

INHIBITIVE ACTION OF PLANT EXTRACTS ON THE CORROSION OF MILD STEEL IN ACIDIC MEDIA

Tedjani Yahia NAMOUSSA, Mohammed Ridha OUHRANI, Nouredine GHERRAF

Laboratoire de Valorisation et Technologie des Ressources Sahariennes

Département Sciences de la Matière, Institut des Sciences et Technologie Centre Universitaire d'El-Oued, B.P. 789 El-Oued 39000, ALGERIE

Ted27nam@gmail.com

ABSTRACT:

The effect of aqueous extracts of *Zygophyllum album* on the corrosion of X52 mild steel in 1M sulphuric acid was investigated by Weight-loss determinations and electrochemical measurements. Potentiodynamic polarization curves indicated that the plant extracts behave as mixed-type inhibitors. The corrosion rates of steel and the inhibition efficiencies of the extract were calculated. The results show that the extract solution of the plant could serve as an effective inhibitor for the corrosion of steel in sulphuric acid medium. Inhibition was found to increase with increasing concentration of the plant extract up to a critical concentration.

KEY WORDS: plant extract; *Zygophyllum-album*.; inhibition; corrosion; X52 Steel.