

Analysis of TQM and Implementation of JIT in Manufacturing Industry: A Review

Manish Kumar ¹,
1-Department of Mechanical Engineering
Maharaja Agrasen University
Baddi Himachal Pradesh

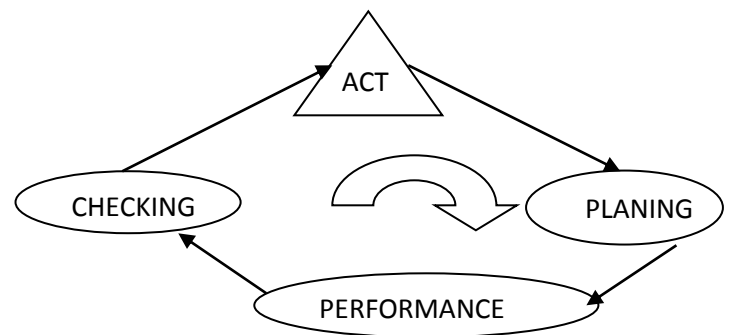
Sharma Sahil ²
2- Department of Mechanical Engineering
Maharaja Agrasen University
Baddi Himachal Pradesh

Abstract- In this era of automation and competition manufacturing industries are looking many ways to improve their quality of the products and to provide products at very fast rate. As we know that in this case customer satisfaction plays a very important role. If customer is happy with the products or its services then we can say that this will be the new benchmark of that industry in the market. And this thing will be achieved by using total quality management in the industry or by using just in time method in manufacturing industry. We also know that only few industries are producing high quality products with higher customer satisfaction rate but we should understand the actual meaning of customer satisfaction i.e. to provide products at less cost with the higher quality.

Keywords: Total Quality Management, Just In Time, Planning Performance Checking Act

INTRODUCTION

Many researchers work on these two parameters i.e. total quality management and just in time. The similarity in these two parameters is that the origin country of both is Japan. The main aim of TQM is to provide quality to the customers at any cost. So, it's very necessary to focus on the customer's requirement and to fulfill that by providing quality in the manufacturing system. The concept and its philosophy are very old and were in USA. TQM is comprehensive and structured approach to organizational management that seeks to improve quality of products and services through ongoing refinements in response to the continuous feedback from the customers. The concept of TQM is applied to any type of industry it originated in the manufacturing industries but now used by any type of industry due to its many advantages. Many researchers are working on these parameters and finally by their study it can be said that it is the combination of PDCA cycle.



As we seen that TQM processes is divided into four basic steps. In the first step after market research or by collecting data by the customers, planning process is carried out to solve problems raised by the customers or collected by the market research. Planning is also deal in order to perform the things as to reduce the component cost by the regulating effective inspection from start to end process. In the second phase we have to develop and implement a solution of the problems facing by the customers to maintain and effectiveness. In its third phase people confirm the result through before and after data comparison and at its acting phase people document their results, discuss that results with other and make a appropriate solution. So we can say that TQM managing the whole production process to produce an excellent products.

By United States department of defense TQM consist of continuous improvement activities involving everyone in the organization managers and workers in a totally integrated effort towards improving performance at every level. This improved performance is directed towards satisfying such cross-functional goals as quality, cost, schedule, missing, need and suitability. The activities are ultimately focused on increasing customer satisfaction.

And hence by applying the concept of TQM in manufacturing industry it increases profit or growth of the industry by reducing defects. In TQM the concepts of quality inspection plays important role because when we focus in quality inspection it reduces the defects and if defects will reduce ultimately profit occurs to the industry. after all this discussion the main conclusion is that

the customer satisfaction can be achieved by implementing the following steps:

- 1) Make the customers aware by the organization initiative.
- 2) Determine customers requirement and plan to achieve that.
- 3) Always measure customer degree of satisfaction.
- 4) Always take action to improve satisfaction of customer.
- 5) Work on customer feedback and market research.

Advantages of TQM:

- 1) Quality control inspector
- 2) Due to quality control inspection less rejection occurs
- 3) Decrease wastage
- 4) Higher employee morale- worker's motivated by extra responsibility
- 5) Improves reputation

Disadvantages of TQM:

- 1) Initial introduction case
- 2) Benefits may not be seen for several years
- 3) Workers may be resistant to change
- 4) It also fails due to improper planning
- 5) Lack of management commitment

Now if we talk about JIT it is a production strategy that plays its important role to improve the industry wealth by reducing inventory and provide quality service and product at night time to the customers.

In the JIT production system getting major attention from its beginning period, there are some major advantages of JIT production system. Inventory, quality improvement, quick delivering of products because we know that in this era of to withstand in the market for long time, we have to provide quality in the products according to the requirements of customers and effective maintenance and service of products time to time at reasonable prices. In JIT, new technologies such as robots are often integrated into the entire manufacturing system after process analysis and simplification has been performed.

Main goals of JIT:

- 1) To minimize inventory
- 2) Eliminate wastage
- 3) Reduce time
- 4) Proper utilization of system
- 5) Increase productivity

Advantages of JIT:

- 1) Reduces cost of production
- 2) It helpful to eliminate wastage
- 3) Over production can be reduced by adopting JIT
- 4) Always work on the customer satisfaction

Disadvantages of JIT:

- 1) Take more time to establish
- 2) To provide zero tolerance on faults not done in actual practice

CONCLUSIONS:

TQM and JIT both focus on reducing wastage and increasing the quality of the products. As we discuss that in the era of competition the main purpose of every industry to become the leader on the market. So to achieve this company has to start TQM and JIT in manufacturing Industries. Because there main concept to reduced the wastage, proper utilization of man power and all resources. Application of JIT business system significantly simplifies costing cost structure and other unwanted activities in the process of production system.

TQM and JIT attempts to have maximum customer satisfaction through providing quality products and quality services but uncongenial business environment , high cost of production we should try to have market research to satisfy our customers by fulfilling their demands. And at last it has been successfully implemented in many manufacturing industries. It is an optimal system that reduced wastage and provides products and services according to customer's requirements.

REFERENCES:

1. Rategan, C., (1992), "Total quality management", Journal of Property Management, Vol. 57,pp. 32-34;
2. Zhang, Z. H., (2000), "Developing a model of quality management methods and evaluating their effects on business performance", Total Quality Management, Vol. 11, No. 1, pp. 129-137.
3. Besterfield, Dale H., Quality Control (Englewood Cliffs, N.J.; Prentice – Hall Inc., 1990).
4. Dean, J. W. and Evans. J. R. (1994), Total Quality Management, Organization and Strategy, NY
5. Garvin, David A. (1988), Managing Quality - The Strategic and Competitive Edge; The Free Press; NY
6. Goetsch, David L. and Davis, Stanley B. (1997), "Introduction to Total Quality", 2nd ed., New Jersey: Prentice Hall
7. Easton, G. (1993), "The 1993 state of U.S. total quality management: A Baldrige examiner's perspective", California Management Review, Vol. 35 No. 3, pp. 32-54.