ABSTRACT

A glass factory has several process characteristics based on burning which generated some environmental problem caused by gases and liquid wastes. Based on Green Productivity principles, several environmental problems that can be identified in PT. Litechindo Utama are too much liquid waste debit from Frosting process and low acidity level. Therefore this research focused to solve these problems by minimization of water consumption dan neutralization waste acidity level.

In the Planning step, problem solving effort started by interview and brainstorming to the managers and supervisors. Productivity index and Environmental Performance Indicator (EPI) index are also identified here. In the Generation of GP Option step, options are developed to meet the objectives and targets formed in the planning stage. These options are screened and prioritized based on Benefit-Cost Ratio (BCR) index and technical analysis, and then synthesized in the implementation planning.

The best option which can minimize water consumption in production process and neutralize waste acidity level is a combination of installation circulation pump and neutralize waste acidity level by adding CaO. The company will have an increase of productivity index about 29.58 % and also Environmental Performance Indicator (EPI) index. It shows that the result can be used as a company strategy to increase efficiency of energy consumption and environmental performance by minimize waste debit and its environmental effects.

Keywords:

Green Productivity, Eco-efficiency, Total Productivity, Environmental Performance Indicator (EPI), Benefit-Cost Ratio.