Implementation of Total Quality Management Based on New Quality Tools

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Abstract : Technical empowerment has been booming into the markets so as to satisfy and make improvements and keep on changing as per the needs of the markets. In order make changes with the growing markets and to increase the feasibility to improvise the quality. To improve and enhance the quality by implementing tools so to bring a new revolution in production shop floor and to maintain continuous improvement in the firm. To withstand the quality in today's terms of markets by maintaining good relationship between company market and customers so as to fulfill the required conditions of customers by taking into consideration quality and production and also workers satisfaction. This also leads to improvement into new technologies and thus here we are overcoming the old tools by new quality tools to implement the Total quality management.

IndexTerms **– Total quality management, JIT ,New quality Tools.**

I. INTRODUCTION

Total Quality Management, TQM, is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses.TQM is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organization.

Following are the different specifications of Total quality Management:

- Performance (Affinity Diagram)
- How well a product/service corresponds to the customer's expectation
- Reliability
- Consistency of performance (Agile manufacturing)
- Durability
- Useful life of a product/service
- Perceived Quality
- Indirect evaluation of quality (e.g. reputation)
- After Sales Service
- Handling of complaints and requests for information

The quality cost concept is an effective tool that can be used to express the value of the quality aspects of the operation in terms of money so that monitoring and analysis of investments and savings in that area can be readily evaluated using the language of business by reducing the time and maintaining the productivity and improvising the quality.

II. Implementation of TQM based on various quality tools.

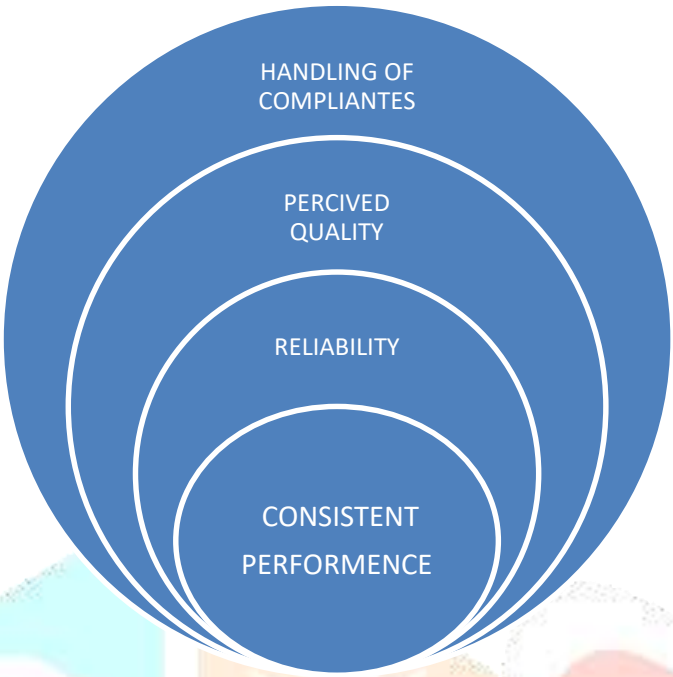


Fig.1.3

Improvement Based On Main Quality Tool

Agile manufacturing is a term applied to an organization that has created the processes, tools, and training to enable it to respond quickly to customer needs and market changes while still controlling costs and quality. An enabling factor in becoming an agile manufacturer has been the development of manufacturing support technology that allows the marketers, the designers and the production personnel to share a common database of parts and products, to share data on production capacities and problems.

1. Implementation of Affinity Diagrams

The affinity diagram is a tool for organizing a large number of ideas, opinions, and facts relating to a broad problem or subject area. In developing a vision statement, for example, senior management might conduct a brainstorming session to develop a list of ideas to incorporate into the vision. This list might include

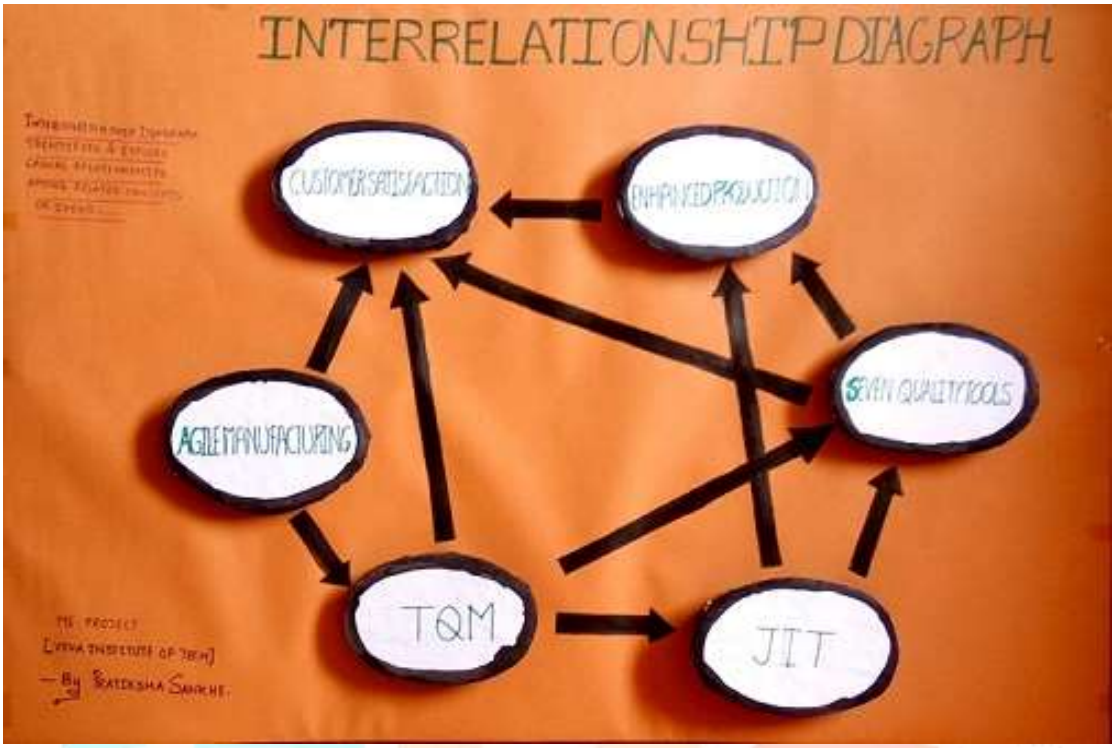
2. Using Tree diagram

A tree diagram maps out the paths and tasks necessary to complete a specific project or reach a specified goal.

A tree diagram brings the issues and problems revealed by the affinity diagram and the interrelationship digraph down to the operational planning stage. A clear statement specifies problem or process. From this general statement, a team can be established to recommend steps to solve the problem or implement the plan. The "product" produced by this group would be a tree diagram with activities and perhaps recommendations for timing the activities.

3. Using Interrelationship diagraph

An interrelationship digraph identifies and explores causal relationships among related concepts or ideas. It shows that every idea can be logically linked with more than one other idea at a time, and allows for "lateral thinking" rather than "linear thinking." This technique is often used after the affinity diagram had clarified issues and problems.



III. Implementation OF JIT TECHNQUIES in TQM

The purpose of JIT manufacturing is to enhance the production process thus this goal is achieved by using following methods…

- Change of shop floor layout: This technique of change of layout helps to reduce the movement of materials. Reduction in production set up times so that products can be made in very small batches.
- Synchronizing the manufacturing process so that sub assemblies and components are available just when they are needed and not before.
- Creating mutually beneficial relationships with suppliers, using techniques such as single sourcing, certification and feedback forms.
- Problem solving and quality circles: The purpose of quality circles is to have every employee involved in solving production and quality problems. These programmes have been very successful in many companies because they create and environment of team involvement and common cause, which enables people, who previously had very little opportunity to contribute, to become innovative and resourceful problem solvers.

IV. Results And Discussion

Affinity we did brainstorming of the overall process going on in shop floor and thus made rated so that it becomes easier to maintain the data and thus also to workers to continue the chain of process so that time consumption will be less.

We have enhanced and showed the overall growth and working of the major aspects of system so that its interrelated to enhance production

Thus using all quality tools we have satisfied the required condition to maintain the quality and also to maintain customers feedback and thus utilized less time and enhance productivity.

Tree diagrams and interrelationship diagraphs provides the proper functioning of the production floor and company in precise manner. Along with the Education and training provided to the employees of the company and thus make them self reliant to take proper measures required , thus it enhances the productivity and improves quality.

Customers feedback the most important factor and backbone of company makes the company to go far long so as to meet requirements of the markets and mentions done.

V. Acknowledgment

It brings me immense pleasure to publish this paper based on quality tools that enhances the quality of firm but along with that efforts of some honours cannot be neglected, so I am thankful to our honourable principal sir Dr. Arun kumar for his valuable guidance and support along with that, I would also like to thank our respectable HOD of Mechanical department, Mrs Niyati Raut for her wide support and for our overall development. Last but not the least to all who have supported me to make my efforts to its best.

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