

ABSTRAK

PT. Sumber Mas Indah Plywood merupakan perusahaan manufaktur yang memproduksi produk kayu lapis (*plywood*), pengerjaan kayu (*wood working*), dan *secondary process* dengan kapasitas produksi kayu lapis per bulan $\pm 12.000 \text{ m}^3$. Dalam proses produksi *plywood* masih ditemukan banyak kecacatan dengan jumlah kecacatan masih diatas target produksi yaitu 5% dari total produksi. Mulai periode Februari 2019 hingga Januari 2020 terdapat 386638 pcs kecacatan dari total produksi 4376314 pcs. Dalam penelitian ini digunakan metode *Six Sigma* untuk mengukur kinerja perusahaan dalam proses pengendalian kualitas produk *plywood*. Penelitian ini dilakukan dengan langkah DMAI (*Define, Measure, Analyze, Improvement*), dan menggunakan alat bantuan SIPOC *diagram*, *pareto diagram*, RCA 5 *time way*, dan FMEA. Dari hasil penelitian diperoleh nilai DPMO kumulatif sebesar 10089,98821 dan skala *sigma* kumulatif sebesar 3,82298466. Faktor penyebab kecacatan pada *plywood* secara keseluruhan karena kurangnya ketelitian operator, kurangnya pengetahuan operator akan *setting* mesin, banyaknya target produksi yang harus dipenuhi oleh pekerja, kelelahan, kurangnya pemantauan kondisi benda kerja atau lingkungan, pemilihan jenis kayu yang kurang tepat, atau perkiraan waktu penggantian *spare part* (mata pisau) yang kurang tepat. Dari kondisi tersebut, diberikan usulan perbaikan seperti peningkatan kinerja operator atau pekerja, evaluasi jadwal *maintenance* dan pergantian *spare part*, dan peningkatan pengawasan kondisi benda kerja dan lingkungan.

Kata Kunci: *Sigma*, DMAI, SIPOC, RCA, FMEA.

ABSTRACT

PT. Sumber Mas Indah Plywood is a manufacturing company that produces plywood, wood working, and secondary process products with a monthly plywood production capacity of $\pm 12,000 \text{ m}^3$. In the process of plywood production there are still many defects with the number of defects still above the production target of 5% of total production. From February 2019 to January 2020 there were 386638 pcs of disability from a total production of 4376314 pcs. In this undergraduate thesis the six sigma method is used to measure the company's performance in terms of the quality control process of plywood products. The research was conducted out using the DMAI (Define, Measure, Analyze, Improvement) steps, and using SIPOC diagram, pareto diagram, RCA 5 time way, and FMEA tools. From the research results obtained cumulative DPMO value of 10089,98821 and cumulative sigma scale of 3,82298466. Factors causing defect in plywood as a whole are due to lack of operator accuracy, lack of operator knowledge of machine settings, the number of production targets that must be met by workers, fatigue, lack of monitoring of workpiece or environmental conditions, selection of inappropriate wood types, or the case of spare parts replacement part that is not quite right. From these conditions, proposed improvements such as improving the performance of the operator or workers, evaluating the maintenance schedule and changing spare parts, and improving the supervision of workpiece and environmental conditions.

Keywords: *Sigma, DMAI, SIPOC, RCA, FMEA.*