ABSTRACT

The thesis titled “Implementation of Lean Manufacturing Tools and Techniques in Multi-end Silk Reeling Industry” is carried out in industries situated around Anantapur district.

In the present research study the main theme was to identify different tools and techniques from lean manufacturing concept that are applicable specifically to the mulberry based multi-end silk reeling industries and implement them for the benefit of the vast silk manufacturing process industries in the Andhra Pradesh. The study attempts to arrive at a new integrated frame work of lean manufacturing tools and techniques implementation for silk manufacturing Industries in the Anantapur scenario for success to achieve better manufacturing standards and customer satisfaction.

Over the past 15 years lean manufacturing tools and techniques has been receiving an increasing amount of attention, as the source for value creations, productivity improvements and cost reductions in business processes. Lean manufacturing is a broad collection of principles and practices and means to analyze and improve production and the factory floor environment that can improve corporate performance.

The Current trends indicate that there is great demand in the lean implementation initiatives by many manufacturing industries in India. Further, the booming multi-end silk reeling industries in Anantapur is looking for newer processes and operation which enhances value streams. Today many Silk builders have required to
recover their industrial procedures so that they can more willingly contest with foreign manufacturers.

Hereafter, implementing value added lean manufacturing tools and techniques will help the manufactures to compete with overseas market.

The latest literature survey revealed that there are gaps prevailing in the application of some of the lean manufacturing tools and techniques in the multi-end silk reeling manufacturing industries. It is also observed from the literature survey that, the implementation of lean manufacturing tools in any industry is user specific and these tools play an effective role in reducing the wastes and improving the lean compliancy. Hence, in the research work, some industries are studied and the research scholar has implemented some of the lean manufacturing tools and techniques in these silk manufacturing industries and proposed a conceptual integrated frame work for silk manufacturing industries to achieve high level of performance.

The existing system in various silk manufacturing industries is evaluated from lean manufacturing perspective and based on the shortcomings it is decided to carry out the research study on implementation of 7 types of wastes, Value Stream Mapping, 6s housekeeping, PDCA, Kaizen systems, Continues improvement. After analyzing the current state of silk production, future state is proposed and after implementation tremendous improvements are recorded.
New design is implemented for specific silk reeling industries, for some of the process based on the kaizen system. 6s implementation yielded positive results in the silk industry working floor. Continuous improvement programmes in the form of kaizen are carried out at different silk reeling industries. Many performance measures like reducing non-value added activities, defects, lead-time, absenteeism, inventory etc are considered. It is found that implementation of lean manufacturing tools and techniques is a challenging task in these industries due to the human factor. Kaizen studies are carried out using SWHS and SPDH. This gives solution in terms of better change to finical burdens.