CORROSION RATE AND VISUAL ANALYSIS USING A MICROSCOPE CAMERA ON THE POWDER COATING LAYER OF ST 37 STEEL WELDING JOINTS

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ABSTRACT

Steel plate is a material that is often used in making vehicles such as cars. In making a car frame, there are several components that undergo welding. Parts of the car frame where the welding process is carried out are very prone to corrosion caused by humidity in the air and chemicals in the vehicle's supporting components. The method for dealing with corrosion is with powder coating. Powder coating is the process of coating a metal surface with a layer of film, then heating it to polymerize and cure the coating. The research used experimental methods to determine the efficiency of powder coating in preventing corrosion. The highest value for calculating the corrosion rate was obtained by the test specimen in the corrosive medium of Zuur battery water with a value of 177.026 mpy after 14 days of immersion. In visual testing using a microscope camera on the corrosive medium of battery water and sea water, a corrosion mechanism occurred, however, in brake fluid, no corrosion occurred because pores appeared due to one of the brake fluid compositions.

Keywords : *Powder Coating, Corrosion Rate, ST 37 Steel*