

***ANALYSIS OF CORROSION RATE ON SS400 CARBON STEEL
PLATE WITH VARIATIONS IN COATING THICKNESS AND
COATING DISTANCE USING THE SPRAY COATING METHOD***

Mentor : (Cahyaning Nur Karimah, S.Pd., M.T.)

Moh Bintang Rizaldi

Automotive Engineering Study Program

Engineering major

ABSTRACT

This study aims to determine the effect of varying the number of layers and spray coating distance on the corrosion rate of SS400 carbon steel using the weight loss method. The variations employed were 2 and 4 layers, with spraying distances of 10 cm and 20 cm. Specimens were immersed in a 5% NaCl solution for 168 hours, after which mass loss was calculated to determine the corrosion rate. The results indicate that the number of layers and the spraying distance influence the corrosion resistance of SS400 steel. The highest corrosion rate was observed in the 2-layer specimen with a 10 cm distance (18.70 mg/dm²·day), while the lowest rate was found in the 4-layer specimen with a 20 cm distance (7.01 mg/dm²·day). Increasing the number of layers and optimizing the spraying distance resulted in improved corrosion resistance for the steel

Keywords : *corrosion, SS400 steel, spray coating, weight loss, corrosion rate*