IMPLEMENTATION OF LEAN MANUFACTURING
IN PT INSERA SENA
(CASE STUDY: PRODUCTION OF SIERRA LITE BIKE)

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ABSTRACT

Sierra Lite is one of a kind city bike Polygon brand produced by PT Insera Sena with a number of high demand. There are three main processes Sierra Lite: the welding process, painting process, and assembly process. After analysis on the whole process of production Sierra Lite bike it is known that there is a 6% non-value adding activity indications of the waste in the production process. From the historical data of PT Insera Sena is known that prior to the improvements in the production process was still found defects that occur in the production of Sierra Lite bike each month. With the discovery of defective products at Sierra Lite bike production during January to August 2013, has given the company a waste of Rp. 358,416,000.00. Based on these facts we conducted this research with the Lean Manufacturing approach to minimize waste and potential root causes as the main cause of waste companies featured on the Sierra Lite bike production process. From the analysis of RCA in the production process of waste obtained the most influence on the quality of overprocessing, defects, and unnecessary motion. Furthermore, the calculation is based on the FMEA method and the concept of Value Based Management obtained improvement alternatives that are the new policy makes the process of operation for the elements of welding process and quality improvement training to operators of quality control in the process of welding, painting and assembly. The combination of these alternatives require alternative repair cost of Rp 609,530,000.00. The alternative chosen because it has the highest value among the other alternative that is equal to 1.08. Further analysis B / C Ratio on selected improvement alternatives and the results obtained a value of 1.98. And the results of the analysis obtained NPV > 0, So it is stated that the improvement was elected viable alternative run by the company.

Key word : Lean Manufacturing, Value Stream Mapping, RCA, FMEA, Value Based Management, Analysis of B/C Ratio, NPV
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