Abstract

This report describes the process of developing a cost model for Westridge Laboratories Inc. Westridge Labs is a developer of personal lubricants in Southern California and wanted to better understand the costs being put into their manufacturing process. This problem was approached and solved using industrial engineering techniques. By gathering data and observing the process to manufacture a 2.5 ounce bottle of ID Millennium, sufficient information was obtained to develop a cost model. In addition to the cost model, other factors of the process were taken into consideration such as the facility layout, quality of the product, cost, and ergonomics. By analyzing each of these topics, recommendations were made about how to maximize efficiency of the product and how to improve the process. The cost model provided quantitative data on how long it takes to produce a batch of 2.5 ounce ID Millennium and much it costs to the company in terms of labor, raw materials, and overhead. The cost model developed is a good guideline of the basic costs of manufacturing the 2.5 ounce bottle of ID Millennium; with slight modifications explained in the report, it can also be applied to other lubricants produced by Westridge Labs.

After observing the process and analyzing the results of the cost model, several recommendations were made. To increase productivity, more than one of the production lines should be utilized. To have the most continuous product flow, four workers should be working on the assembly line at all times and movement around the facility should be limited. To improve the work conditions for the manufacturing employees, more ergonomic tools should be implemented. Further details about the manufacturing process and cost model can be seen in the full report.