

## ABSTRACT

*PT. Suzuki Indomobil Motor TB II is an automotive company that produces four-wheeled vehicles. One of the production units produced is the Suzuki Carry Pick-Up. In the production process of the Carry car there are various types of defects, one of the highest defects is the butsu defect that occurs in the painting process stage based on company data reports from the period May 2019 to July 2019. Based on the problem, a study was conducted to identify the main causes of the butsu defect in the body. Carry cars and provide proposed improvements that can be used to minimize the causes of Butsu defects in the car body of the Carry. Using the DMAI approach and carrying out FMEA calculations and using the Sigma Level can minimize the causes of butsu defects. In the Define phase, Critical to Quality (CTQ) determination and production mapping of the Painting department will be carried out using the SIPOC Diagram. At the Measure stage, process stability calculations will be performed using the P Control Map and process capability to find the average DPMO value and the average Sigma Level value. In the Analyze Phase, the root cause analysis of the butsu defect problem is analyzed using Fishbone diagrams, 5 Why's, and FMEA to determine the priority of improvement. From the Analyze stage, it was found that the root causes of butsu defects were Man, machine, method and Environment factors. The Man factor occurs because the operator is not careful when cleaning and the operator does not maintain personal and tool hygiene, at the machine stage the painting tools are less than optimal, at the machine stage due to non-optimal paint spraying equipment, at the method stage due to imperfect surface cleaning methods, while the stage environment because the painting area is not clean. In the Improve phase, the proposed improvement is given in the form of training and routine meetings, the use of painting coveralls, additional cleaning time, conducting preventive maintenance on a regular basis, and providing air filtering in the Painting area. after improving it can be assumed to increase the level of sigma from 3.7 to 4,12.*

*Keywords: DMAI, Butsu, CTQ, Fishbone, 5 Why's, and FMEA.*