

**INCREASING SUSTAINABILITY MANUFACTURING
WITH RECYCLE SOLVENT MACHINE USING PDCA
METHOD IN THE PRINTING INDUSTRY**

UNDERGRADUATE FINAL PROJECT

Submitted as one of the requirements to obtain Sarjana Teknik (S.T.)

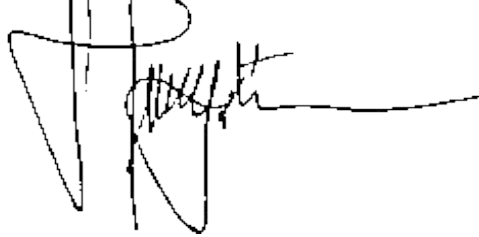
**By
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**FACULTY OF ENGINEERING
INDUSTRIAL ENGINEERING STUDY PROGRAM
CIKARANG
MARCH, 2023**

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The Panel of Examiners declare that the undergraduate thesis entitled "**Increasing Sustainability Manufacturing With Recycle Solvent Machine Using PDCA Method in The Printing Industry**" that was submitted by Andi Syarifah Nurul Rifani majoring in Industrial Engineering from the Faculty Engineering was assessed and approved to have passed the Oral Examination on 28th, February 2023.

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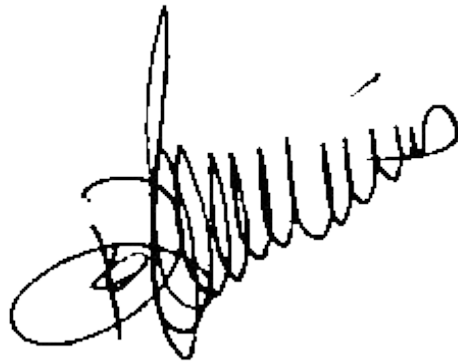
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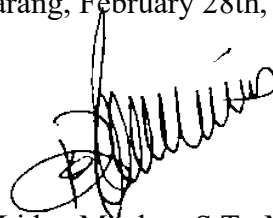
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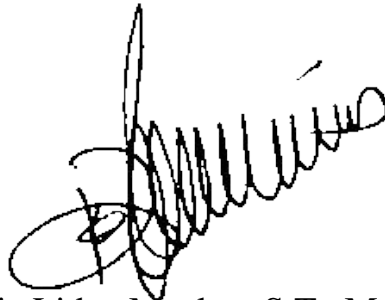
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By

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ABSTRACT

Sustainability is a major concern in the printing industry, as traditional printing methods can harm the environment and human health. This research explores the challenges faced by the printing industry in increasing sustainability and what steps can be taken to overcome these challenges. The PDCA (Plan-Do-Check-Act) method is a continuous improvement cycle that can be applied to increase sustainability in the printing industry. By adopting the PDCA (Plan-Do-Check-Act) method, the printing industry can reduce its environmental footprint and contribute to a more sustainable future. This reduction in solvent usage can lead to a decrease in the amount of waste produced, a reduction in the environmental impact of solvent disposal, and a decrease in energy consumption as less solvent needs to be produced and transported. The PDCA method ensures that the implementation of the recycle solvent machine is not a one-time event but is an ongoing process of continuous improvement. Improvements were made to reduce the amount of solvent waste, and by the end of the project, the amount of solvent waste showed a decrease from 20-24 Drum/Month to 8-16 Drum/Month. This decrease can increase sustainability manufacturing if the company continuously controls the process and still doing it.

Keyword: *Sustainable Manufacturing, PDCA Method, Printing Industry, Continuous Improvement.*

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LIST OF TERMINOLOGY

Sustainable Manufacturing	Sustainable manufacturing is a production method that focuses on minimizing the negative impact of manufacturing processes on the environment, while maximizing economic and social benefits..
Continuous Improvement	Continuous improvement is a process of making small, incremental changes to a product, service, or process with the aim of making it better over time.
PDCA Method	“Plan, Do Check, Action” is used in business to control and continuously improve processes and products continuously.
Solvent Solvent Recycle Machine	A machine is used to reduce the results of liquid waste from the production process into solid waste, and the remaining solvent can be reused for the cylinder washing process on the machine.
Liquid Waste	The residue from industrial activities that are no longer used and processing the liquid waste can reduce the risk of pollution that impacts the environment.
Solid Waste	Waste from industrial products no longer used in the form of solids, sludge, or slurry originates from a processing process or waste generated from industrial activities and public places.