ABSTRACT

PT Agronesia (Division of Engineering Rubber Industry) is an industrial manufacturing company with trademark "Inkaba" which produces technical rubber products for industrial needs. This research focus on the type of rubber bellow. In the rubber production process, defects discovered that can affect product quality. According to the company, January – December 2016 the defect rate that occurred was 17,5% (limit of tolerance of companies below 10%). Therefore, the need to design an improvement to minimize defect product.

This research used a method of six sigma to reduce defect product. Stage in six sigma are namely DMAIC (Define, Measure, Analyze, Improve, and Control). At stage of define is done CTQ identification and found 5 CTQ, then mapping of the production process using SIPOC diagram. At stage of measure is done measurement process stability (Control Chart p) and process capability (DPMO and levels of sigma), with the results obtained that there is the process that out of control and has 3,470 sigma point. After knew that there is a process that is not controlled, and then on Analyze Stage to determine the highest defect type in the product by using Pareto diagram and analyze the defect causal factor using fishbone diagram, and 5 why's, and determine priority for improvement suggestion using FMEA. The improvement stage is done by making the design of improvement proposal in the form of tool and preventive maintenance.

Keyword : Defect, Six Sigma, DMAIC, CTQ