**ABSTRACT**

THE EFFECTS OF 5-PYRAZOLONE DERIVATIVES HAVE BEEN INVESTIGATED AS CORROSION INHIBITOR FOR MILD STEEL IN 1M HCL AND 1M H2SO4 USING ELECTROCHEMICAL AND NON-ELECTROCHEMICAL TECHNIQUES. THE EFFICIENCY OF INHIBITOR INCREASES WITH INCREASE IN INHIBITOR CONCENTRATION AND DECREASES WITH RISE IN TEMPERATURE. THE ADSORPTION OF THESE INHIBITORS ON MILD STEEL SURFACE HAS BEEN FOUND TO OBEY LANGMUIR ISOTHERM. POTENTIODYNAMIC POLARIZATION RESULTS SHOW THAT THE INHIBITORS BEHAVE AS A MIXED TYPE. SOME THERMODYNAMIC PARAMETERS SUCH AS ENTHALPY (ΔH°), ENTROPY (ΔS°) AND FREE ENERGY (ΔG°) HAVE BEEN CALCULATED.