

PENCEGAHAN LAJU KOROSI DENGAN INHIBITOR ALAMI EKSTRAK DAUN PEPAYA

PREVENTION OF CORROSION RATE BY NATURAL INHIBITOR PAPAYA LEAF EXTRACT

Yohandri Bow

Staf Pengajar Jurusan Teknik Kimia Politeknik Negeri Sriwijaya
Jalan Srijaya Negara, Bukit Besar Palembang 30139
email: andre_bow@yahoo.com

ABSTRACT

Corrosion is an event of damage or deterioration of a metal caused by reaction with the environment. Corrosion process can be prevented by the addition of corrosion inhibitor. Papaya leaf extract is an organic material that could potentially be used as a corrosion inhibitor because it contains N-acetyl- glukosamida and amino acid. The purpose of this study is to determine the effects of brine concentration and surface area on the rate of corrosion of a metal plate that can be used as reference in corrosion control on metal plate. Determination of corrosion rate use weight loss methods, with medium marinade variation 3.5%, 5% and 6.5% salt water and a sample of the iron plates of different sizes. Each concentration of the medium contained four samples with different sizes of iron plates immersed for 30 days. The results showed the highest corrosion rate found on a metal plate without inhibitor with a value of 0.1331 mm/year. The greater concentration of the medium the corrosion rate will be higher. The smaller surface area of iron plate the corrosion rate will be higher.

Keywords: Corrosion, inhibitor, weight loss methods