ABSTRACT

PT. Jalimas Indah Perkasa is a company engaged in the convection sector that produces women's robes. The high demand for production every month causes defects in the sewing process, zipper installation, and sequin installation. Therefore, this study uses the Six Sigma method with the DMAIC (Define, Measure, Analyze, Improve, Control) approach to find the causes of defects, calculate the defect value and provide improvement suggestions. Data were collected from January - December 2024 with a total production of 12,704 pcs. The results of the analysis showed that the most defects occurred in the zipper section 347 pcs, stitching 271 pcs, and sequins 266 pcs. The calculation of Defects Per Million Opportunities (DPMO) shows that the quality of the production process experienced the lowest sigma number in July 2.14, indicating high defects, while November showed the highest sigma number 2.52, which means low defects. Human factors and ineffective work techniques are the main causes of failure, based on the analysis of the Pareto diagram and interrelationship diagram, as well as the calculation of DPMO with an average sigma value of 2.49. Therefore, a proposal for improvement is given by creating SOPs in each production line which is expected to help reduce defective products in future production.

Keywords: *Six Sigma DMAIC, Quality Control, Defective products, Women's gamis*