

***ANALYSIS OF THE EFFECT OF LONG TAMPERING TIME ON THE THICKNESS AND ADHESION OF POWDER COATING FLUIDIZED BED METHOD ON ALUMINUM T5 5052 MATERIAL***

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***ABSTRACT***

*This study examines the use of the fluidized bed powder coating method on T5 5052 aluminum material to create a quality powder coating layer. Researchers want to know the optimal tampering time to produce a layer that is resistant to pressure with an even thickness. The initial treatment process used the Vapor Blasting, Degreasing, Chromating method before the visual test, thickness test, and cross cut test were carried out. The results showed that tampering for 15 minutes resulted in a layer with an average thickness of 233.33 $\mu$ m and a peeling rate of 25%. Tampering for 25 minutes resulted in an average thickness of 316.67 $\mu$ m and a peel-off rate of 5%. Meanwhile, tampering for 35 minutes resulted in a thickness of 356.67 $\mu$ m and an exfoliation rate of 3%. In this case, tampering for 35 minutes showed the best results with an optimal combination of coating thickness and adhesion level. The results of this study provide important insights regarding the use of the fluidized bed powder coating method on T5 5052 aluminum material and the effect of tampering time on the quality of the resulting powder coating layer.*

*Keywords : Alumunium T5 5052, Powder Coating Fluidized Bed, Vapor Blasting, Degreasing, Chromating, Cross Cut*