STUDIES ON CORROSION INHIBITION OF IRON IN AQUEOUS SOLUTIONS

The aim of the present work is to study the corrosion inhibition of iron in 3.5% O4 in absence and presence of some selected inhibitors. Some hydrazone ierivatives were prepared and used as inhibitors.The thesis comprises three main chapters; the first one deals with the blowing fields of interest:(1) Corrosion theories and corrosion protection.(2) Literature survey of corrosion behavior of iron.(3) Aim of the present work.Chapter two deals with the experimental part. It includes the chemical (composition of the investigated material, preparation of hydrazone derivatives, preparation of the phosphoric acid solutions, and the procedures used for the | corrosion measurements such as weight loss and polarization techniques.The results obtained and their interpretations are shown in chapter three under two separated sections; (A) and (B)..Section A: contains the results obtained from weight loss measurements for iron dissolution in 3.5% H3PO4 containing different concentrations of hydrazone derivatives. These results revealed that these derivatives behave similarly and the weight loss is generally decreases with increasing the concentration of these derivatives and also depends upon the nature and molecular size of the hydrazone derivatives used.