ABSTRACT

Plant Maintenance is one of the key pillars in the manufacturing sector. The role of maintenance management is to ensure service to all the departments in terms of performance, availability, scalability, reliability with the main responsibility of asset life management. This study will focus on analyzing the possibilities of providing value addition to Plant Maintenance department by using the lean principles to effectively manage and maintain the resources, processes and procedures to reduce the overhead and wastage.

The topic of the research focuses on three major areas like “Lean Philosophy, Plant Maintenance function and Internal customer satisfaction”. The core area of the research frame is Plant maintenance function with the focus on common maintenance practices, the outcome of the study is Lean Maintenance with the result of internal customer satisfaction and the suggested tool for improvement is Lean Philosophy.

The structured questions prepared with eight streams of common maintenance practices and the responses of the research questionnaire from Non Lean principle practicing and Lean principle practicing organizations are measured and analysed using two samples t – test. In two sample t- test analyses, it is found that the p- values of the eight elements hypotheses from the respondents of Non lean principle and Lean principle practicing organizations are <0.005, hence common maintenance practices of Non lean principle practicing organizations are not equal to the common maintenance practices of the Lean principle practicing organizations. The data analysis proved that the possibilities of providing value addition to Plant Maintenance department by using the lean principles to effectively manage and maintain the resources, processes and procedures to reduce the overhead and wastage for improving internal customer satisfaction.
Lean philosophy with applicable tools and techniques for plant maintenance functions are identified from the literature review and from the Lean Principle implementation organization. The research conclusion was derived using Lean Maintenance model with outcome and result. The recommendation from the outcome of the research study is implemented in pilot sample in the research study organizations and the implemented case studies are presented in International and National Conferences and reputed journals for accreditations.