**ABSTRACT**

The influence of pyrimidine derivatives on the corrosion inhibition of mild steel in 1 M H2SO4 was studied using weight loss and electrochemical techniques. These compounds act as good corrosion inhibitors even at low concentration and the inhibition efficiency increased with the increase in inhibition concentration. The corrosion rates have been determined at various temperatures (303-333K) by weight loss measurements. The Rt values obtained from EIS method increased with increase in inhibitor concentration. The potentiostatic polarization results clearly revealed that the inhibitors behave as a mixed type but slightly anodic in nature. The adsorption process was found to obey the Langmuir adsorption isotherm. The synergistic effect of halide ion on the inhibition efficiency increase with increase concentration.