efficiencies increased from 27.744% for the lowest inhibitor concentration to 57.317% for the highest concentration of the inhibitor for aluminium corrosion in 1.0MHCl. Similarly, the inhibitor (HEC) showed efficiencies in the range from 35.893% to a maximum of 58.157% for aluminium corrosion in 1.5M HCl. The corrosion current was also studied and it decreased with increase in inhibitor concentration.

Keywords: *Aluminium; Hydroxyethylcellulose; corrosion inhibition; corrosion current; Inhibition Efficiency.*