

Abstract

This research aims to exercise waste reduction resulting from operations and to preserve product quality that will lead to the highest level of customer satisfaction by Lean six sigma methodology. Working process is improved by reduction of lead time in HGA (Head Gimbal Assembly) test process. Lean six sigma consists of 5 phases which are: 1. Define problem/ Value phase, 2. Measure/ Value Stream phase, 3. Analysis/ System Flow phase, 4. Improvement/ Pull System phase and 5. Control/ System perfection phase. It was found that the root cause at HGA test process stemmed from the fact that HGA testing was excessively conducted beyond the customer requirements, resulting in late delivery. Consequently, HGA test process was implemented by taking into consideration the customer requirements by adopting the sampling test based on customer's standard, reviewing test items and reducing the test time according to customer's needs. Moreover, the process was improved by eliminating an unnecessary process concerning product quality by combining with the current working process. In addition, the analysis of product quality was carried out only with the worthwhile products. Those with poor performance were returned to the previous process for rework. The objective was to maximize output and quality while maintaining an acceptable level to the customer. Regarding to Control/ System perfection phase that applies statistic process control both output quantity and product quality.

After improvement, this project has achieved target plan consisting of waste reduction in HGA test process, defining preventive action onward, ensuring customer confidence to receive product on time with high quality and satisfaction, and to be in line with company policy for cost reduction and to avoid the purchase of 21 testers during July to December 2008 with Lean six sigma that saved 183,750,000 baht. Furthermore, the company can maintain its credibility and achieve HGA sales of 40,767,000 pieces which is worth 3,057,525,000 baht.