

Ph.D. Research Proposal

Doctoral Program in Quality Management

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

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Date : 12.12.2020

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 Review:

- 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.