Sample of Abstract for the ANQ 2016 Congress

Defective Rate Reduction of Home Audio Products Through Six Sigma Methodology

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Acoustic products mainly apply to Home Audio product (Hi-Fi & TV), Automotive (Car Audio), and Communication (Hand-phone) products group. Failure for the Acoustics products show that the Audio group contributes the highest failure cost rate which is as high as 70% of total failure cost. Hence, it is important for the Production Department to form a quality improvement team to identify the root causes of the Touching Sound defect so that the company can reduce the defective product being produced . Initial investigation indicates that several factors such as Damper, Cone Paper, Dimension Matching etc could contribute to the defective rate.

The Six Sigma Methodology of DMAIC (Define-Measure-Analyze-Improve-Control) is deployed to tackle this problem. Several tools have been employed to solve this problem including the SIPOC, Pareto Analysis, Cause and Effect Diagram, Failure Modes and Effect Analysis, Hypothesis Testing, Control Charts, Design of Experiment, Multiple Regression and Xbar-R Control Chart. The disciplined approach methodology of Six Sigma enables the team to tackle the problems effectively. The DOE conducted shows that the Neck height and the Edge Treatment have the significant effects to this Touching Sound defects. From this finding, improvement for these two items is carried out. The end results are very encouraging. By tackling the above-mentioned 2 major defects, the team is able to reduce the defective rate from 8.35% to 2%. That is 76% improvement leading to a substantial cost saving. With such encouraging result, the team decides to continue doing more improvement project for other products in the future.

IMPORTANT NOTE:

All Information has be placed only 1 page of A4 size sheet