

**THE EFFECT OF THE USE OF PRIMARY EPOXY ON CORROSION RATE
AND LOW CARBON STEEL MICROSTRUCTURE ST 37 IN THE
ATMOSPHERIC ENVIRONMENT OF JEMBER DISTRICT**

M Gaung Sidiq Alfaini

Automotive Machinery Study Program, Department of Engineering
State Polytechnic of Jember

ABSTRACT

Corrosion is a form of damage that occurs in metal. Many factors can cause corrosion, one of which is the atmosphere. Metal decay in general cannot be stopped but can be slowed down. There are various ways to cause corrosion, one of which is often used is to use inhibitors, one of which is using an epoxy primer. In this study, ST 37 steel and epoxy primer were used as a coating (inhibitor). The variation used is the specimen placement in the atmospheric environment of Jember Regency which includes Ambulu as a coastal area, Ajung as a coastal area, Summersari as an urban area, Arjasa as a plantation area and Silo as a mountainous area. The atmospheric environment in the five places was categorized as very good, good and quite good because the corrosion rate was at >1-20 mpy. For the use of primary epoxy as a coating in the five places, it was in the good and very good category because it had efficiency inhibitors between 61 – 80% and 81 – 100%.

Keywords: *corrosion, ST 37 steel, epoxy primer, atmospheric environment, corrosion rate*