HONEY AND EXTRACT OF ROSEMARY AS GREEN INHIBITOR OF CORROSION CONTROL FOR MILD STEEL IN 0.5 M NaCl

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ABSTRACT

HONEY AND EXTRACT OF ROSEMARY (*Rosmarinus Officinalis L*) AS GREEN INHIBITOR OF CORROSION CONTROL FOR MILD STEEL IN 0.5 M SODIUM CHLORIDE

Generally mild steel is used as basic elements construction material in effluent treatment plant, pipelines, reinforcement in concrete structure as well. This steel will more easy to exposed to aggressive environment such as high temperature, seawater and etc that will cause corrosion. To prevent this problem, inhibitor is added onto this steel to retard the corrosion rate. Usually the effective corrosion inhibitors are expensive, toxic, and hazardous for human being and environment. Therefore, the non-toxic, ecological harmless, green corrosion inhibitor is regarded as important and always actual. This study is carried out to determine the effectiveness of green inhibitor of honey and extract of *Rosmarinus Officinalis L.* (rosemary) for mild steel in sodium chloride. The inhibition action of honey and extract of *Rosmarinus Officinalis L.* (rosemary) on the corrosion of mild steel in sodium chloride has been evaluated by weight loss measurement and polarization techniques. The two methods is used to compared the inhibition efficiency of the honey and extract *Rosmarinus Officinalis L.* (rosemary). It was found that a good inhibitor efficiency increase as the inhibitor concentration increase, while the addition of extract *Rosmarinus Officinalis L.* (rosemary) increased the inhibition efficiency of the honey. After some time, the inhibition efficiency decreased due to the growth of fungi in medium. The adsorption of honey and extract of *Rosmarinus Officinalis L.* (rosemary) on the mild steel in sodium chloride interface is found to follow Temkin's isotherm.