OPTIMIZING OPERATIONAL TIME OF COAL HANDLING SYSTEM IN PLTU CILACAP USING LEAN SIX SIGMA

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ABSTRACT

Coal handling system is functioning to handle the management of coal and its combustion in the boiler. Delay in one process activity because of the condition of equipment or lack of skill of operator can be the reason to find the best way to increase the quality of performance, effectiveness, efficiency, profitable enterprises, and improving customer’s satisfaction. The purpose of this study is to identify non-value added activities and waste of the coal handling system, and how to minimize the waste.

To identify and eliminate waste and non-value added activities, this study used Lean Six Sigma methods. To apply the methods of Lean Six Sigma there are DMAIC method (Define, Measure, Analyze, Improve, and Control). How to understand the process we described value stream mapping to show the flow of work and information. While the parameters used to determine whether the output of the method is optimal or not is the time parameter, meaning that this method is successful if it can reduce the waste of processing time. Validation is done by using simulation Arena.

Results obtained from this study is the reduction of operating time at 10.08 hours earlier than the previous time, so as to improve the efficiency of performance of coal handling system in Cilacap coal plant.

Keywords : lean six sigma, coal handling, efficiency, waste, value stream map, quality management