

## ABSTRACT

PT. Alviny Indonesia is a manufacturing company engaged in stickers manufacturing. Most of the products that manufactured by PT. Alviny are to suit customer specifications. Today, the problem being faced by PT. Alviny Indonesia is the high number of defects in the motorcycle sticker's production process, one sticker products that are produced with the largest production percentage is Vega ZR motorcycle sticker. PT. Alviny records the number of defective products Vega ZR motorcycle sticker from January 2010 to December 2010 amounted to 2.808.888 which is in average 16% of the total inspections performed. Besides, the target of company's disability was 0% while the company's current product defect tolerance is 5%. Today's condition is very far from the defect tolerance of the company. Therefore, it is necessary to improve the quality which focused on the biggest types of defects.

Six Sigma methods is used to overcome these problems. Six Sigma consists of Define, Measure, Analyze, Improve, and Control stages. The production process definition and determination of motor sticker Critical to Quality(CTQ) is carried out in Define phase. There are four types of Critical to Quality of Vega ZR stickers, the suitability of color, pattern compliance, hygiene of products, and texture of products. Based on the four CTQ, there are ten types of defects in the product. The types of defects are color no smooth, gradation, overlap, dust, clear, smear, scratch, color no standard, die cut, and others.

The most defects is dust defect. In the Measure phase, calculation of process capability and stability of Vega ZR motor sticker is conducted and known that Vega ZR production process has not been stable with a value of process capability in the DPMO 15726.36574 or equal to 3.66-Sigma. In the Analyze phase, corporate cause of disability of the analysis is carried out. Once analyzed, there are four types of common cause of disability dust wich are workers who are not diciplined and rigorous, dirty working tools, dirty material and room, dirty condition tat lead to dirty air in the production area. In the Improve phase, proposals given based on the analysis done with the goal of reducing dust defects. The proposed improvements will be given to PT. Alviny Indonesia to improve quality control

Keywords: Six Sigma, CTQ, Quality Improvement, Sticker.