Reduction of Rejection in MCCB Handle Case Assembly Using Quality Control Approach

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Abstract:
Quality was “fit to use” traditionally. The customers had less knowledge about quality and were dependent on company's definition of quality for a product. With enhancement of technology, new quality principles were developed. The customers understood that quality was much beyond what they perceived earlier. Hence, there came a paradigm change in the philosophy of quality. In the present scenario, the definition of quality is given by the customers. Tools like QFD, Six Sigma, Kaizen, and Kanban to translate the requirements were developed. All this and other quality enhancing techniques integrated together to form the Total Quality Management Systems. Quantification of quality has become an important consideration of present industries. Hence, Statistical Quality Control is extensively used as control mechanism. This tool will help in identifying the problems in a process, and can find out the solution for the problems. This method has a distinct advantage than traditional quality methods.

This project work was carried out in Centum Industries Pvt Ltd, Bengaluru. The objective of this project was to cut down the internal rejection rate of MCCB Handle Case assembly line, which was one of the major products in Centum Industries suffering heavy rejections. Different QC tools like Pareto Charts, Cause and Effect diagrams were used for finding out the major rejection types and the causes of these rejection types. This was followed by Root Cause analysis, and several suggestions were given for cutting down the rejections, of which some are in the process of implementation. As per the analysis and studies the corrective actions and Standard Operating Procedure (SOP) were implemented.

The internal rejections for the assembly line were then analysed that helped in finding the root cause of the major problems like pad lock was tight in handle component assembly, handle components were getting scratch in the assembly while screwing, and getting defective parts from the supplier. By solving the major problems, the rejection came down from 20% to 5%.