

## RESEARCH ARTICLE

### PRE-ASSESSMENT FOR TQM IMPLEMENTATION IN SEPIDDASHT INDUSTRIAL GROUP AS A MODEL OF SMALL AND MEDIUM SIZE ENTERPRISES

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*Received 20<sup>th</sup> January, 2013; Received in Revised form; 29<sup>th</sup> February, 2013; Accepted 27<sup>th</sup> March, 2013; Published online 15<sup>th</sup> April, 2013*

#### ABSTRACT

At the first glance seen TQM is a change in an organization's technology and the way of doing work and their tools in organization process such a paperwork, procurement process and other procedures. But TQM is also a change in organization culture, its norms, values and behaviors. Therefore TQM is in fact a large scale systems changes and consequently large scale changes always cause many sources to resist against itself such as employees and middle managers. Therefore it is necessary to assess sources of resistance to change and ways of dealing with them in order to avoid their failure in Implementing TQM. This paper provides some check list assessments according to TQM and Deming's principles to assess the preparation of an organization to clarify that Are they ready to implement TQM or not ? These sort of assessments has been done in *Sepid Industrial Group* and its subsystems has been evaluated such as Training system, employees Involvement system, performance measurement system, reward and punishment system, recruitment system and so on. that the result of that assessment will be reported.

**Key words:** Implementing TQM, Consequently, Procurement process, Employees Involvement system, Recruitment system.

#### INTRODUCTION

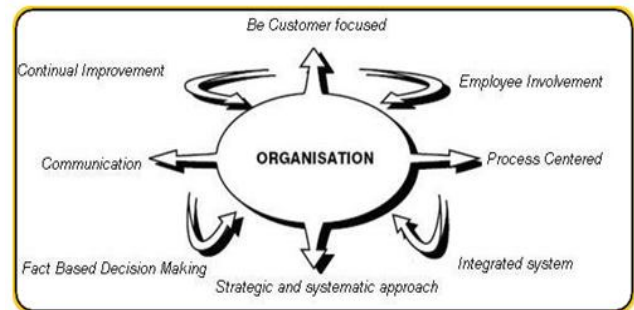
Sepid Industrial Group was founded in 1983 in order to produce atmospheric torches and any kind of heating system and it also to produce electronic components, industrial heaters and gas control taps from 1994. This organization is located in Mahmood Abad the suburb of Isfahan. Sepid Industrial Group succeeded to achieve ISO 9001:2000 and ISO 14001 from RWTUV certification body in May of 2002.

#### Principles and concepts of TQM

TQM is an integrative philosophy of management for continuously improving the quality of products and processes Ahire (1997). It is used around the world. TQM functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products or services offered by an organization. In other words, TQM capitalizes on the involvement of management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations. Considering the practices of TQM as discussed in six empirical studies, Cua, McKone, and Schroeder (2001) identified the nine common TQM practices as cross-functional product design, process management, supplier quality management, customer involvement, information and feedback, committed leadership, strategic planning, cross-functional training, and employee involvement Cua, McKone, and Schroeder (2001).

#### TQM principles

- Be Customer focused
- Insure Total Employee Involvement
- Process Centered
- Integrated system
- Strategic and systematic approach
- Continual Improvement
- Fact Based Decision Making
- Communication



Two very Important things are left By Deming as heritage which are very necessary to Implement TQM. The First it's his quality approach which is summed up in famous 14 points:

**Point 1:** Create constancy of purpose toward improvement of the product and service so as to become competitive, stay in business and provide jobs.

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**Point 2:** Adopt the new philosophy. We are in a new economic age. We no longer need live with commonly accepted levels of delay, mistake, defective material and defective workmanship.

**Point 3:** Cease dependence on mass inspection; require, instead, statistical evidence that quality is built in.

**Point 4:** Improve the quality of incoming materials. End the practice of awarding business on the basis of a price alone. Instead, depend on meaningful measures of quality, along with price.

**Point 5:** Find the problems; constantly improve the system of production and service. There should be continual reduction of waste and continual improvement of quality in every activity so as to yield a continual rise in productivity and a decrease in costs.

**Point 6:** Institute modern methods of training and education for all. Modern methods of on-the-job training use control charts to determine whether a worker has been properly trained and is able to perform the job correctly. Statistical methods must be used to discover when training is complete.

**Point 7:** Institute modern methods of supervision. The emphasis of production supervisors must be to help people to do a better job. Improvement of quality will automatically improve productivity. Management must prepare to take immediate action on response from supervisors concerning problems such as inherited defects, lack of maintenance of machines, poor tools or fuzzy operational definitions.

**Point 8:** Fear is a barrier to improvement so drive out fear by encouraging effective two-way communication and other mechanisms that will enable everybody to be part of change, and to belong to it. Fear can often be found at all levels in an organization: fear of change, fear of the fact that it may be necessary to learn a better way of working and fear that their positions might be usurped frequently affect middle and higher management, whilst on the shop-floor, workers can also fear the effects of change on their jobs.

**Point 9:** Break down barriers between departments and staff areas. People in different areas such as research, design, sales, administration and production must work in teams to tackle problems that may be encountered with products or service.

**Point 10:** Eliminate the use of slogans, posters and exhortations for the workforce, demanding zero defects and new levels of productivity without providing methods. Such exhortations only create adversarial relationships.

**Point 11:** Eliminate work standards that prescribe numerical quotas for the workforce and numerical goals for people in management. Substitute aids and helpful leadership.

**Point 12:** Remove the barriers that rob hourly workers, and people in management, of their right to pride of workmanship. This implies, abolition of the annual merit rating (appraisal of performance) and of management by objectives.

**Point 13:** Institute a vigorous program of education, and encourage self-improvement for everyone. What an organization needs is not just good people; it needs people that are improving with education.

**Point 14:** Top management's permanent commitment to ever-improving quality and productivity must be clearly defined and a management structure created that will continuously take action to follow the preceding 13 points.

The second his heritage is deadly diseases for management include:

- Lack of constancy of purpose to plan product and service that will have a market and keep the company in business, and provide jobs.
- Emphasis on short-term profits: short-term thinking (just the opposite from constancy of purpose to stay in business), fed by fear of unfriendly takeover, and by push from bankers and owners for dividends.
- Evaluation of performance, merit rating, or annual review.
- Mobility of management; job hopping.
- Management by use only of visible figures, with little or no consideration of figures that are unknown or unknowable.

The purpose here is to review principles of effective planned change implementation and suggest specific TQM applications. Several assumptions are proposed:

- TQM is a viable and effective planned change method, when properly installed
- not all organizations are appropriate or ready for TQM
- preconditions (appropriateness, readiness) for successful TQM can sometimes be created
- leadership commitment to a largescale, long term, cultural change is necessary. While problems in adapting TQM in government and social service organizations have been identified, TQM can be useful in such organizations if properly modified (Milakovich, 1991; Swiss, 1992).

#### **The approach of Pre-assessment of TQM Implementation in Sepid Industrial Group**

One way in analysis of current situation in an organization for implementing TQM is analyzing its subsystems. In this paper in order to Primary assessment 3 areas has been identified include:

- Internal performance and information exchange through systems
- External relationship between organization and its customers and suppliers.
- Internal relationship between employees and managers.

And based on that mentioned areas a check list with 118 questions has been designed and in order to being complete were distributed among employees.

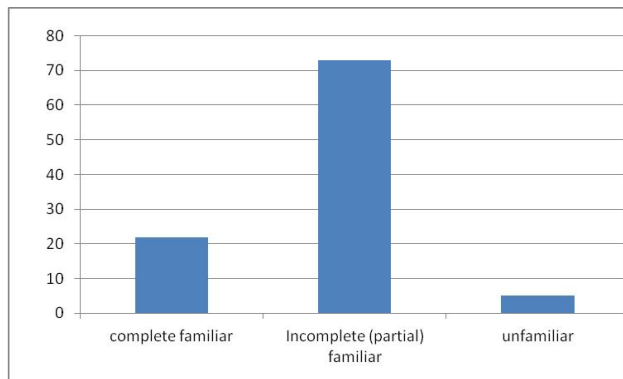
**Sepid Pre-assessment of TQM based on subsystems**

**Training systems**

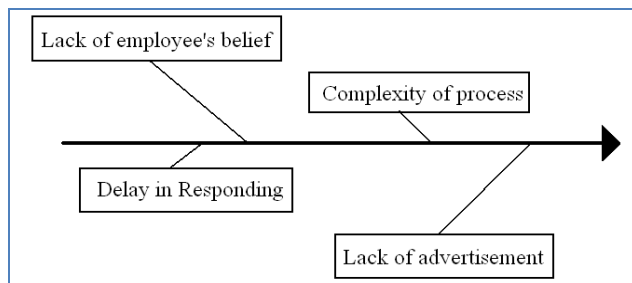
The training system is one of the active and effective systems through Sepid Industrial Group. Their approach in this system is to assess employees before employment and determining what courses needed to provide them for their job. In addition several courses are hold by human resource training system for promoting jobs. After courses the analysis of the efficiency of that is done by training system with employees surveys. Future courses also planed according organization's strategic goals and stakeholders expectations.

**Employees Involvement System**

The recommendation and idea of workers is collected by Quality Assurance department. The big deal in this department is designing an efficient system to encourage employees in being involve at organization's affairs. But the result of filled check list shows that only 22% of employees are completely familiar with this system in organization and 73 percent are partial familiar and eventually 5% are completely unfamiliar of being such system in their work place. Actually this distribution which is shown in Figure 1 is not adequate for an organization that want to implement total quality management so the main problem of system should be identified. For this purpose we have used of cause and effect diagram (fish bone diagram) to identify reasons.



**Figure 1: the percentage of familiarity with recommendation system in organization**



**Figure 2: cause and effect diagram in order to identify cause of less employee involvement**

- Lack of staff beliefs of its influence on their work conditions

- Complexity of recommendation system and its work flow.
- Delays in responding staff's requests or recommendations
- Lake of advertisement to aware employees of being such recommendation system

The frequency of each reason is determined by inquiry through organization's employees the result comes in below Table:

**Table 1: employee's inquiry result**

No	Item	Frequency
1	Lack of staff beliefs of its influence on their work conditions	20
2	Complexity of recommendation system and its work flow	4
3	Delays in responding staff's requests or recommendations	8
4	Lake of advertisement to aware employees of being such recommendation system	3

**Performance measurement system**

There is no specific technique to measure organization and employee performance in *Sepid Industrial Group* and each two years top manager wants from middle managers to introduce their successful personnel but this is wrong way to analyze because the taste of middle managers affect on this selection and this action doesn't follow of a specific process and apposite to Japanese method is done in a short term of period. As a result many other employees probably claim that why haven't they been selected as a successful personnel. Thus sepid industrial group must be applied a specific method to measure performance before implementing TQM.

**Reward and Punishment system**

Sepid company has an appropriate process in rewarding and punishment of employees which is devided two main sections:

- financial , and
- official

A notable point in Reward and Punishment system of Sepid company is following of equality theory by top managers.

**Recruitment system**

Researches demonstrate that the process of employment of this company doesn't follow of any specific and organized method.

**Payroll system**

Payroll system in Sepid Industrial Group is based two kind of work status: regular working hours and overtime working hour that is counted regarding to job expertise. This method could satisfy both employees and managers in organization so far.

**Quality system**

There are regular meetings in quality related issues each month and the quality control and assurance department send their periodic reports to top manager. In addition all of 7 QC tools are applied through production process. But one big problems

is still remain. The understanding of quality doesn't seem adequate among employees and should be improved. Some conference and courses are need to inform employees that all they are involved in quality of final products.

### Conclusion

Doing Pre-assessments is very important to increase the chance of success of implementing Total Quality Management in each organization. Because as it mentioned before TQM is a large scale change in organization performance that should prepared suitable conditions in organization's culture and behavior to implement it properly. In this paper we designed some check list based on main TQM principles for assessing the preparation of Sepid Industrial Group As a case study in three areas and 7 subsystems. As a consequence this company is good in 4 subsystems including: Human resource training system, recruitment system, payroll system, reward and punishment system. But it needs some developing before TQM implementation in 3 other systems including: employee involvement system, performance measurement system and quality system.

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