Effect of some safe additives and mixed salts scales on electrochemical corrosion behavior of yellow brass alloy in artificial seawater

Khadijah M. Emran¹,*, Samia K. Hamdonab, Abeer Mohammed Al Balawi⁰

¹Applied Chemistry Department, College of Applied Science, Taibah University, P.O. Box (4050), Al-Madinah Al-Monawarah, Kingdom of Saudi Arabia
Tel./Fax: + 966 4 8490272; email: kabdalsamad@taibahu.edu.sa
²National Institute of Oceanography and Fisheries, Alexandria, Egypt

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ABSTRACT

Study of the brass/synthetic seawater interface, with and without inhibitor, was carried out using electrochemical methods. EIS showed that the alloys safer localize corrosion in seawater. The presence of scales decreases the corrosion rate. The inhibition performance of tyrosine (Tyr), polyacrylic acid (PAA), and yeast was studied. The acceleration effect of corrosion processes of brass in the presence of Tyr and PAA reflects that the inhibitor concentration was not enough to completely cover the active surface site of the metal. The protection values of the additives in the case of brass go in the order Tyr > PAA > Yeast.

Keywords: Corrosion; Scales; Safely additives; Brass alloy; Seawater

*Corresponding author.

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