

Adsorption Effect of *Arachis hypogaea* and *Cocos nucifera* Surfactant Inhibitors on 316L Steel in HCL Acid Solution

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Abstract:

Arachis hypogaea (AH) and *Cocos nucifera* (CN) surfactant were examined as corrosion inhibitor for 316L steel in 9 M HCl solution by weight loss (WL) method. Observation from the results showed that the presence of the active components and functional groups were actually the reasons for strong adsorption performance of AH and CN inhibitors as the corrosion rate was drastically retarded with increment in percentage inhibitor concentrations. Though AH inhibitor showed better efficiency than CN inhibitor due to more active components as revealed by the phytochemical analysis test. ATF-FITR test demonstrated all the potential functional groups accountable for the excellent inhibitions of AH and CN inhibitors. Keywords: Organic compound; Corrosion rate; Active components; Functional groups. ATF-FTIR spectroscopy.