

ABSTRACT

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Analysis of Corrosion Rate of Carbon Steel Galvanized By Weight Loss Method To Thickness And Micro Structure of Steel

This study aims to determine the effect of hot dip galvanizing on steel with different carbon content on mechanical properties of steel. The method used was that the metal was coated with hot dip galvanizing media using zinc. From the hardness test results, SAE 1085 produced the highest average of hardness 95.1 HRB. The results of the thickness test showed that the highest AISI 1020 was 131.8 μm . The results of the corrosion rate test showed that the highest corrosion rate is AISI 1020 was 0.36385 mmpy. The microstructure test results showed SAE 1085 has a smaller grain size. Zn layer which is not too thick due to lack of diffusion and movement of Zn atoms due to high carbon content which has a close layer distance and small grains. So that the corrosion rate that occurs is lower than steel which has a low carbon content.

Keywords : Carbon Steel, Hot Dip Galvanizing, Corrosion Rate, Weight Loss Method.

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