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Data Article

Data on environmental sustainable corrosion inhibitor for stainless steel in aggressive environment



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ABSTRACT

This data article contains data related to the research article entitled “enhanced corrosion resistance of stainless steel Type 316 in sulphuric acid solution using eco-friendly waste product” (Sanni et al., 2018). In this data article, a comprehensive effect of waste product and optimized process parameter of the inhibitor in 0.5 M H₂SO₄ solution was presented using weight loss and potentiodynamic polarization techniques. The presence of the inhibitor (egg shell powder) influenced corrosion resistance of stainless steel. Inhibition efficiency value of 94.74% was recorded as a result of inhibition of the steel by the ionized molecules of the inhibiting compound of the egg shell powder influencing the redox mechanism reactions responsible for corrosion and surface deterioration.

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