Ph.D. Research Proposal

Doctoral Program in Quality Management

" Minimization of Rejection Rate using Lean six sigma Tools and techniques in Manufacturing Industry"

R.KUMARASAMY

Kumarasamy.r@tvsss.co.in

TVS Sensing solutions private ltd.,
Madurai – Melur Road, Vellaripatti,
Madurai.

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Research Proposal on Quality Improvement

Title :

Minimization of Rejection Rate using Lean six sigma
Tools and techniques in Manufacturing Industry"

Background :

In the automotive industry there are challenges to overcome
the manufacturing defects during the regular production to
meet the customer needs. Selection of this project is to help
the organization to meet customer demand of QCDS.

Objective :

The objective of this research is the pilot implementation of six
sigma DMAIC phases to improve the rejection rate of
manufacturing industry. The current global market is focusing
on zero defects that are 3.34 defectives per million parts
produced. Six Sigma places the emphasis on financial results
that can be achieved through the virtual elimination of
products and process defects. Profits and industry stakeholder
value is maximized

Project summary :

In this research it is planned to analyze a case study by implementing six sigma tool for minimization of rejection rate. The defect is identified by process flow, pareto chart, fish bone diagram and all were also adopted to analyze the depth of the issue and to identify the critical factors which is required for controlling and improving the overall expectations for the zero rejection rate.

Literature Reviw:

- ➢ Lean Tools Execution in a Small Scale Manufacturing Industry for Productivity Improvement- A Case StudyS. Nallusamy, V. Saravanan, Computer Science2016

- ➢ Implementation of Lean Tools in an Automotive Industry for Productivity Enhancement - A Case Study,S. Nallusamy, M.A. Adil Ahamed, Engineering, 2017.

Result expected :

To reduce the rejections rate to the lowest level to get benefit to the organization to improve the bottom line.

Research Time line :

It is expected to complete the project within three years.