PENGARUH INHIBITOR EKSTRAK DAUN INAI (lawsonia inermis) TERHADAP LAJU KOROSI BAJA ST. 37 DIUKUR DENGAN METODE PENGURANGAN MASSA

Sri Handani¹, Sri Wildani¹, Emriadi²
¹Jurusan Fisika FMIPA Universitas Andalas, Padang
²Jurusan Kimia FMIPA Universitas Andalas, Padang

ABSTRACT

The corrosion tests and micro structure analysis of St. 37 steel had been investigated. These investigation were conducted in nitric acid (HNO₃). The range of concentration added was from 0-0.5 N with extract of henna leaves as inhibitors. The method used was losing mass by measuring loss mass of steel before and after corrosion. The boiling method was used to get the extract of henna leaves. Optical photo Carton Stereo Trinokuler were used for micro structure. Corrosion rate can be reduced by adding inhibitor and inhibition efficiency is measured if its ability to suppress corrosion. The result of the immersion tests show that the inhibition efficiencies are different on 0-0.5 N concentration are 81.96 %, 78.92 %, 53.74 %, 44.85 %, 44.45 % and 39.65 %. Addition of 50 g/1000 mL extrac of henna leaves results in the highest efficiency for HNO₃ environment. The photo showed the surface structure of steel before corrosion, in layer with extract of henna leaves and after corrosion in medium nitric acid.

Keywords: Corrosion rate, Inhibition efficiency, Extract of henna leaves, Nitric acid.

DAFTAR PUSTAKA