

## **ABSTRACT**

*PT. Pindad Indonesia is a manufacturing company specializing in military products and commercial. PT. Pindad aware that product and service quality in accordance with customer needs is very influential on the success of the company's business. From the data produced during from March until September 2011, showed the number of defective products Pump Casing on top of the target company, namely the number of defects < 8%. In order for customer satisfaction and enterprise efficiency can be achieved, PT. Pindad is trying to control and improve the quality of production.*

*The order to reduce the number of defects, Six Sigma will be used as quality improvement method. The stages that must be done in the implementation of Six Sigma are define, measure, analyze, improve, and control (DMAIC). Performed on stage define they are product selecting, identifying of Critical To Quality (CTQ), and identifying production process. Measure stage performs identification of critical to quality (CTQ) potential and measures capabilities such as stability and capability. In the Analyze stage perform identification the root causes of selected defects using the fishbone diagram. Furthermore, on the the improve stage perform a proposed improvement and the control stage perform a measurement after improvement level sigma.*

*Based on measurement by using quality data of Pump Casing from March until September 2009, known that potential defect are loss mold defect, and broken casting defect. Performance existing of production process Pump Casing is DPMO value 23852 and sigma level 3,48 sigma at output level. After improved DPMO value 8.011 and sigma level 3,91 sigma the sigma level has increased by 0.43. By that numbers known that the improvement are done successfully to reduce defects and increase the production quality.*

*Keywords : Pump Casing Panasonic GP-200jxk, Defect, DPMO, Six Sigma*