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ABSTRACT

"ANALYSIS OF THE USE OF THE SIX SIGMA METHOD IN REDUCING DEFECTIVE PRODUCTS IN THE ELVAN FASHION ROBE PRODUCTION PROCESS"

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This study aims to analyze the application of the Six Sigma method in reducing defective products in the robe production process at Elvan Fashion convection in Tasikmalaya City. The main problem addressed in this research is the high level of product defects occurring during the production process, which impacts increased production costs and decreased product quality. Data from 2025 indicate that the percentage of defective products ranges from 4% to 6% each month, with defect types including sewing defects, material defects, cutting defects, and finishing defects.This research employs a quantitative descriptive method using the Six Sigma approach through the DMAIC (Define, Measure, Analyze, Improve, Control) stages. The results of this study indicate that the Six Sigma method effectively identifies dominant defect types and their root causes systematically. The proposed improvements have the potential to reduce defect levels and improve the sigma value of the production process. Therefore, the implementation of the Six Sigma method is proven to have a significant effect in reducing defective products and improving production quality at Elvan Fashion convection.

Keywords: *Six Sigma, DMAIC, defective products, quality, garment convection*

ABSTRAK

ANALISIS PENGGUNAAN METODE SIX SIGMA DALAM MENGURANGI PRODUK CACAT PADA PROSES PRODUKSIKONVEKSI JUBAH ELVAN FASHION

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Penelitian ini bertujuan untuk menganalisis penggunaan metode Six Sigma dalam mengurangi produk cacat pada proses produksi konveksi jubah Elvan Fashion di Kota Tasikmalaya. Permasalahan utama dalam penelitian ini adalah tingginya tingkat produk cacat yang terjadi selama proses produksi, yang berdampak pada peningkatan biaya produksi dan penurunan kualitas produk. Data menunjukkan bahwa persentase produk cacat selama tahun 2025 berkisar antara 4% hingga 6% setiap bulan, dengan jenis cacat meliputi cacat jahitan, bahan, potongan, dan penyelesaian akhir. Metode penelitian yang digunakan adalah deskriptif kuantitatif dengan pendekatan Six Sigma melalui tahapan DMAIC (Define, Measure, Analyze, Improve, Control). Hasil penelitian menunjukkan bahwa metode Six Sigma mampu mengidentifikasi jenis cacat dominan dan akar penyebabnya secara sistematis. Implementasi perbaikan yang diusulkan berpotensi menurunkan tingkat cacat serta meningkatkan nilai sigma proses produksi. Dengan demikian, penerapan metode Six Sigma terbukti berpengaruh dalam mengurangi produk cacat dan meningkatkan kualitas produksi pada konveksi jubah Elvan Fashion.

Kata Kunci: Six Sigma, DMAIC, produk cacat, kualitas, konveksi jubah