Corrosion Behavior Of Steel In Acidic Medium For Petroleum Systems

Author

Listed:

- M.A. Fajobi

  (Department of Mechanical Engineering, Covenant University, Nigeria)

- R.T. Loto

  (Department of Mechanical Engineering, Covenant University, Nigeria)

- O.O. Oluwole

  (Department of Mechanical Engineering, University of Ibadan, Nigeria.)

Abstract

The electrochemical reaction response of austenitic 316L stainless steel and carbon steel was examined through weight loss analysis in 1M, 2M and 3M of HCl acid. The results show that austenitic 316L has high corrosion resistance than carbon steel for the test analyzed with the lowest corrosion rate of 0.0018mm/y at 1M of HCl and highest at 0.0053mm/y when compared with carbon steel which has the lowest corrosion rate of 0.0003mm/y for 1M of HCl and highest at 0.0013 mm/y of 3M of HCl solution all at ambient temperature conditions. General corrosion was displayed on the surface of the carbon steel but austenitic 316L was not affected due to the presence of chromium alloy and other alloying elements.

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