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ISO Implementation: A Case Study for an Indian Automobile Industry

Authors

Ashwani Sharma¹, Neeraj Kumar², Jitender Panchal³¹PG student, Mechanical Department, MIET, Mohri, India²Assistant Professor, Mechanical Department, RNCET, Madlauda (Panipat)³H.O.D. Mechanical Department, MIET, Mohri, India

Abstract

Every manufacturing organization is concerned with the quality of its products, while it is very important that quality requirements be satisfied and production schedules be met. It is equally important that the finished product meets established specification, because customer's satisfaction is derived from quality products and services. Customers are the source of income to manufacturing and service companies. So customer's relation is important in Quality Management. Since income of the company is direct function of customer satisfaction, a lot of studies have been devoted to effects of quality on customer satisfaction.

In September 2000, ISO compulsory formally introduced ISO 9001:2000, which may make the entire previous certificate redundant. This paper highlights the case study of ISO 9001:2000 in an Indian automobile industry.

1. INTRODUCTION

ISO is an International Organization for the Standards. It was formed by the technical committees. Guidelines are provided for a wide range of organizations by these standards. These organizations include manufacturing, processing, electronics, printing, forestry and servicing. ISO was first established in 1947, in Switzerland, for the purpose of developing economic, technological, and scientific corporation between member countries (Bureau of Business Practice). Later in 1979 the ISO Technical Committee (ISO/TC 176) was formed to make a set of guidelines in order to bring together and standardize world industries. ISO has affiliation in more than 90 countries. It is interesting to know that the word ISO is driven from the Greek word "isos" which means "same as." The words "same as" can be implied to mean the consumer gets what they expects. In our class of quality assurance we have learned that if the consumer gets what they expect, this is consider quality. Therefore, the root word ISO stands for quality.

To assure the quality, one has to ensure the quality. To ensure the quality it is important to make systematic control at each and every stage and also to take critical review of efforts and achievement of the company with respect to quality of product. For making systematic controls, co-ordination of every employee is needed, since quality on every person working within the organization. Every employee's involvement is utmost important in understanding the problems, finding solution and implementing them, all these action would lead to maintain and improve quality of the product and reliability. The manufacturer can assure the quality of its product and can guarantee its performance with full confidence, sound quality assurance system thus helps to maintain/improve the quality in the products and hence the reputation of the firm and better customer relations. Poor assurance quality system results in a production of products that are poor in and reliability system. ISO 9001:2000 (formally known as ISO 9000 series)

series of standards on quality system was formulated by International organization for standardization in order to meet the requirement of internationally uniform quality system.

2 LITERATURE REVIEW

Durai Anand Kumar, Dr. V. Balakrishnan (2011) told that the purpose of this research study was to evaluate the effectiveness of ISO 9001 Certified Contracting organizations at United Arab Emirates and identify the potential reasons behind the failure of ISO 9001 certified organizations.

Juan Jose Taril, Jose Francisco Molina-Azorin, Maki Heras (2012) told that the purpose of this paper was to determine the similarities and differences between the benefits derived from implementing the ISO 9001 and the ISO 14001 standards.

Matjaž Maletič, Manja Podpečan and Damjan Maletič (2014) found that in response to the emerging interest in organizations' ecological responsibility in terms of improving corporate sustainability performance several initiatives have gained attention. The objective of this paper is the investigation of the mechanisms through which the corporate sustainability can be contributed by ISO 14001. In this regard, the paper examines the theoretical concepts and discusses the ISO 14001 in the context of the corporate sustainability. In addition, the paper discusses the benefits of ISO 14001.

Sik Sumaedi and Medi Yarmen (2015) identified that ISO 9001 is a standard of quality management that is widely adopted by food manufacturing industries. However, the effectiveness of implementation of ISO 9001 in food manufacturing industries still becomes a fundamental issue. This is due to the fact that there is no any instrument for the measurement of effectiveness of ISO 9001 implementation. This paper tries to propose an instrument that can be used to measure the effectiveness of implementation of ISO 9001 in food industries.

3 RESEARCH PROBLEM

The research problem is the low quality of products manufactured in industry due to lack of proper guidelines. Industry is continuously facing the problems of low quality of products; high rejection rate & rework of the industry is more. By all these reasons the industry find out a simple solution of all problems which is implementation of ISO 9001:2000 which can solves all the above mentioned problems of industry

4 COMPANY PROFILE

ABC India Pvt. Ltd. is a break pad manufacturing industry. It is a multinational company and known for making mostly all kinds of brake pads and brake shoes kits.

ABC India Pvt. Ltd. was opened in Jan. 2007 and in the starting period the company was facing a serious problem i.e. the high rejection rate, more rework and also the low quality of product. So to overcome all these problems company was making a plan how to implement ISO 9001:2000. At last company make a plan and implemented ISO 9001:2000 in July 2008 and solved out most of the above discussed problems of the industry.

5 IMPLEMENTATION OF ISO

The implementation procedure of ISO 9001:2000 Quality system more time taking procedure. This is the extra work for the employees who maintain the records in the industry. In this procedure the entire old work system is change into a new one.

At the first time when company needs to implement ISO company hire aadviser to help and write the company quality procedure. The company gave all the responsibility to the Management Representative (MR). The MR in this case was an engineer procedure with the help of individual department heads. It was not necessary to change the old working system, but adjusted acc. to the ISO quality procedure. The coordinator guides the MR and gave progress

report acc. to ISO9001:2000 quality system. This is the complete procedure take 5 to 9 month to set in an industry. Once the quality procedure adopted, the system reflected the company working system. The ISO quality system defines the maintenance of records of the product from raw material to finished product. If any product fails at the consumer end with in the specified guarantee/warranty period, then causes of failure of the component can be easily identified, and action be taken easily against the failed product. Therefore, the similar' type of problem cannot occur in future.

6 DATA COLLECTION

Survey was used as a data collection tool. Data collection is very important and it is required in

order to identify and represent the problem. In the industry the production processes were observed and the role of staff was taken into consideration. After analysis the problem areas were detected and some recommendation was suggested to improve the performance.

7 PRODUCTION AND REJECTION SURVEY

For the manufacturing of brake shoe there are press machines in the industry which are arranged in cells and each cell contain any of the two types of press machines and a total of 48 manufacturing sections. A survey was done to collect and analyze data in order to measure the performance of the industry after the implementation of ISO.

TABLE-1 Daily Production Survey Report

Day	Production (Set)	Increase or Decrease in Production (Set)	Production Increase or Decrease Rate (%)
1 st	4265	-	-
2 nd	4185	-80	-1.87 %
3 rd	4350	165	3.94 %
4 th	4240	-110	-2.52 %
5 th	4370	130	3.06 %
6 th	4225	-145	-3.31 %
7 th	4250	25	0.59 %
8 th	4295	45	1.05 %

TABLE – 2 Daily Rejection Survey Report

Day	Rejection (Set)	Increase or Decrease in Rejection (Set)	Rejection Increase or Decrease Rate (%)
1 st	102	-	-
2 nd	107	5	4.90
3 rd	103	-4	-3.73
4 th	95	-8	-7.76
5 th	102	7	7.36
6 th	98	-4	-3.92
7 th	104	6	6.12
8 th	96	-8	-7.69

8 RESULT

After studying the all factors of ISO 9001:2000 implemented in industry a sharp result was observed in the industry which showed that there is continuous improvement of quality of products, process and services. We saw that the rejection rate and rework of the industry is decreased and the Quality standard, Sale and

Production rate in the industry is increased continuously.

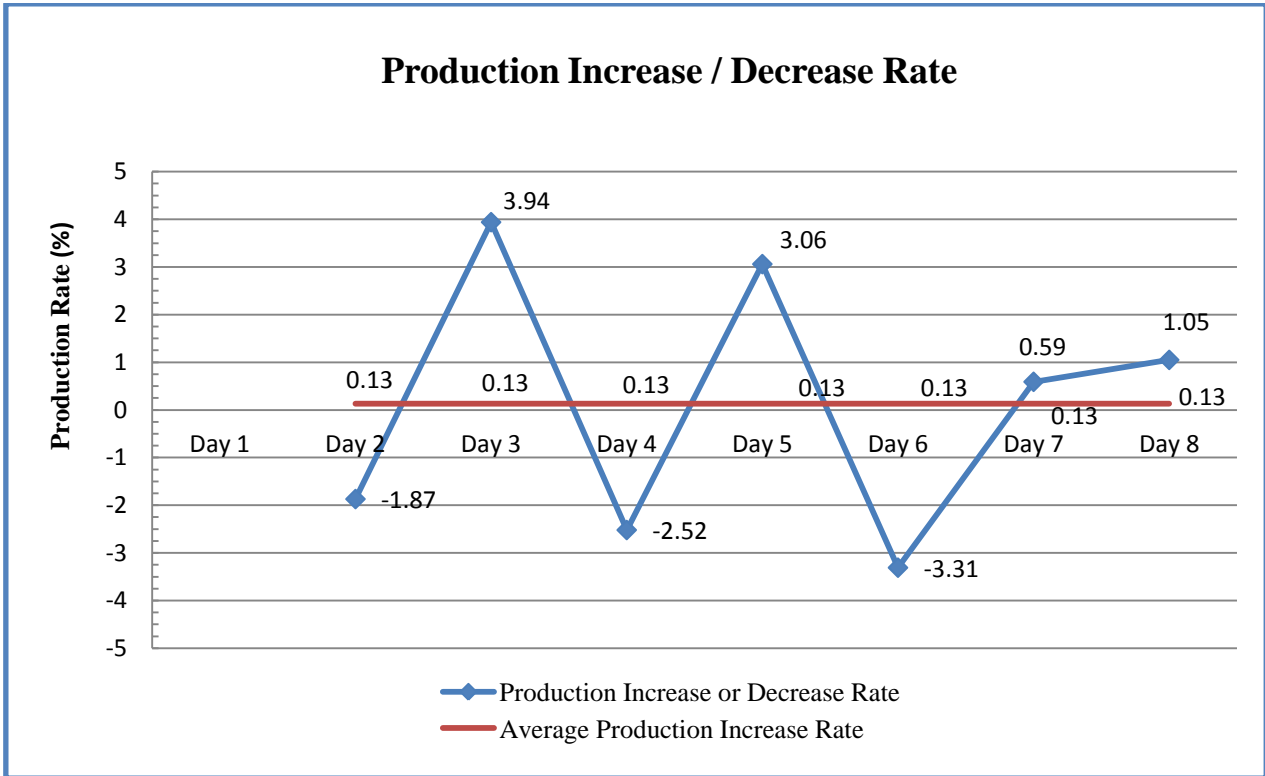


Fig. No. 1 Graph b/w Production Increase Rate and Time

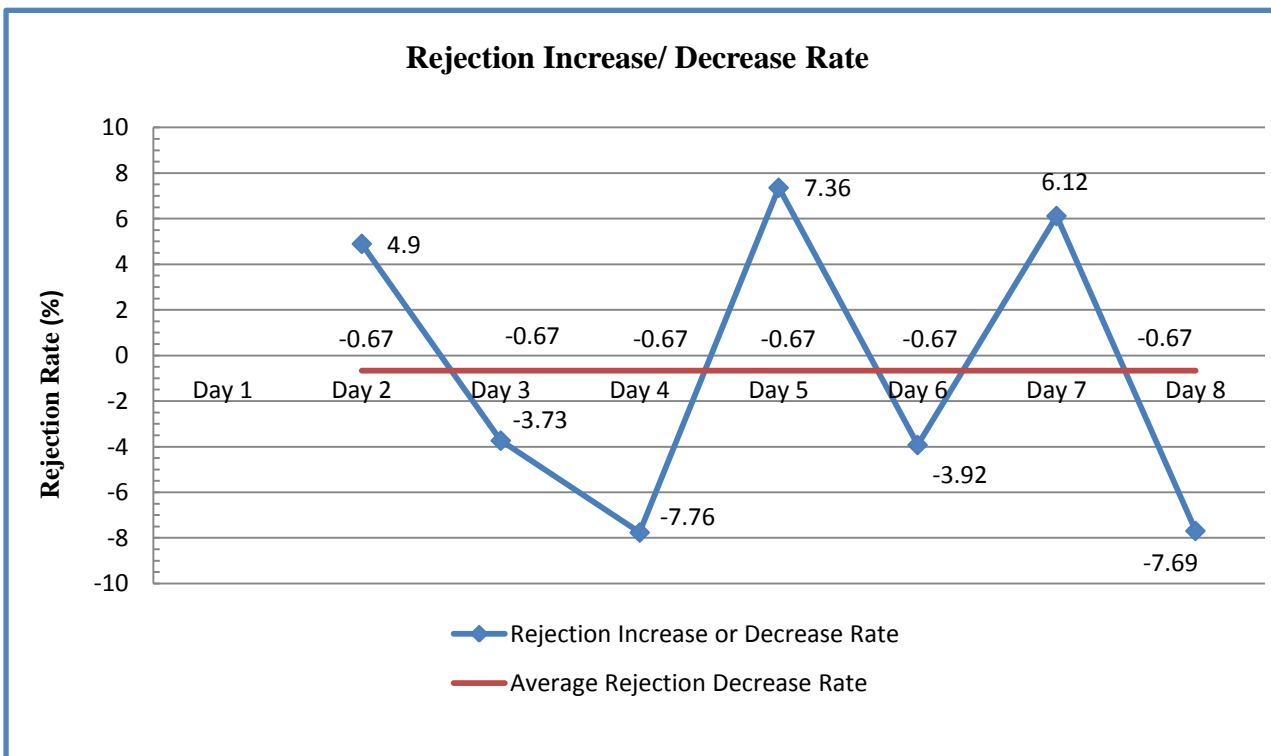


Fig. No. 2 Graph b/w Rejection Decrease Rate and Time

9 CONCLUSION

During the case study it was observed that some more improvements might be done in the processes and techniques which are being

followed in the industry so that better results may be obtained. After implementing these suggestions during the production process the

changes which came into existence are given as:

1. Per day average Production increase rate = 0.13 %
2. Per day average Reduction decrease rate = 0.67 %

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