

Reduction of Defects Using Seven Quality Control Tools for Productivity Improvement at Automobile Company

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Abstract : Quality of production near to zero defects is an objective of every manufacturing and service organization. In order to maintain and improve the quality by reduction in defects, Statistical tools are being used by any organizations. There are many statistical tools available to assess the quality. Keeping in view the importance of many statistical tools, traditional 7QC tools has been used in any manufacturing and automobile Industry. Therefore, the 7QC tools have been successfully applied at one of the Automobile Company Pakistan. Preliminary survey has been done for the implementation of 7QC tool in the assembly line of Automobile Industry. During preliminary survey two inspection points were decided to collect the data, which are Chassis line and trim line. The data for defects at Chassis line and trim line were collected for reduction in defects which ultimately improve productivity. Every 7QC tools has its benefits observed from the results. The flow charts developed for better understanding about inspection point for data collection. The check sheets developed for helps for defects data collection. Histogram represents the severity level of defects. Pareto charts show the cumulative effect of defects. The Cause and Effect diagrams developed for finding the root causes of each defects. Scatter diagram developed the relation of defects increasing or decreasing. The P-Control charts developed for showing out of control points beyond the limits for corrective actions. The successful implementation of 7QC tools at the inspection points at Automobile Industry concluded that the considerable amount of reduction on defects level, as in Chassis line from 132 defects to 13 defects. The total 90% defects were reduced in Chassis Line. In Trim line defects were reduced from 157 defects to 28 defects. The total 82% defects were reduced in Trim Line. As the Automobile Company exercised only few of the 7 QC tools, not fully getting the fruits by the application of 7 QC tools. Therefore, it is suggested the company may need to manage a mechanism for the application of 7 QC tools at every section.

Keywords : check sheet, cause and effect diagram, control chart, histogram

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