

## Bits Reduction in the Electrodeposition Process of a Pickup Truck – A case study

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### Abstract

Painting process is critical in the manufacturing process of commercial vehicle to provide both protection and decorative elements. Good quality coating is important to reduce cost and concurrently achieve customer satisfaction. A systematic approach and applications of the basics and advanced management tools and techniques are used to improve the quality of the coated body. One of the proposed approach is to utilise the PDCA-cycle to reduce the defects on the electrodeposited body. In this study, the bits defect on the electrodeposited automobile bodies is investigated. Within the multilayer coating on bodies, the iron filing leads to the bits defect that appears on the electrodeposited coating surface. The iron filings arised from the metal assembly process carried out in the bodyshop, remained on the body during the painting process in paint shop. The defected surface can be removed through the process of sanding which is high in cost and requires extensive production time. Therefore, the best method to prevent the bits defects is by removing or reducing the iron filing through filtration, magnetic separation and surface adjustment process. The implementation of filtration system, magnetic separation and surface adjustment process improved 36% of bits and reduced 42% of sanding man hour with a total saving of RM40.00 per unit.

**Keywords** : electrodeposition, defect, quality improvement, PDCA

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