

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengendalian kualitas produk paving block di UD Mulia Genteng Beton dengan menggunakan pendekatan *Six Sigma* melalui tahapan *Define, Measure, Analyze, Improve, dan Control* (DMAIC), serta metode 5W+1H sebagai usulan perbaikan. UD ini kerap menghadapi masalah produk cacat seperti sompel, retak, dan permukaan tidak rata, yang berdampak terhadap mutu produk secara keseluruhan. Data dikumpulkan melalui observasi, wawancara, dan dokumentasi selama proses produksi pada bulan Mei 2025. Hasil analisis menunjukkan bahwa rata-rata nilai *Defects Per Million Opportunities* (DPMO) adalah sebesar 20.603,88 dan nilai sigma rata-rata sebesar 3,54, yang masih tergolong standar kualitas industri nasional. Penyebab utama cacat dianalisis menggunakan metode *fishbone* diagram, yang menunjukkan bahwa faktor manusia, material, metode, mesin, dan lingkungan merupakan kontributor utama. Sebagai upaya perbaikan, metode 5W+1H digunakan untuk merancang tindakan korektif secara sistematis. Penelitian ini menyimpulkan bahwa pendekatan *Six Sigma* efektif dalam meminimalkan tingkat cacat dan dapat menjadi landasan strategi peningkatan kualitas produk di UD.

Kata kunci: *Six Sigma*, paving block, pengendalian kualitas, 5W+1H, DPMO.

ABSTRACT

This study aims to analyze the quality control of paving block products at the Mulia Genteng Beton MSME using the Six Sigma approach through the Define, Measure, Analyze, Improve, and Control (DMAIC) stages, along with the 5W+1H method as a proposed improvement. This UD frequently encounters product defects such as chips, cracks, and uneven surfaces, which impact overall product quality. Data were collected through observation, interviews, and documentation during the production process in May 2025. The analysis showed an average Defects Per Million Opportunities (DPMO) value of 20.603,88 and an average sigma value of 3.54, which is within the national industry quality standard. The root causes of defects were analyzed using fishbone diagram, indicating that human, material, method, machine, and environmental factors were the main contributors. As an improvement effort, the 5W+1H method was used to systematically design corrective actions. This study concludes that the Six Sigma approach is effective in minimizing defect rates and can serve as the foundation for product quality improvement strategies in UD.

Keywords: *Six Sigma, paving blocks, quality control, 5W+1H, DPMO.*