ABSTRACT

This study aims to analyze and improve the quality of 220 ml cup water packaging at UD. Amasae in Sinunukan 3 District, Mandailing Natal Regency. The main problem faced by the company is the high level of product defects, including broken seals, physical damage to the cup, and breakage due to being crushed by weight. This study uses the Six Sigma and Kaizen methods to identify the root cause and propose continuous improvements to the production process. Data were obtained from field observations, interviews, and document analysis related to production and product defects during October 2024. The Six Sigma stages include Define, Measure, Analyze, Improve, and Control (DMAIC), while the Kaizen method is applied through the Five M and 5S approaches. The results of the analysis show that the main causes of damage come from human factors, machines, materials, methods, and the environment. Proposed improvements include employee training, machine calibration, material replacement, better implementation of SOPs, and work environment arrangements. Implementation of improvements resulted in a decrease in the level of defects and an increase in the sigma level to close to 4, which reflects a more stable and efficient production process. This study provides a practical contribution to UD. Amasae in optimizing product quality and increasing customer satisfaction.

Keywords : Quality Control, Six Sigma, Kaizen, UD. Amasae, Product Defects, Air Cup Packaging.