ABSTRACT

PT XYZ is a nation-owned company that works in the manufacturing and producing of defense devices and other commercial products. In the producing process of the Panser product, some of the stages include cutting process, smoothing process, hole punching process, forming process, inspection process and testing process. Based on the historical data of the company, throughout January to October 2016, notably in the cutting process of Special Vehicle Division Unit, it is identified that there are still a significiant amount of defects that exceeds the standard tolerance that has been set by the company of 2% per month, with most defects caused by uneven cut.

To resolve this problem, the research uses the approach of Six Sigma method. The Six Sigma Method consists of several stages, named DMAI that includes Define, Measure, Analyze and Improve. In the defining stage, it will be done using the CTQ Determination and production process mapping using the SIPOC Diagram. In the measuring stage, calculation of the process stability and capability is done with the average DPMO being 7331.095 and *the average Sigma Level being* 3.953*. In the analyzing stage, analysis of the problem's roots are done using the fishbone diagram tool and 5 Why's. Afterwards, the determination of the repairing priority and cause factor is done using FMEA analysis. In the improving stage, a repair suggestion of making additional work instruction, adding machine settings rule display and developing a training system for new operators and workers in the company is advised.*

Keywords: CTQ, Six Sigma, Cutting Process, DMAI.