

Industrial Research Project Title	Reduction of Defects Caused by Dust in Automotive Paint Process
Industrial Research Project Credits	6
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Abstract

The objectives of this industrial research project are to study the factors causing defects and to find ways to improve production process and product quality in order to help reducing defects caused by dust in automotive paint process. This study is based on problem solving and quality improvement by QC Story approach and statistical process control, as tools to solve problems and to develop production process. The study focuses on process improvement through reduction of variation occurring in manufacturing process by reasonable analysis system and reasonable decision making based on reliable data. For this study, researchers got good cooperation from Thai Rung Union Car Public Company Limited, which was used as a case study for the research. The process under study is top coat painting in automotive painting process which has a chronic problem of defect caused by dust on the paint surface. The problem requires an additional end process repair, a process that does not add value to products. The goal of this research is 50 percent reduction of defects from 1.7 to 0.85 defects per unit. Problem solving operation started from the study of production process in order to find key factors of the problem as well as carrying out the measurement system analysis until it was reasonably acceptable. Thereafter, all factors expecting to cause the problem had been analyzed using statistical process control. It was discovered that the major cause of the problem is the inefficient cleaning of the oven and the dolly rut in the paint oven. After improvement, the dust was reduced to the object.