

ABSTRAK

Penelitian ini membahas perbaikan workstation pada proses sablon kemasan di UPT Industri Makanan Minuman dan Kemasan (UPT MAMIN) Sidoarjo dengan menggunakan pendekatan *motion study* dan Peta Tangan Kanan Tangan Kiri (PTKTK). Permasalahan utama yang ditemukan adalah posisi kerja operator yang tidak ergonomis, tingginya aktivitas tidak bernilai tambah, serta tingginya waktu siklus akibat tata letak workstation yang kurang efisien. Penelitian dilakukan melalui observasi langsung, wawancara, studi literatur, serta pengukuran waktu kerja menggunakan *stopwatch*. Hasil analisis menunjukkan terdapat 10 elemen kerja, dengan 3 aktivitas (30%) termasuk kategori *Value Added* (VA), 4 aktivitas (40%) *Non-Value Added* (NVA), dan 3 aktivitas (30%) *Non-Value Added but Necessary* (NNVA). Waktu siklus rata-rata tercatat 18 detik, terdiri dari 12 detik (66,7%) aktivitas efektif dan 6 detik (33,3%) aktivitas tidak efektif, dengan waktu terlama 401,65 detik pada aktivitas membawa bahan baku. Evaluasi postur kerja memperlihatkan operator sering membungkuk dan menjangkau lebih dari 90 cm, yang berisiko menimbulkan kelelahan otot. Berdasarkan hasil analisis, diusulkan perbaikan *workstation* berupa penyesuaian tinggi meja 72–75 cm sesuai data *antropometri*, kursi lipat ergonomis, penataan ulang layout agar 70% peralatan berada dalam jangkauan normal, serta penambahan rak hasil sablon. Usulan ini diperkirakan mampu mengurangi aktivitas tidak bernilai tambah sebesar $\pm 30\%$ serta meningkatkan efisiensi waktu proses lebih dari 20%.

Kata kunci: *Motion Study*, PTKTK, *Workstation*, *Ergonomi*, Sablon Kemasan.

ABSTRACT

This study discusses workstation improvements in the packaging screen printing process at the Food, Beverage and Packaging Industry Unit (UPT MAMIN) in Sidoarjo using a motion study approach and the Right Hand Left Hand Map (PTKTK). The main problems found were the non-ergonomic working position of the operator, the high number of non-value-added activities, and the high cycle time due to the inefficient workstation layout. The study was conducted through direct observation, interviews, literature studies, and measuring work time using a stopwatch. The analysis results showed that there were 10 work elements, with 3 activities (30%) included in the Value Added (VA) category, 4 activities (40%) Non-Value Added (NVA), and 3 activities (30%) Non-Value Added but Necessary (NNVA). The average cycle time was recorded at 18 seconds, consisting of 12 seconds (66.7%) effective activities and 6 seconds (33.3%) ineffective activities, with the longest time of 401.65 seconds in the raw material carrying activity. A work posture evaluation revealed that operators frequently hunched over and reached beyond 90 cm, which could lead to muscle fatigue. Based on the analysis, workstation improvements were proposed, including adjusting the table height to 72–75 cm based on anthropometric data, installing ergonomic folding chairs, rearranging the layout so that 70% of equipment was within reach, and adding screen printing racks. This proposal is estimated to reduce non-value-added activities by approximately 30% and increase process time efficiency by more than 20%.

Keywords: Motion Study, PTKTK, Workstation, Ergonomics, Packaging Screen Printing.