

## **ABSTRACT**

The study was conducted at PT. United Can Co.. Ltd. in West Jakarta, which produces various kinds of tin metal packaging raw material. The principal problem in this research is aimed to improve the quality of the product packaging beverage cans 250 ml sizes.

Problem solving done by the method of Six Sigma Define phase, Measure, Analyze, Improve, and Control (DMAIC). DMAIC phases begins with the identification of customer needs to determine priorities CTQ. Furthermore, measured sigma level, stability and process capability CTQ priority. At the stage of analysis used causal diagrams to find the cause of the failure of the CTQ, and then conducted a failure analysis with Failure Modes Effects Analysis tools (FMEA). In the last stage is set and control the process improvement plan for the company.

The results begins from Define phase where the obtained ME High as a priority CTQ. In the Measure phase is known sigma level in the year 2008 amounted to 3.19 to 3.20 sigma in the Year 2009. In the Analyze phase of the information that the method factors or processes, labor, materials, measurements, the environment, as well as machinery and equipment factors suspected as the cause of instability and the inability of LSM (lacquer Spraying Machine). In the Improve and Control phases given the proposal to Improve the managerial and technical side and also given the proposal to ensure the quality of the Control Can Body 250 ml.

**Keywords:** Six Sigma, Critical to Quality (CTQ), Can Body 250 ml, Level Sigma, ME High, FMEA, Lacquer Spraying Machine.