

Analysis of Increased Production Capacity in a Manufacturing Company Using the A3 Report

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Abstract

This research aims to analyze the production process of a product in a manufacturing company through the implementation of the A3 Report. It also seeks to identify waste in the production line and generate projects to improve the current operating conditions of the various processes. Tasks were redistributed among operators to balance the current line. Current operation diagrams, routing diagrams, and process flow diagrams were created and analyzed using the Principles of Operations Analysis and the Seven Questions framework. Improvement proposals were developed, including AutoCAD designs of a fixture for a press, and presented using the A3 Lean Six Sigma tool. Through the proposed diagrams, process efficiency was increased from 67.45% to 91.75%, reducing the number of operators required for the assembly line from 8 to 5. Cost savings were achieved due to improvements in work redistribution and changes in tooling and working conditions. The implementation of fixtures provides a more ergonomic workstation. In conclusion, the implementation of Report A3 increased efficiency by 24.30%, and therefore, its implementation is recommended throughout the manufacturing company.

Keywords

Report A3, Line Balancing, Efficiency, Lean Six Sigma.

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