

Abstract

Nowadays, a company which can produce with low cost will lead to gain an advantage in doing the business. Based on the case study, the problem of the company high defective rate due to un-consistent production and lacking of continuous improvement. The objective of this research is then to develop and adjust the production process in order to obtain process with less a defective rate by using Six Sigma strategy.

Six Sigma's working steps used in this research consist of Select critical characteristics, Determine targets and specifications, Validate measurement system, Establish baseline, Determine improvement objectives, Study process inputs, Determine potential causes, Quantify key input settings, Formulate implementation plan, Validate the plan, Control inputs and monitor outputs and Sustain the change.

The key research indicator is the defective rate which can be calculated by the total number of defective tires divided by total number of tire produced monthly. By applying the Six Sigma Strategy, the defective rate is decreased from 0.12 to 0.04% and Z-score is improved from 1.53 to 3.30.