

## ABSTRACT

*Carton box or corrugated box is a type of paper packaging consisting of wave-shaped material made from one or several sheets of kraft liner paper and medium paper as the wave layer, with various sizes and thicknesses that function to package various kinds of goods. One company that produces cardboard boxes is PT. XYZ especially in the Carton Box (packaging) division. The Carton Box Division has production quality problems that impact customer satisfaction. The DPMO value of the carton box production process is 20.119 with a sigma value of 3,55, it is still below the company's target (sigma value of >4,0). Therefore, to increase competitiveness and customer satisfaction, it is necessary to improve production to increase DPMO and sigma value.*

*This research aims to improve production in the Carton Box industry at PT. XYZ uses the Lean Six Sigma (LSS) method with the DMAIC approach. Apart from that, the Failure Measure Effect and Critical Analysis (FMECA) method was also used at the analysis stage and the Theory Resheniya Izobreatatelskikh Zadatch, (TRIZ) method at the improvement stage of the Lean Six Sigma method. The results of this research are the implementation of production improvements in the form of work processes (work instructions) and pokayoke to reduce and prevent quality problems due to production, namely the process of checking plate quality (galley proof) as well as standardization and notification of plate renewal. After implementing the improvements, the DPMO value fell to 6,122 and the sigma value became 4.01.*

*Keyword: Lean Six Sigma (LSS), Failure Measure Effect and Critically Analysis (FMECA), Teoriya Resheniya Izobreatatelskikh Zadatch (TRIZ), Pokayoke, Carton Box*