

# MINIMISASI *WASTE* PADA PROSES PRODUKSI LAMPU AKRILIK MELALUI PENDEKATAN *LEAN MANUFACTURING* DI GEEVEE BY CENTI – PT. CENTRA TEKNOLOGI INDONESIA

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## ABSTRAK

Geevee merupakan salah satu divisi produk kreatif dari PT Centra Teknologi Indonesia yang berfokus memproduksi produk dari bahan akrilik. salah satu contohnya adalah lampu akrilik.. Pada proses produksi lampu akrilik terdapat 2 jenis *waste* yang sering terjadi yaitu *waste waiting* dan *waste defect*. Salah satu cara mengatasi permasalahan tersebut yaitu dengan menggunakan *lean manufacturing*. Penelitian ini bertujuan untuk mengetahui *waste* yang terjadi pada Geevee lalu mengidentifikasi penyebab *waste* serta memberikan rekomendasi perbaikan untuk mengurangi *waste* yang terjadi pada proses produksi lampu akrilik pada Geevee. Metode yang digunakan dalam *lean manufacturing* adalah *Value Stream Mapping* (VSM), material, *Process Activity Mapping* (PAM), *fishbone diagram*, *Failure Mode effect Analysis* (FMEA), dan 5W+1H. Dari hasil kuesioner 7 *waste* diketahui bahwa *waste* yang paling dominan adalah *waiting* dengan persentase *waste* sebesar 32% dan *defect* dengan persentase *waste* sebesar 24%. Hasil pengolahan menggunakan PAM menunjukkan bahwa kategori aktivitas yang tergolong *value added* (VA) memiliki persentase sebesar 59,51% dengan waktu 1643, 529 detik, yang termasuk kategori *necessary non value added* (NNVA) memiliki persentase sebesar 30,4865 dengan waktu 836,314 detik, dan yang termasuk ke dalam kategori *non value added* (NVA) memiliki presentase sebesar 263,402% dengan waktu 263,402. Selanjutnya adalah dilakukan analisis penyebab menggunakan *fishbone diagram* dan usulan perbaikan menggunakan 5W+1H. Dari hasil penelitian diperoleh usulan perbaikan pada *waste waiting* yaitu penambahan tenaga kerja serta pembuatan SOP yang akan ditempel pada dinding pada area produksi serta untuk usulan perbaikan pada *waste defect* yaitu memberikan waktu istirahat sejenak pada sela-sela jam kerja dan melakukan pemeliharaan mesin secara rutin.

**Kata kunci:** *Waste, Lean Manufacturing, Value Stream Mapping, Process activity mapping, 5W+1H*

**WASTE MINIMIZATION IN THE ACRYLIC LAMP PRODUCTION PROCESS THROUGH  
A LEAN MANUFACTURING APPROACH AT GEEVEE BY CENTI - PT. CENTRA  
TEKNOLOGI INDONESIA**

**ABSTRACT**

Geevee is one of the creative product divisions of PT Centra Teknologi Indonesia, specializing in producing products made from acrylic materials, such as acrylic lamps. During the production process of these lamps, two types of waste frequently occur: waiting waste and defect waste. One practical approach to address this issue is through lean manufacturing. This study aims to identify the waste in Geevee, determine the underlying causes, and provide recommendations for minimizing waste in the acrylic lamp production process. The methods employed in lean manufacturing include Value Stream Mapping (VSM), material analysis, Process Activity Mapping (PAM), fishbone diagrams, Failure Mode and Effects Analysis (FMEA), and the 5W + 1H technique. According to the seven waste questionnaire results, the most significant type of waste identified is waiting, accounting for 32% of the total waste, followed by defects, which represent 24%. The processing results obtained through PAM indicate that the activity categorized as value added (VA) accounts for 59.51% of the total time, equivalent to 1643,529 seconds. The necessary non-value added (NNVA) category represents 30.4865% of the time, or 836.314 seconds. The non-value added (NVA) category constitutes 263.402% of the time, amounting to 263.402 seconds. Following that, a cause analysis will be conducted using a fishbone diagram, and a proposal for improvement will be made using the 5W + 1H method. The study suggested waste waiting improvement, which involves adding more workers and implementing SOPs that will be posted on the walls in the production area. Additionally, a proposal for waste defects improvement includes implementing short breaks between work hours and conducting regular machine maintenance.

**Keywords:** Waste, Lean Manufacturing, Value Stream Mapping, Process activity mapping, 5W + 1H

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