

PERBAIKAN PROSES PRODUKSI MENGGUNAKAN PENDEKATAN *LEAN MANUFACTURING* DI UMKM ALMIRA KONVEKSI

Hera Wati¹, Maria Gratiana Dian Jatningsih²

INTISARI

Latar Belakang: UMKM Almira Konveksi menghadapi permasalahan tingginya aktivitas tidak bernilai tambah seperti *transportation*, *motion*, *waiting*, *inventory*, *excess processing*, dan *defect*. Kondisi ini menyebabkan *lead time* panjang dan berisiko menimbulkan keterlambatan pengiriman. Untuk itu diperlukan pendekatan *lean manufacturing* guna menganalisis serta meminimalkan pemborosan.

Tujuan: Penelitian ini bertujuan mengidentifikasi pemborosan pada proses produksi Almira Konveksi dan memberikan usulan perbaikan untuk meningkatkan efisiensi serta mengurangi risiko keterlambatan..

Metode Penelitian: Metode yang digunakan adalah *Value Stream Mapping* (VSM) untuk memetakan aliran material dan informasi, serta *Process Activity Mapping* (PAM) untuk mengukur proporsi aktivitas *value added* (VA), *necessary but non value added* (NNVA), dan *non value added* (NVA). Data diperoleh melalui observasi langsung di lantai produksi dan wawancara dengan operator.

Hasil: Analisis menunjukkan bahwa pada kondisi *current state* total waktu produksi mencapai 3.060 detik, dengan proporsi VA sebesar 43,8% dan NVA + NNVA sebesar 56,2%. *Waste* yang paling dominan terjadi pada *transportation*, *motion*, *waiting*, serta penumpukan WIP antar proses. Setelah dilakukan perbaikan, waktu produksi berkurang menjadi 1.535 detik dengan VA meningkat menjadi 75,6% dan NVA + NNVA menurun menjadi 24,4%. Peningkatan efisiensi ditunjukkan dengan kenaikan *Process Cycle Efficiency* (PCE) dari 43,8% menjadi 75,6%.

Kesimpulan: Penerapan *lean manufacturing* terbukti mampu menekan aktivitas tidak bernilai tambah, memperbaiki aliran proses, meningkatkan efisiensi produksi, serta mengurangi risiko keterlambatan pengiriman produk pada Almira Konveksi.

Kata kunci: *Lean Manufacturing*, VSM, PAM, *Waste*

¹Hera Wati Universitas Jenderal Achmad Yani Yogyakarta

² Maria Gratiana Dian Jatningsih Universitas Jenderal Achmad Yani Yogyakarta

IMPROVING THE PRODUCTION PROCESS USING THE LEAN MANUFACTURING APPROACH AT ALMIRA KONVEKSI UMKM

Hera Wati¹, Maria Gratiana Dian Jatiningsih²

ABSTRACT

Background: Almira Convection, a small-scale garment enterprise, faces significant non-value-added activities such as transportation, motion, waiting, inventory, excess processing, and defects. These wastes contribute to long lead times and the risk of delayed deliveries. Therefore, a lean manufacturing approach is required to analyze and reduce the identified waste.

Purpose: This study aims to identify the types of waste in Almira Convection's production process and propose improvements to enhance efficiency and reduce delivery delays.

Research Method: The research used Value Stream Mapping (VSM) to illustrate the material and information flow, and Process Activity Mapping (PAM) to measure the proportion of value added (VA), necessary but non value added (NNVA), and non value added (NVA). Data were collected through direct observation on the production floor and interviews with operators.

Results: The analysis showed that in the current state, the total process time was 3,060 seconds, with VA at 43.8% and NVA + NNVA dominating at 56.2%. The most significant wastes were transportation, motion, waiting, and WIP accumulation between processes. After improvements were applied, the total process time decreased to 1,535 seconds, VA increased to 75.6%, and NVA + NNVA decreased to 24.4%. Efficiency improvement was also indicated by the increase of Process Cycle Efficiency (PCE) from 43.8% to 75.6%.

Conclusion: The implementation of lean manufacturing proved effective in reducing non-value-added activities, improving production flow, enhancing efficiency, and minimizing the risk of delivery delays at Almira Convection.

Keywords: Lean Manufacturing, VSM, PAM, Waste

¹Hera Wati at Jenderal Achmad Yani University of Yogyakarta

² Maria Gratiana Dian Jatiningsih at Jenderal Achmad Yani University of Yogyakarta