STATISTICAL QUALITY CONTROL AS COMPETITIVE WEAPON AT A CAN END FACTORY

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ABSTRACT

The End Factory manufactures lids or "ends" for twelve-ounce aluminum beverage containers. The factory is part of a metal beverage container manufacturing company. The ends are produced at the end plant and shipped to the body factory where they are welded together to produce the can. The company's customers consist of manufacturers of beverages such as Coca-Cola, Pepsi, and brewers of various brands of beer. Beverage container manufacturing business is very competitive. It is therefore important for a company in the industry to have a competitive focus for retaining current customers and acquiring new ones.

In the paper we study the effect of using quality as the competitive focus to maintain a respectable position in the market, and continuously increase market share for one of the top end factories in the United States. Our research examines the use of Statistical Quality Control (SQC) tools in the improvement of product design, the manufacturing process, and factory floor workers. We documented the process by constructing the flow diagram of current operations, and determined the metrics that are relevant for tracking customers' requirements, as well as evaluating the improvement achieved as a result of various quality projects. SQC is particularly important for the can end because of the high level of precision required for the "score residual," which is the piece that is shared to "open" the can. Low level of precision of this end characteristic leads to either the tab breaking when the can is being opened, or the can bursting open while the beverage is being transported from the brewery to the customer. We also examine the impact of quality practices on costs.

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