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.)

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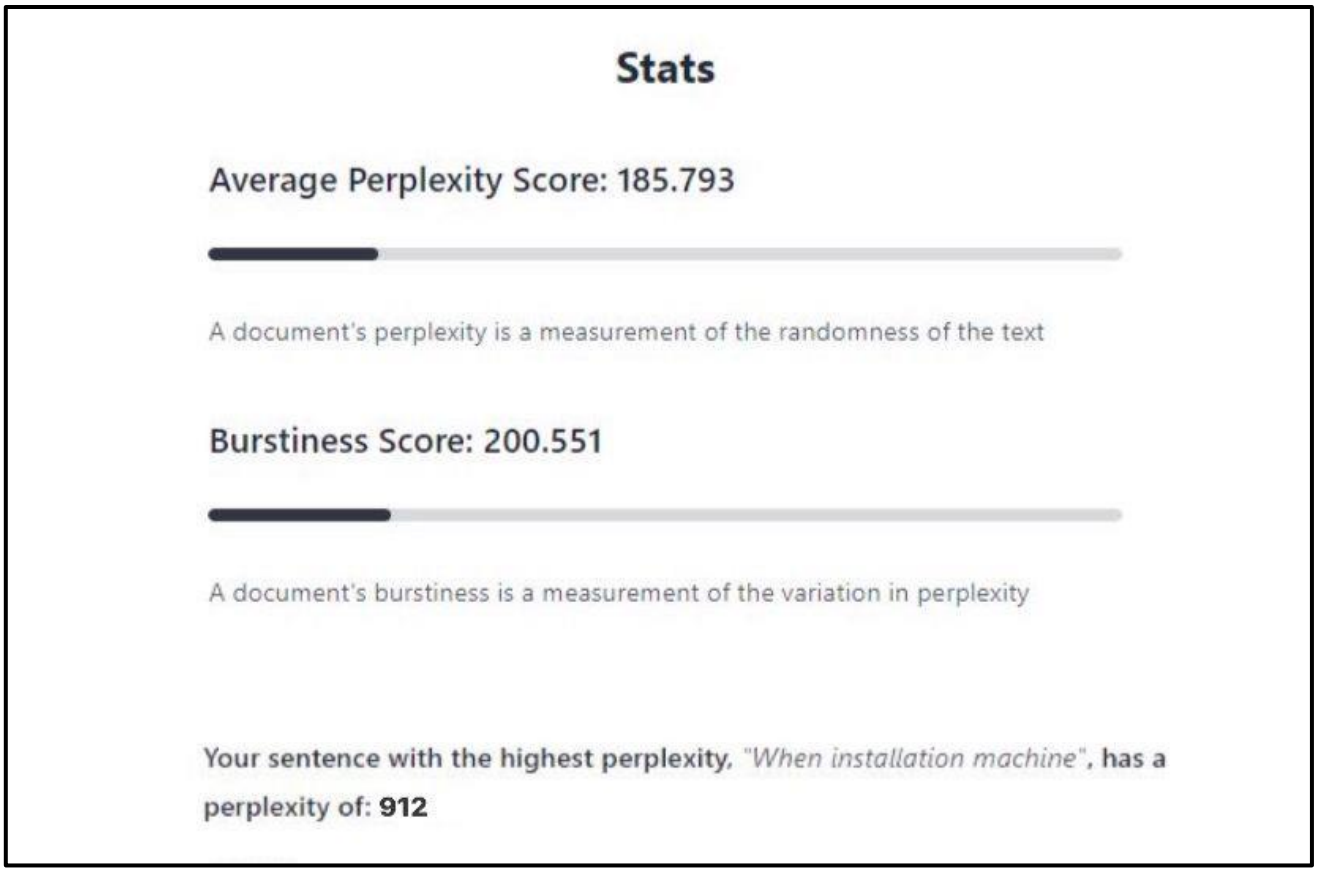
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ABSTRACT

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.*

TABLE OF CONTENT

PANEL OF EXAMINER APPROVAL i
THESIS ADVISOR ii
RECOMMENDATION LETTER ii
STATEMENT OF ORIGINALITY iii
SCIENTIFIC PUBLICATION APPROVAL FOR ACADEMIC INTEREST iv
ADVISOR APPROVAL FOR JOURNAL/INSTITUTION'S REPOSITORY v
ABSTRACT vii
ACKNOWLEDGMENT viii
TABLE OF CONTENT x
LIST OF TABLES xiii
LIST OF FIGURES xiv
LIST OF TERMINOLOGY xv
CHAPTER I INTRODUCTION 1
1.1 Problem Background 1
1.2 Problem Statement 3
1.3 Objectives 3
1.4 Scope 3
1.5 Assumptions 3
1.6 Research Outline 4
CHAPTER II LITERATURE REVIEW 6
2.1 Solvent Waste 6
2.2 Sustainable Manufacturing 9
2.2.1 Economic Sustainability 10
2.2.2 Environmental Sustainability 11
2.2.3 Social Sustainability 12
2.3 Continuous Improvement 13
2.4 PDCA Method 15
2.5 Solvent Recycle Machine 16
2.6 Pareto Chart 18

CHAPTER III RESEARCH METHODOLOGY 20
3.1 Research Methodology 20
3.1.1 Problem Identification 21
3.1.2 Literature Study 21
3.1.3 Data Collection and Analysis 21
3.1.4 Conclusion and Future Work 22
3.2 Detailed Research Framework 22
3.2.1 Plan 23
3.2.2 Do 24
3.2.3 Check 24
3.2.4 Action 24
CHAPTER IV DATA COLLECTION AND ANALYSIS 25
4.1 Initial Condition 25
4.1.1 Environmental impact 27
4.1.2 Social Impact 29
4.1.3 Economic Impact 31
4.2 Data analysis 32
4.2.1 Plan 32
4.2.2 Do 38
4.2.3 Check 44
4.2.4 Action 47
4.3 Implementation Result 48
4.3.1 Measure the Effectiveness of Sustainability Manufacturing 48
4.3.4 Comparison Initial Condition and Implementation Result 55

CHAPTER V CONCLUSION AND RECOMMENDATIONS 59
5.1 Conclusion 59
5.2 Recommendations 60
REFERENCES 61

LIST OF TABLES

Table 2.1 Sample Formulation of Gravure Inks 8
Table 4.1 Negative Impact of Solvents 29
Table 4.2 Solvent Waste Treatment Cost Budget 32
Table 4.3 Project Charter 37
Table 4.4 Monitoring Progress 45
Table 4.5 Evaluation of the Recycle Solvent Machine 46
Table 4.5 Volume of Solvents 49
Table 4.6 Summary Reduction Efforts Every Period 50
Table 4.7 The Measure Before and After Reducing Solvent Waste. 52
Table 4.8 Calculation Cost 54
Table 4.9 Comparison Cost of Reducing Solvent Waste 55

LIST OF FIGURES

Figure 2.1 PDCA Method 15
Figure 2.2 Recycle Solvent Machine 17
Figure 3. 1 Detailed Research framework of Research Design 23
Figure 4.1 Process Flow of Solvent Waste 25
Figure 4.2 Solvent Waste 27
Figure 4.3 Discuss Implementation Plan 38
Figure 4.4 Recycle Solvent Machine 40
Figure 4.5 Installation Recycle Solvent 41
Figure 4.6 Implementation Maintenance Plan 42
Figure 4.7 Training Recycle Solvent Machine 44
Figure 4.8 Clean Solvent and Pasta Solvent 56
Figure 4.9 Decreasing the Amount of Solvent Waste 57

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.