

## **Gambir extract as rust converter on pre-rusted steel plate**

### **ABSTRACT**

Electrochemical analysis via potentiodynamic polarization analysis was used to study the performance of gambir extract as a rust converter. The pre-rusted steel plate was coated with a rust converter based on the various concentrations of gambir. The concentrations of gambir varied from 5% to 20%. The efficiencies of the coating when exposed to 3% NaCl solution were expressed as corrosion rate. The Tafel plot shows that increasing the gambir concentration decreases the corrosion rate. The 5% gambir, 10% gambir, and 20% gambir had corrosion rates of 21.9, 14.3 and 4.52 mmpy, respectively. The addition of 5% H<sub>3</sub>PO<sub>4</sub> to the formulation, gave a better performance of the rust converter.