

QUALITY MANAGEMENT SYSTEM (ISO 9000:2000) - AN OVERVIEW

Partha Pratim Saha

Ex-M.Tech. (Prod. Engg.) Student, Kalyani Govt. Engg. College
& Senior Section Engineer (Design), Jig & Tool Design Office,
Eastern Railway, Kanchrapara Workshop

Introduction

The competitive pressures are throwing new challenges to the business world. In past, quality acted as a distinguishing characteristic between a company and its competitors. In today's world, however, quality has become mandatory. It is an assumed characteristic. The distinguishing features then become verifiable quality, continuous improvement, innovation, superior customer service, etc. That's why a quality management system becomes mandatory in today's environment. Quality management system is merely a measurable and verifiable mechanism that can be used by companies to demonstrate quality.

ISO 9000 is a set of international Quality Management Standards and guidelines for quality management and quality assurance. The standard represents an international consensus on good management practices with the aim of ensuring that the organization can, time and again, deliver the product or services that meet the client's quality requirements.

The ISO 9000 is developed by International Organization for Standardization (ISO) in Geneva, Switzerland. Initial publication of this standard is in the year of 1987 and globally reputed. Today, more than 9,50,000 organizations have been certified worldwide. The current ISO 9000 family is revised by TC 176 and published on 15.12.2000.

By the way of revision, ISO 9000 family currently in use comprising 20 standards, reduced to 3 Quality Management Standards only.

ISO 9000: 2000 QMS Fundamentals and vocabulary.

ISO 9001: 2000 QMS requirement standards replaces ISO 9001,9002 & 9003.

ISO 9004: 2000 QMS guidance for performance and improvement.

Many Indian Industries have already got ISO 9000 certification of their quality system and many more are at various stage of implementation. It is based on the philosophy that an integrated, systematic and planned approach only can ensure quality. ISO 9000 has originated from Western countries and is a documentation oriented quality system requiring participation by all.

Contents

ISO 9000:2000 standard contains the following:

- Scope.
- Relations for quality management systems.
- Requirements for quality management systems and requirements for products.
- Quality management system approach.
- The process approach.
- Quality process and Quality Objective.
- Role of top management with the quality management system.
- Documentation.
- Evaluating quality management systems.
- Continual improvement.

- Role of statistical techniques.
- Quality management systems and other management system focuses.
- Relationship between quality management systems and excellence models.
- Terms and definitions.

Scope

ISO 9000:2000 standard describes fundamentals of quality management system. This standard is applicable to the following:

- a) Organization seeking advantage through the implementation of a quality management system.
- b) Organizations seeking confidence from their suppliers that their product requirements will be satisfied.
- c) Users of the products.
- d) Those concerned with a mutual understanding of the terminology used in quality management (e.g. suppliers, customers, regulators).
- e) Those internal or external to the organization who assess the quality management system or audit it for conformity with the requirements or audit it for conformity with the requirements of ISO 9001 (e.g. auditors, regulators, certification/ registration bodies).
- f) Those internal or external to the organization who give advice or training on the quality management system appropriate to that organization.
- g) Developers of related standards.

Principles

The quality management principles can be used by top management as the basis of its role, which is as follows:

- i. To establish and maintain the quality policy and quality objectives of the organization.
- ii. To promote the quality policy and quality objectives throughout the organization to

increase awareness, motivation and involvement.

- iii. To ensure focus on customer requirements throughout the organization.
- iv. To ensure that appropriate processes are implemented to enable requirements of customers and other interested parties to be fulfilled and quality objectives to be achieved.
- v. To ensure that an effective and efficient quality management system is established, implemented and maintained to achieve these quality objectives.
- vi. To ensure the availability of necessary resources.
- vii. To review the quality management system periodically.
- viii. To decide on actions regarding the quality policy and quality objectives.
- ix. To decide on actions for improvement of the quality management system.

The systemic identification and management of the processes employed within an organization and particularly the interaction between such processes is referred to as the "Process Approach." Figure 1, illustrates the process-based quality management system described the ISO 9000 family of standards. This illustration shows that interested parties play a significant role in providing inputs to the organization. Monitoring the satisfaction of interested parties requires the evaluation of information relating to the perception of interested parties as to the extent to which their needs and expectations have been met. (Figure 1)

Basic Steps for ISO 9000 Certification

The basic steps to be followed for ISO certification are given below:

- (1) Quality Awareness training.
- (2) Form task force.
- (3) Analyze existing practices and corrective action.
- (4) Design and develop standard procedures.

- (5) Prepare documentation.
 - Quality manual
 - Quality procedures
 - Work instructions.
- (6) Implement the Quality System.
- (7) Quality Auditing.
- (8) Preliminary Audit by Third party.
- (9) Apply for Accreditation.
- (10) Maintain the system.

Management Principles

Eight management principles have been identified in ISO 9000:2000 to facilitate the achievement of quality objectives. These are the following:

- Customer focus.
- Leadership.
- Involvement of people.
- Process approach.
- System approach of management.
- Continual improvement.
- Factual approach to design making.
- Mutual-beneficial supplier relationships.

Benefits of ISO 9000:2000 Certification

There are several benefits resulting from ISO 9000 Quality Systems Standards. Some of them are listed below :-

1. ISO 9000 provides a competitive edge in the domestic and global markets.
2. It provides a climate for consistent improvement in quality.
3. It reduces wastes and repairs- enhancing profits in turn.
4. It maintains streamlined records.
5. It maintains streamlined material handling and storage.
6. It changes the attitude of workforce.
7. Process quality improvement is maintained.
8. Products right in the first instance, no rework and

nothing for rectification.

9. ISO 9000 gives international recognition of ability, credibility and expertise, thereby increasing the number of customers.
10. Supplier without certification can face higher insurance rates, or, be denied insurance in some markets.

Limitations of ISO 9000

1. Implementation of this system is very demanding of resources.
2. Assessment and registration are expensive.
3. Work-culture need to be changed/ improved.
4. Up grading of manufacturing and test facilities is essential.
5. Unless carefully planned, the system may become non-cost effective.
6. Dedication and will to improve and constant improvement are must for success.

References

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5. Khanna, O.P., "Industrial Engineering and Management", Dhanapat Rai & Sons, 1682, Naisarak, Delhi-110006, 1995.

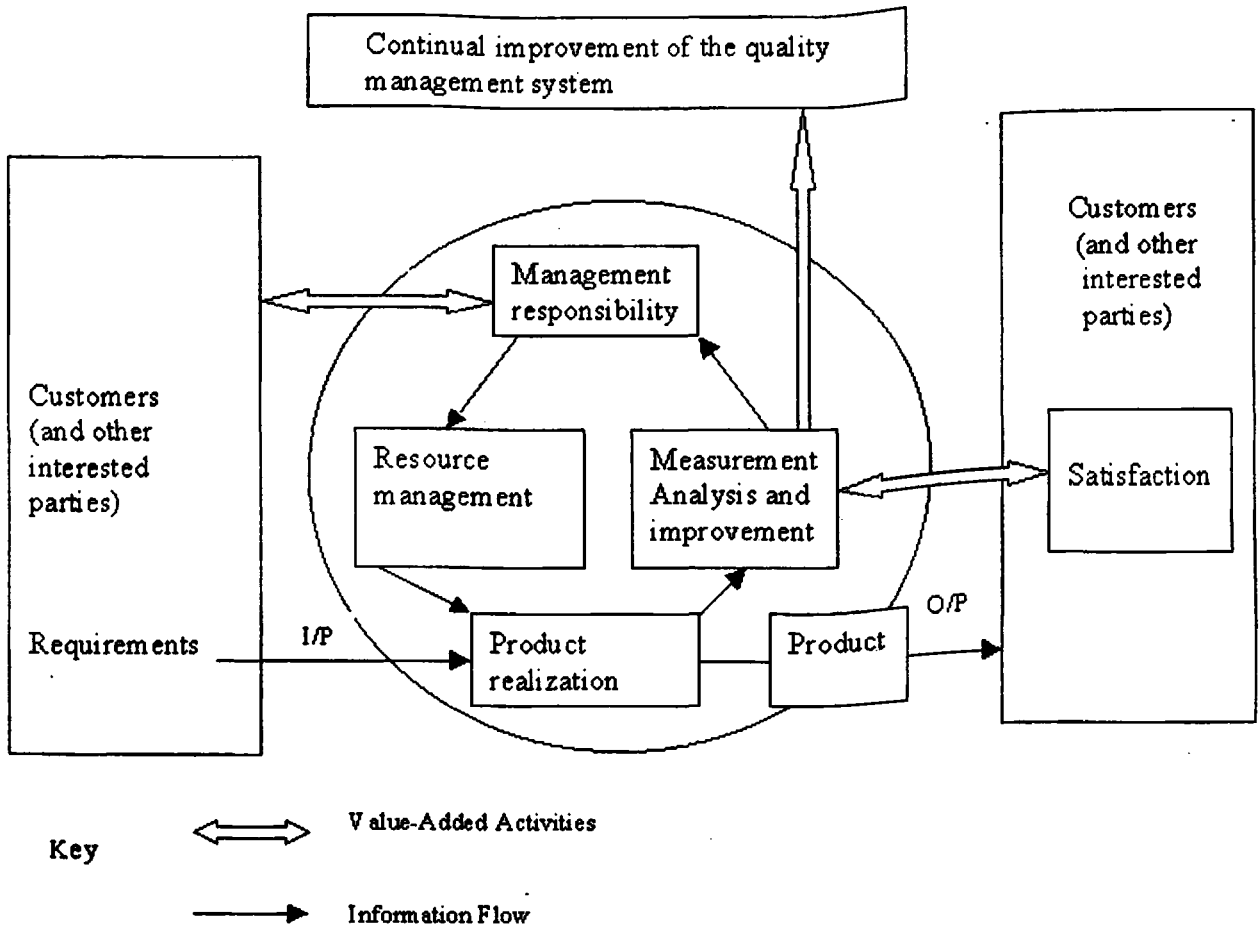


Figure 1 -Model of a process-based quality management system.