

**IDENTIFICATION AND REDUCTION OF WASTE TO
IMPROVE PRODUCTION EFFICIENCY AT
CV PUTRA TANJUNG**

FINAL PROJECT REPORT

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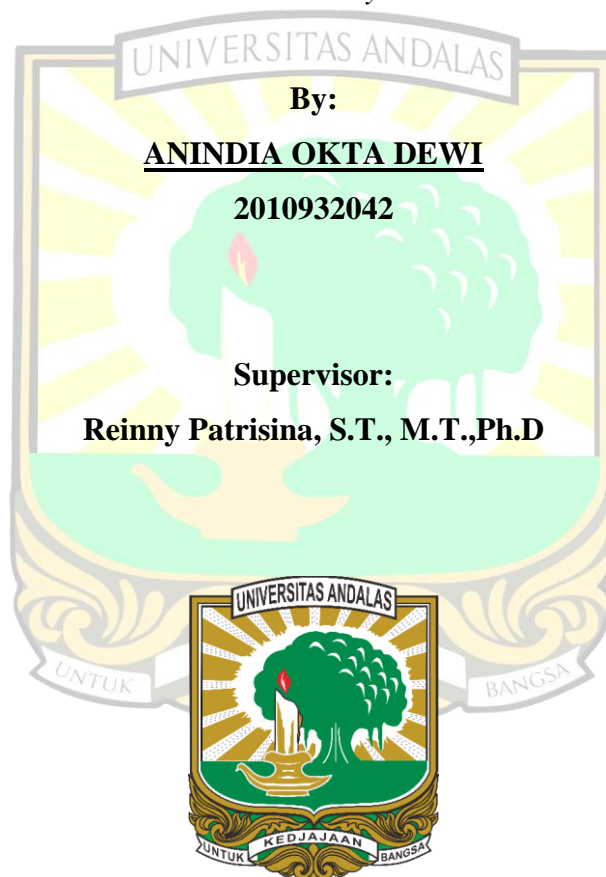


**DEPARTMENT OF INDUSTRIAL ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITY OF ANDALAS
PADANG
2024**

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FINAL PROJECT

*As One of the Requirements for Completing the Bachelor Program at the
Department of Industrial Engineering, Faculty of Engineering, Andalas
University*



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ABSTRACT

Today's manufacturing companies face fierce competition. The ability of each company to meet customer needs and demand for quality and competitive products needs to be continuously improved. CV Putra Tanjung is one of the businesses that produces fish sponge cake in Padang City. To meet consumer demand, this company needs to increase productivity through effective and efficient production activities. This improvement can be achieved by reducing waste and increasing product value. This research aims to minimize the waste that occurs in the fish sponge cake production process at CV Putra Tanjung. Existing waste can be reduced by applying the concept of lean manufacturing. Waste identification using Waste Relationship Matrix (WRM) and Waste Assessment Questionnaire (WAQ) shows that the waste with the highest percentage is motion waste at 36.50%, followed by waste defect at 24.19%, and process waste at 17.60%. Furthermore, a tool was selected to analyze the flow on the production floor using Process Activity Mapping (PAM). The PAM results showed that the value-added activity was 37%, necessary non-value-added activity was 50%, and non-value-added activity was 13%. The causes of waste were identified using a fishbone diagram. Based on the findings, the recommendations for improvement include purchasing a planetary mixer with a whisk attachment, procuring ovens, flour measuring devices, gloves, cooling racks, and standardizing work systems. These improvements are expected to increase the Process Cycle Efficiency (PCE) value by 31.20%.

Keywords: Efficiency, Lean Manufacturing, Minimization, Production, Waste

ABSTRAK

Perusahaan manufaktur saat ini menghadapi persaingan yang sangat ketat. Kemampuan setiap perusahaan dalam memenuhi kebutuhan pelanggan dan permintaan produk berkualitas serta kompetitif perlu terus ditingkatkan. CV Putra Tanjung merupakan salah satu usaha yang memproduksi bolu ikan di Kota Padang. Untuk memenuhi permintaan konsumen, perusahaan ini perlu meningkatkan produktivitas melalui aktivitas produksi yang efektif dan efisien. Peningkatan tersebut dapat dicapai dengan mengurangi pemborosan (waste) dan meningkatkan nilai produk. Penelitian ini bertujuan untuk meminimalkan pemborosan yang terjadi dalam proses produksi bolu ikan di CV Putra Tanjung. Pemborosan yang ada dapat dikurangi dengan menerapkan konsep lean manufacturing. Identifikasi waste menggunakan Waste Relationship Matrix (WRM) dan Waste Assessment Questionnaire (WAQ) menunjukkan bahwa waste dengan persentase tertinggi adalah motion waste sebesar 36,50%, diikuti oleh waste defect sebesar 24,19%, dan process waste sebesar 17,60%. Selanjutnya, dilakukan pemilihan alat untuk menganalisis aliran di rantai produksi menggunakan Process Activity Mapping (PAM). Hasil PAM menunjukkan bahwa nilai value-added activity adalah 37%, necessary non-value-added activity sebesar 50%, dan non-value added activity sebesar 13%. Penyebab terjadinya waste diidentifikasi dengan menggunakan fishbone diagram. Berdasarkan temuan tersebut, rekomendasi perbaikan mencakup pembelian planetary mixer dengan whisk attachment, pengadaan oven, alat pengukur takaran tepung, sarung tangan, rak pendingin, serta pembakuan sistem kerja. Perbaikan ini diperkirakan akan meningkatkan nilai Process Cycle Efficiency (PCE) sebesar 31.20%.

Kata Kunci: Efisiensi, Lean Manufacturing, Minimasi, Pemborosan, Produksi