

Analysis of the Increase in the Production Capacity of a Manufacturing Company Through the Kaizen Methodology

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Abstract

The objective of this research is to analyze the process of elaboration of a product in a manufacturing company through the implementation of the Kaizen methodology. The activities that add value and the opportunity areas were identified through five kaizen improvement projects. Then, opportunity areas were analyzed and improved to meet customer demand on time. A work plan was defined for each stage of the project, using lean tools such as the 5 whys, takt time, line balancing, Kanban, application of the 5s and preparation of work instruction sheets. The results show a 60% increase in production at the assembly area. At the cable cutting station, the waiting time of 3 hours and 11 minutes for the crimping station was eliminated and the roll change was reduced by 50% of the time. In addition, the project eliminated the waiting time of 2 hours and 42 minutes in the assembly, crimping, tinning and assembly areas of the harness sub-assembly process. The lead time was reduced by 50%, going from 7.2 days to 3.6 days, consisting of a 26% reduction in total cycle time. Finally, it is concluded that the implementation of kaizen managed to eliminate waiting time on the production line, reduced total cycle times and lead time, making the process smooth and increasing production capacity, so it is recommended to implement the Kaizen methodology throughout the manufacturing company.

Keywords

Kaizen, Work plan, Production capacity, Lead time.

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