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Comparison of the Inhibition Effect of Cedrus Atlantica and Azadirachta Indica on Low Carbon Steel Corrosion: Data and Statistical Analysis

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Abstract:

Comparative study of the corrosion inhibition effect of specific concentrations of cedrus atlantica (CA) and azadirachta indica (AI) oil distillates was performed on low carbon steel in 3M of $C_6H_7O_8$ by coupon analysis. Data obtained showed both distillates performed adequately at all concentrations assessed with principal inhibition value of 94.31% and 99.59%. The performance of CA oil distillate was concentration dependent compared to AI distillate which showed limited variation with respect to concentration. Statistical computation by analysis of variance shows inspection time and inhibitor concentration influences the inhibition performance of both compounds. The margin of error values shows the performance values of both compounds above 70% inhibition efficiency is 100% (+0%). Results from standard deviation shows the inhibition efficiency data varied positively with respect inspection time.

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