

## **ABSTRACT**

PT. Pindad is a company that manufactures military and non-military equipment. Pump casing produced by the Department Cor 1 is a focus for quality improvement in 2011. This quality problems resulted in waste of a negative impact on the company and consumers. Based on the inspection report data on pump casing products, product reject rate during the year 2011 reached 14.41%. While the flaw tolerance allowed by the company in 2011 was 8%.

To overcome these problems, lean six sigma methods is used. The step used is to define , measure, analyze, and improve in DMAIC and using the tools in lean to do the repair process on production casing pump. Define phase is carried out by SIPOC diagramming, determination of the dominant defect type, as well as the authentication of the biggest waste is defect. In phase measure determine the CTQ, measurement stability and process capability. In analyze phase, determine the root cause problems with the fishbone chart and 5 Why and prioritization improvements to the FMEA. In improve stage is proposing improvement of the results analyze phase. The proposal aims is to improve the quality of the process production by improving the efficiency and performance of the pump casing production.

Based on the define phase, the dominant defect pump casing products in 2011 is a kind of frozen defects early in the percentage of 38,71% from 11 other types of defects. Performance of the pump casing production in 2011 is still not stable, with an average 15750.3 DPMO and sigma level 3.76. Recommendations are given for improve the quality of the production process such as replacing the pump casing machine along with other alternatives, reducing the time one of the inspection process, the use of visual management, automation system, as well as the standard dose and measures of slag remover tool.

*Keywords: FMEA, fishbone chart, 5 Why, Andon*