**ABSTRACT**

A new class of corrosion inhibitors namely dianiline Schiff bases was synthesized and its inhibiting action on the corrosion of mild steel in 1M sulphuric acid at 30°C was investigated by various corrosion monitoring techniques. A preliminary screening of the inhibition efficiency was carried out using weight loss measurements. Potentiodynamic polarization studies showed that the Schiff bases were mixed type inhibitors. The effect of temperature on the corrosion behaviour of mild steel in 1M sulphuric acid with the addition of the Schiff bases was studied in the temperature range from 40°C-60°C. The adsorption of these compounds on a mild steel surface from sulphuric acid obeyed the Langmuir adsorption isotherm. The decrease in inhibition efficiency with increase in temperature and the less negative ∆G°ads values suggest predominant physisorption of the Schiff base molecules on the steel surface.