

## **ABSTRACT**

*PT Bintang Agung is a company which produce bed linen and shortpants. In 2011, company focuses to do quality improvement on bed linen product. Until nowadays, this company still have some quality problems on their product with its 5.69 % average defect rate between January 2011 – June 2011.*

*Six Sigma is a solving method to solve this quality problem by using zero defect principal. There are 5 steps in six sigma method called DMAIC (Define, Measure, Analyze, Improve, Control). This research is conduct until Improve steps only. The first step is define the production process of the bed linen and determine the CTQ (Critical to quantity). Next phase is measuring step, collect all CTQ potential data and calculate the stability and capability process. Then, analyze the factors that caused defect and analyze to determine the priority problem. On the improvement step, TRIZ is used to result recommendation. The recommendation is determined based on the analyze that already conducted before the improvement step. This recommendation is pointed to decrease the defect quantity on bed linen product.*

*On this research, obtained three CTQ key consist of product integrity, colour matching, and neat stitches. Based on these three CTQ keys, there are five types defects found. On this research, only focus on three types of defect, unmatched colour defect, loose stitches defect, and tear defect. Performance of existing bed linen product on the level output is 11360,40 DPMO value and 3,77 for the sigma level. PT Bintang Agung need to improve the process continuously to gain 6 sigma. Some recommendations gave to improve the product quality such as provide warning posters, using timer, produce SOP, and measuring tools assistant that designed to measure the fabric.*

*Key Words: Six Sigma, Critical to Quality, DPMO, Level Sigma*