

***ANALYSIS OF THE WATER TRANSFER PRINTING TECHNIQUE
REGARDING PAINT ADHESION AND THICKNESS ON ACRYLONITRILE
BUTADIENE STYRENE (ABS) MOTORCYCLE BODY WORK***

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ABSTRACT

This study aims to determine the effect of variations in spraying distance and drying time on the thickness and adhesion of paint on motorcycle body parts made of Acrylonitrile Butadiene Styrene (ABS) using the Water Transfer Printing (WTP) method. The study employed an experimental method with spraying distances of 10 cm, 15 cm, and 20 cm and drying times of 15, 30, and 45 minutes at a temperature of 30°C. Paint thickness was measured using a Coating Thickness Gauge, while adhesion was tested using the Cross-Cut Test based on ASTM D3359. The results showed that the highest paint thickness of 246.0 μm was obtained at a spraying distance of 10 cm with a drying time of 15 minutes, while the lowest thickness of 199.3 μm was obtained at a spraying distance of 20 cm with a drying time of 45 minutes. The best adhesion was obtained at a spraying distance of 15 cm with a drying time of 30 minutes, with 5% damage and a 4B classification. Therefore, variations in spraying distance and drying time affect the thickness and adhesion of the paint coating on ABS.

keywords: *Drying variations, spraying distance, paint layer, temperature of 30°C*