ANALYSIS OF THE INFLUENCE OF LOW CARBON STEEL BARRIER PROTECTION LAYER WITH PAINTING METHOD ON CORROSION RATE IN SEA WATER MEDIA

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ABSTRACT

Corrosion is a decrease in quality and metals damage because of reaction with their environment. Therefore corrosion cannot be prevented but can only be inhibited. Many methods to inhibit the rate of corrosion. One of them is using steel coated with the painting method. The material used is low carbon steel ASTM A36 and uses epoxy paint with the mark is international paint. The coated process is carried out with a variation of coated thickness is 75 µm, 125 µm, 275 µm with an oven temperatured is 60 ° C and 70 ° C with 30 minutes corroded using sea water media. The results of corrosion rate value for row material that is 1,064 mm / year, the lowest corrosion rate values are at the thickness of 275µm coating with a temperatured of 70 ° C which is 0.002 mm / year, the highest corrosion rate at a coated thickness of 75 µm with a temperatured of 60 ° C is 0.075 mm / year, the thicker coated and the higher temperatured can reduced corrosion rate value of ASTM A36 steel.

Keywords: painting, ASTM A36 steel, coating thickness, corrosion rate, seawater.