

ISO 9000 Series of Quality Management and Assurance Standards

- 1979 the British Standard Institute (BSI) submitted a formal proposal to the International Standards Organization (ISO) in Geneva
- The first edition of ISO 9000 standards was published in 1987 (these standards were based mainly on UK BS-5750 standards, and Canadian standards, CSA-Z299)

ISO 9000 Standards

- Concept: determine characteristics of the management practices that must be standardized.
- Main objective: total quality improvement
- Difficulties: many countries initiated and implemented their own National Quality Policies.

ISO 9000 Series

- ISO 9000 (a guide)
- ISO 9001 (a set of requirements for the quality system of the supplier)
- ISO 9002 (product standards)
- ISO 9003 (final inspection and testing)
- ISO 9004 (guidelines for developing and implementing quality system principles, structure, auditing and review)

ISO 9000 Standards

- The implementation of the ISO 9000 standards does not imply necessarily a higher level of quality but it forces a company to assure its customers that the products are manufactured according to the standards.
- The directives of standards cover mainly such areas as product safety, and other quality considerations.
- The list of products (medical implants, gas appliances, toys, building products, etc)

ISO 9000 Registration

- In the United States the registration process is supported by the American Society for Quality (ASQ)
- The Registrar Accreditation Board (RAB) was formed in 1989.
- The main function of RAB is to accredit registrar, which will register suppliers

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ISO 9000 Standards

- According to respondents of the survey conducted by Deloitte & Touche (1994) the ISO 9000 registration is a routine
- ISO 9000 registration is a bottom line of doing business
- ISO 9000 is a critical marketing tool (saves annually from \$25,000 to more than \$500,000)

Companies seek ISO 9000 registration in order to

- Enter global markets
- Improve organization's management and product/service quality
- Self-assess its quality procedures
- Outward (exporting) internalization
- Satisfy customers

Basic Steps in ISO 9000 Registration

- Planning
- Training
- Preparing documentation
- Internal assessment
- Internal auditing
- Pre-registration assessment
- Registration assessment
- Certification

Positive effects of ISO 9000 certification

- Improving processes' procedures
- Improving process understanding
- Improving existing quality policies and programs
- Completing Quality Manual
- Improving communication between management and employees
- Increasing company's credibility

Negative aspects of ISO 9000

- Extra time and money involved in the registration process.
- Distraction from other quality programs
- A lot of work

The Success Factors in ISO 9000 Registration

- Clear planning
- Hard work of each employee
- Commitment from top level
- Management support at every level

- Cross-functional team work
- Weekly meetings
- Extensive training resulting in knowledgeable individuals

Managerial Implications

- ISO 9000 are becoming an integral part of global business
- Managers must understand what the critical success factors are before starting the ISO 9000 registration
- There are extensive benefits to the company beyond the certification.
- Consider certification to other standards.

QUALITY CIRCLE

Quality circle is basically a small group of employees –who volunteer to meet regularly to undertake work related projects- quality, productivity, safety, efficiency, cost, working conditions etc& evolve recommendations to improve effectiveness in the selected functional area.

The size of the quality circle is important-both too big and too small should be avoided. In big group everybody will not get enough opportunities to participate & in too small group someone may dominate.

BASIC PRINCIPLES OF QUALITY CIRCLE

1. Every job is capable of being improved.
2. People do not resist change, they resist being externally changed.
3. Every employee is capable of attaining excellence in his work & the basic ability to improve the job.
4. People like to improve their job and derive satisfaction out of it provided they are involved through recognition& reward for work.
5. People like to participate in groups and crave for attention.
6. People have integrity and can be highly creative.
7. A man who does the job knows best about the job at least they know the problems of the job.

BENEFITS OF QUALITY CIRCLE

1. Benefits to the organization:

- a. Improve – employee & employer relationship.
- b. Develop – participative culture & team spirit.
- c. Reduce – work related errors & cost.
- d. Increase – productivity.
- e. Improve – quality of the goods & services.
- f. Leads–towards the better efficiency.
- g. Catalyze – attitudinal change.
- h. Save – amount of time.

2. Benefits to the employee:

- a. Provide- job interest
- b. Give – sense of participation.
- c. Develop – latent problem solving capabilities.
- d. Improve – individual communication capability.
- e. Advances – employee career & personal development.
- f. Involve – worker in decision making.
- g. Remove – frustration.
- h. Encourage – employee to get involve with common goal of the org.

OPERATION OF QUALITY CIRCLE

1. Formation of the circle.
2. Training of the members.
3. Problem identification & problem selection.
4. Problem analysis.
5. Recommendation.
6. Management presentation.
7. Review & decision by the management.
8. Implementation.
9. Monitoring the effect.

LIMITATION OF QC

1. Since QC is basically directed towards the involvement of the workers, so the problems should be simple in nature.
2. Unions of India are not very enthusiastic about the QC.
3. Management is also not very open towards the union.
4. Supervisors and lower level managers are generally found to exhibit some interest initially which sooner develop into indifference.
5. Level of education of workers in India is very low.

TOTAL QUALITY MANAGEMENT

- Management commitment
- Team work, Quality tools & techniques. Participation
- TQM MODEL

What is TQM?

- 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.
- TQM views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is "Do the right things, right the first time, every time". TQM is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations. There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor

TQM Activities

- Commitment by senior management and all employees
- Meeting customer requirements
- Reducing development cycle times
- Just In Time/Demand Flow Manufacturing
- Improvement teams
- Reducing product and service costs
- Systems to facilitate improvement
- Line Management ownership
- Employee involvement and empowerment

- Recognition and celebration
- Challenging quantified goals and benchmarking
- Focus on processes / improvement plans
- Specific incorporation in strategic planning

TQM

TQM is a way of planning, organising and understand each activity that depends on each individual at each level.

Ideas of continuous learning allied to concepts such as empowerment and partnership, which also imply that a change in behaviour and culture is required if construction firms are to become learning organizations

This is a complete management philosophy that permeates every aspect of a country and places quality as a strategic issue.

Total quality management is accomplished through an integrated effort among all levels in a company to increase customer satisfaction by continuously improving current performance.

TQM is a management-led approach applicable in all the operations of a company and the responsibility of ensuring quality is collective.

The philosophy of TQM is one of prevention rather than defect detection. TQM is a way of thinking of goals, organization, processes and people to ensure that the right things are done right the first time. It is an approach to improving the competitiveness and effectiveness, and flexibility of the whole organization.

The essential elements of TQM are:

- Management commitment and leadership
- Training
- Teamwork
- Statistical methods
- Cost of quality
- Supplier involvement

It is believed that adoption of TQM by construction companies will result in higher customer satisfaction, better quality products and higher market share.

However, adoption of TQM requires a complete turnaround in the corporate culture and management approach, as compared to the traditional way of top management giving orders and employees merely obeying those.

Construction, being different from manufacturing and other industries, has many unique problems that cause hindrances in adoption of TQM.

Some of the major problems identified are:

- Lack of teamwork
- Poor communication
- Inadequate planning and scheduling

The causes identified for the above problems are:

- No team-building exercises at the interception of projects
- Lack of understanding of team member's expectations
- Little or no team-orientated planning and scheduling