

Studi Pengendalian Mutu Produk Wooden Spatula pada Industri Kayu di Daerah Istimewa Yogyakarta

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INTISARI

Pengendalian mutu memiliki peran krusial dalam industri manufaktur *kitchenware* untuk mempertahankan konsistensi kualitas produk dan menekan jumlah produk cacat. Perusahaan X di Daerah Istimewa Yogyakarta menghadapi kendala berupa tingkat cacat produk *wooden spatula* bulanan yang kerap melebihi standar toleransi yang ditetapkan perusahaan, yaitu $< 2\%$. Penelitian ini bertujuan untuk mengidentifikasi jenis-jenis cacat yang terjadi pada tahap proses produksi pasca-pengeringan serta menganalisis tingkat kestabilan pengendalian mutu produk tersebut.

Penelitian deskriptif ini dilaksanakan selama 30 hari kerja di Perusahaan X yang berlokasi di Kecamatan Jetis, Kabupaten Bantul. Pengumpulan data primer dilakukan melalui observasi langsung dengan ukuran sampel harian sebanyak 44 produk yang ditentukan berdasarkan rumus Slovin, serta dilengkapi dengan metode wawancara dan dokumentasi. Data kuantitatif yang diperoleh kemudian diolah menggunakan metode *Statistical Quality Control (SQC)* melalui instrumen *Seven Tools* yang terdiri atas *checksheet*, *defect concentration diagram*, *pareto diagram*, *scatter diagram*, peta kendali (*u-chart*), histogram, dan *fishbone diagram*.

Hasil observasi dan analisis menunjukkan jenis cacat yang didapatkan yaitu cacat belah, cacat retak, cacat growong, cacat blue stain, cacat mata kayu, cutter mark, ukuran tidak sesuai, permukaan kasar, dan *finishing* tidak merata. Berdasarkan peta kendali *u-chart*, secara umum proses produksi *wooden spatula* telah terkendali secara statistik, meskipun terdapat variasi khusus (*special cause variation*) pada beberapa proses yang melampaui batas kendali atas. Analisis *fishbone diagram* mengidentifikasi akar penyebab cacat bersumber dari faktor manusia (kelelahan operator), bahan baku (log kayu jati *grade C*), kondisi mesin, metode kerja, dan lingkungan kerja yang terbuka. Perusahaan disarankan menerapkan pemeliharaan mesin berkala, pengetatan SOP kontrol kualitas di setiap proses produksi, dan seleksi mutu bahan baku.

Kata Kunci: *Statistical Quality Control*, *Seven Tools*, *u-chart*, Jenis Cacat, *fishbone diagram*

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A Quality Control Study of Wooden Spatula Products in the Wood Industry of the Special Region of Yogyakarta

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ABSTRACT

Quality control plays a crucial role in the kitchenware manufacturing industry to maintain consistent product quality and minimize defective products. Company X in the Special Region of Yogyakarta faces challenges with monthly wooden spatula defect rates frequently exceeding the company's tolerance standard of $< 2\%$. This study aims to identify the types of defects occurring in the post-drying production stage and analyze the stability level of its quality control.

This descriptive research was conducted over 30 working days at Company X, located in Jetis District, Bantul Regency. Primary data collection was carried out through direct observation with a daily sample size of 44 products determined based on the Slovin formula, complemented by interview and documentation methods. The obtained quantitative data were then processed using the Statistical Quality Control (SQC) method through the Seven Tools instruments, consisting of checksheets, defect concentration diagrams, Pareto diagrams, scatter diagrams, control charts (u-chart), histograms, and fishbone diagrams.

Observation and analysis results showed that the types of defects identified were splits, cracks, growong (hollow) defects, blue stain, wood knots, cutter marks, non-conforming sizes, rough surfaces, and uneven finishing. Based on the u-chart control chart, the production process of wooden spatulas was generally statistically controlled, although there were special cause variations in several processes that exceeded the Upper Control Limit (UCL). The fishbone diagram analysis identified that the root causes of defects stemmed from human factors (operator fatigue), raw materials (grade C teak wood logs), machine conditions, work methods, and an open working environment. The company is advised to implement regular machine maintenance, tighten quality control SOPs at every production line, and enforce stricter raw material quality selection.

Keywords: Statistical Quality Control, Seven Tools, U-Chart, Defect Types, Fishbone Diagram.

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