



SMART STRATEGY

MINIMIZE OPERATING COST
TO GAIN COMPETITIVE ADVANTAGE

Ir. Arif Budi Sulistyo, S.T., MAB, ASEAN Eng.

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PREFACE

Alhamdulillah Rabbil 'alamin, All praise is due to Allah, the Lord of the Worlds and Master of the Day of Judgment, for the heavenly blessing, grace and guidance, to enable me to complete the book. The book entitled "Smart Strategy Minimize Operating Cost To Gain Competitive Advantage.

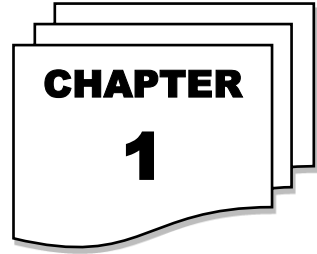
Operating cost plays the important role in determining effectivity in a manufacturing company. The more effective the process, the more minimum the cost should be. However, it's not always about the process, there are any other factors that affect the operating cost such as the price of the raw material, and the increment of the electricity and fuel price. The purpose of this monograph is to find a strategy how to decrease operating cost so that the company cash flow can back to healthy.

Author use "The company" to address research object instead of its real name. Hopefully, this book would give a positive contribution for those who concern in operating cost management.

Author

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ALL ABOUT THE COMPANY

A. COMPANY OVERVIEW

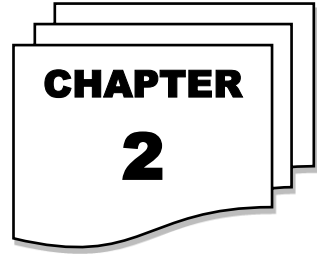
1. *Company History*

The company is integrated Chlor Alkali-Vinyl Chloride plants in Indonesia which produce basic chemicals for many of downstream industries, namely Liquid Caustic Soda (LCS), Vinyl Chloride Monomer (VCM) and Polyvinyl Chloride (PVC).

In 1986, The company was established as a multinational company with its headquarters in Jakarta. In 1989, started operation as its state-of-the-art production complex at Banten province. Over the years, the complex has expanded several times, substantially increasing production capacity. Total investment now stands at more than USD 1 billion. Today, The company operates the largest chlor alkali-vinyl chloride plant in Southeast Asia. By focusing on chemical and industrial markets, The company has the capacity to produce Liquid Caustic Soda (LCS), Vinyl Chloride Monomer (VCM) and Polyvinyl Chloride (PVC).

The company is Joint Venture Company with British, Japan and Indonesia companies. Since started operation in 1989 until now 2016, The company has 6 stage plant expansions for LCS, VCM and PVC. Current plant capacity is:

- LCS = 1,450,000 ton/year (48.3%)
- VCM = 800,000 ton/year
- PVC = 550,000 ton/year



EXPLORING BUSINESS ISSUE

The increasing manufacturing cost is business issue in the company and problem formulation has been described in previous chapter. The cost increment may reduce operating profit and make financial performance worst. This issue shall be handled and well resolved to maintain sustainability of business. Broader thinking exploration and deep analysis are necessary to list up suspected factors, and finally find out the root causes will be explained in this chapter.

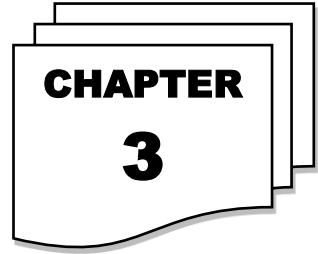
A. STEP BY STEP EXPLORATION

1. Research process

Process of research comprises several stages as shown in figure 2.1. At the first, the company is the firm that research is doing at, especially in operation section. The area is selected caused by there are some challenging points to be improved. Research aim is answering problem statement that stated in previous chapter.

The research is limited to:

- Causing factors that under company control only, meanwhile market situation, consumers and competitor factor that beyond of firm control is excluded.
- Purely comes from company historical data and own observation, no additional data by respondent survey.



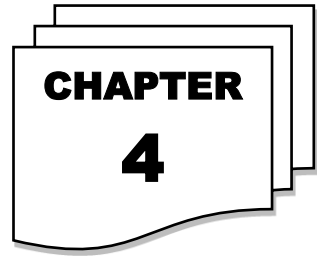
SMART SOLUTIONS FOR THE BUSINESS

After identify root of problem in previous chapter, there are several ideas arise as alternatives solution. The several options are obtained to reduce manufacturing cost by optimization energy usage. The options come from analysis of information that might comes from historical data, manufacturer design, expert information, etc.

A. ALTERNATIVE OF BUSINESS SOLUTION

As describe in previous chapter, energy consumption in The company are consist of electricity and fuel, where fuel usage are Natural Gas, LPG, heavy oil and coal. Basically, each energy source has chance to be improved, to achieve minimum operating cost. There are several alternatives of idea or activity to reduce cost of energy as follows:

- a. Maximize Hydrogen selling instead of utilization as fuel
- b. Replace LPG utilization by Natural Gas
- c. Revamp coal boiler
- d. Electrolysis membrane replacement
- e. Operational C/A load arrangement
- f. Implementing Energy Management System (EnMS)



CONCLUSION AND IMPLEMENTATION PLAN

A. CONCLUSION AND RECOMMENDATION

1. *Conclusion*

After going through the analysis stage of business solution alternatives, which was followed by the assessments detailed in the previous chapter, several solutions and priority rating are determined. These solutions are expected to reduce manufacturing cost, which is high to begin with. Table 4.1 shows solutions based on priority rating that shall be taken, including the pros and cons of each alternative.

Table 4.1. Priority rating and pros-cons of alternative solution

Priority	Alternative Solution	Pros	Cons
1	C/A operational load arrangement	✓ Low investment ✓ High-cost saving ✓ No need high technology ✓ Low risk ✓ No license issue	✓ Need for good coordination among cross functional departments ✓ Need for dedicated department in charge ✓ Need for detail measurement as well as record to

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Rising energy costs can have a significant impact on companies, particularly electricity and fuel price at company who major producer of Liquid Caustic Soda (LCS), Vinyl Chloride Monomer (VCM) and Polyvinyl Chloride (PVC) in Indonesia. It also leads manufacturing cost of the main products LCS, VCM and PVC are high to begin with, and tends to increase within the last 4 months, about 19%, 4% and 3% respectively. It then rise the question how to overcome those situation? (1) What sectors are having major contribution that affect manufacturing cost increment? (2) What actions plan should be taken to cut the extra expenses? (3) For long term operation, what is the ultimate planning to eliminate dependency to the raw material suppliers, as improvement in term of cost, reliability supply, and efficiency?(4) This book will try to discuss them comprehensively. Then, offering any possible answers that could be rational solutions for the company.



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