

Analisis Laju Korosi Baja ASTM A36 Menggunakan Powder Coating dengan Variasi Pretreatment (*Analysis of ASTM A36 Steel Corrosion Rate Using Powder Coating with Pretreatment Variations*).
Pembimbing (Andik Irawan, ST, M.Eng)

Mohammad Yanuar Firhan Ramadhan
Study Program of Automotive Engineering
Majoring of Engineering
Program Studi Mesin Otomotif
Jurusan Teknik

ABSTRACT

The need for materials in the manufacturing field affects the choice of various kinds of suitable materials. The use of metal in the form of ASTM A36 steel is one of the options used in the automotive sector and also in ship commodities. Metal objects on ships will experience corrosion when they have been used for sailing for a long time, because the corrosion properties of seawater can cause corrosion to occur more quickly. This can be prevented by restoring it yourself using a powder coating. The purpose of this study was to analyze the corrosion rate of ASTM A36 steel using powder coating with variations in pretreatment. This type of research uses experimental research. The object of this research is the corrosion rate value of ASTM A36 steel. The results of the research obtained by the researchers were the least corrosion rate found in specimens with iron phosphating pretreatment with the paint thickness before testing the corrosion rate of 88.28 μm and the reduction in paint thickness after testing the corrosion rate of 10.69 μm . By pretreatment of iron phosphating on the specimen surface or an automotive material, it can reduce or slow down corrosion caused by sea water.

Keyword: *corrosion rate, ASTM A36, pretreatment, powder coating*