

Phatharawadee Phathanamongkol 2012: A Study of Financial Cost and Environmental Effect of Carbon Disulfide Production in Rayon Production Process, A Case Study of Thai Rayon Co.,Ltd. Master of Economics (Business Economics), Major Field:Business Economics, Department of Economics. Thesis Advisor: Miss Woradee Jongadsayakul, Ph.D. 166 pages.

For the products that have an impact on the environment and community around the production line, the company should pay special attention to such impact beyond its financial interest. This is an expression of social responsibility. The purpose of this study is therefore to study the financial cost and environmental impacts of carbon disulfide ( $CS_2$ ) use in the production of rayon fiber, a case study of Thai Rayon Company Limited.

Thai Rayon Company Limited is the only one manufacturer of rayon fiber in Thailand, serving both domestic and international markets. The production of  $CS_2$  using charcoal as fuel begins to experience more problems due to the reduced amount of charcoal, the difficulty in quality control, and the impact on environment. A survey of people in the communities surrounding charcoal production line in Angthong Province and natural gas production line in Saraburi Province show that the production of  $CS_2$  using charcoal as fuel has an overall impact, including air pollution, water pollution, and noise pollution, more than the one using natural gas as fuel. The company is therefore interested to change the fuel in  $CS_2$  production process from charcoal to natural gas. Moreover, the comparison study of financial costs between charcoal and natural gas as fuel shows that the use of natural gas as fuel in the production process has a present value of cost lower than the use of charcoal as a fuel.

The results from the study show that the use of natural gas as fuel in production process is more appropriate both in terms of cost and environment. Therefore, charcoal should be replaced by natural gas in order to benefit not only business but also environment.

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Thesis Advisor's signature