The Quest for Excellence: A Case Study of TQM Practice in Tata Steel

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ABSTRACT

The case examines the quality initiatives taken by Tata Steel is the first integrated steel company in the world to win the world’s highest award of quality, the Deming Application Prize. The company TQM experience and its preparation for winning the award explored and the case also provides information about Deming prize. This paper aims to address the issue of excellence of quality strategy in a Deming Application Prize winner company.

Keywords: Business Excellence, Deming prize, Total Quality Management,

I. INTRODUCTION

Given the historical background to quality which started as a assurance functions through inspection prior to dispatch or sale, the concept of a quality appears to have its roots more in manufacturing than trading or service organizations, especially large manufacturing organizations. After the logical follow-up to this, TQM as a company-wide management philosophy started getting attention by a large number of manufacturing organizations. Given an environment of competition and concern for productivity and effectiveness, as also global opportunities, many organizations including private and public sectors appear to have appreciated the need for implementing a quality conscious culture across their companies’ different functions. Indian industry is facing stiff competition from rivals like, China, Korea, and many other nations. It is high time that is focused more upon attaining world-class standards in terms of the quality of its products and services. Of late, Indian companies have demonstrated many successes on this front, such as winning Deming prizes. Prior to globalization of Indian economy in 1991, the competition in steel industry was limited. By adopting measures leading to marginal improvements, Tata Steel was ahead of its Indian competitors. However, the environment changed dramatically and the company had to think ‘out of the box’. It became necessary to redefine the business elements (processes, products, market-segment, human resource, input materials, plant location, etc.), business priorities, vision, strategies, management tool and techniques etc. In effect, the company redefined and reoriented itself in a turbulent environment. It started
with ISO 9001 certification of various manufacturing and later service units. Process Improvements through Quality Improvement Projects (QIP’s), Value Engineering Projects and Statistical Process Control projects and Operations Research Projects by managerial teams was making great contributions in various departments and divisions of the company. Quality Circles and 5S as strategic tool for employee involvement and improvement were adopted in all departments of the company. It adopted the J N Tata Quality Award Model based on Malcolm Baldrige Model for its various divisions in the company in 1992. Later it adopted the JRDQV Model for Business Excellence in 1994 for competing with other group companies. Benchmarking and Business Process Reengineering (BPR) emerged as powerful Management Tools in this direction complimenting the TQM efforts at Tata Steel in terms of continuous improvement in process and practices. Concept of Balanced Score Card was integrated with the TQM strategy of the company in 1998. It was integrated with the Annual quality Improvement Plans (AQUIP’s) of various departments.

II. QUALITY JOURNEY IN INDIA

It is known fact that that concept of quality has been around for a long time, but the stress on the word quality in every aspect of life i.e. in business, service or social life has increased in the last few decades. Quality has awakened all the nations, industries and organizations around the world. The word “quality” means different things to different people. The ranges of meanings include that quality is excellence, value, conformance to specifications, conformance to requirements, fitness for use, customer satisfaction, meeting taj Mahal, located in Agra, is one of the seven wonders of the world, the konark sun Temple in Orissa, are the testimony to the rich cultural heritage are all. Architectural marvels which boost of high degree of excellence and excellent quality. Indian companies are also participating in the quality race, although slowly. They are facing a challenge from the multinational companies since the Government of India implemented the policies of liberalization, privatization and globalization. In the light of this, the Indian companies are in dire need of new ideas, approaches and techniques for attaining a competitive edge. Industry associations like the Confederation of India (CII), Federation of Indian Chambers of Commerce and Industry (FICCI), Indian Statistical Institute (ISI), Nasscom, and specialized institutions like National Productivity Council (NPC) have a part of their organizations devoted to helping the industry in the formulation and implementation of quality management programmes, education and training programmes and provide consultancy services. The bureau of Indian standards, has also established quality standards in accordance with international system standards, with main task of product standardizations. Today we witness a world that has changed a world that has changed dramatically since the nineties. Globalization is here to stay.

III. TQM IN INDIAN COMPANIES THROUGH DEMING PRIZE

India’s interest about TQM came about by years of selfless contribution of one Japanese Professor yoshikazu tsuda, invited by confederation of Indian industry (CII) to introduce TQM to Indian manufacturing industry. He was the guide assigned by Japanese union of scientist and engineers that is responsible of the promotion of TQM in Japan & the world over.

The resounding success of several Indian manufacturing and service firms in recent times has invariably been linked to excellent practices to quality management. If you consider the auto-component manufactures in India, many of them won the Deming Award for quality, the largest number outside Japan. Similarly, India has the largest number of CMM Level 5-certified Software Company in the world. With such
international recognition in quality, these two sectors of our industry were able to compete globally.

1. Identify the degree of commitment and key interests and list the long-term changes required
2. Define the objectives of TQM
3. Identify resources available and develop understanding of organizational system with quality system
4. Specify top management commitment through quality policies, procedures and processes
5. Create company-wide awareness and participative work environment by emphasizing customer-oriented values. Encourage quality commitment
6. Design action plans and develop specifics about future
7. Identify key issues and constraints on implementation and develop strategies for implementation
8. Identify and allocate resources, execute plans and build momentum for change
9. Implement and monitor
10. Measure benefits in terms of increased customer satisfaction
11. Review and reward

**Fig.1**

Road map for implementation stages of TQM

Indian companies seem to be in the favorites list of the Deming Awards (termed as the Nobel Prize in the world of manufacturing) of Japan. The Japanese Union of Scientists and Engineers (JUSE) Started the Deming prize in 1951. Initially, this prize was open only to the Japanese industry, but in 1985 it was open thrown open to the rest of the world. From 1998 onwards, Indian companies started figuring in the Deming prize list, with Sundaram Clayton’s brakes division claiming the honor first. Deming Grand Prize is the highest honor in quality awarded to a company for excellence in Total Quality Management. This prize given to companies for demonstrating practicing TQM in areas of production, customer service, safety, human resource, corporate social responsibility, environment

1998 Sundram-Clayton Limited, Brakes Division
2001 Sundaram Brake Lining Limited
2002 TVS Motor Company Limited
2003 Brakes India Limited, Foundry Division
2004 Rane Brake Linings Limited
2005 Sona Koyo Steering System Limited
2006 SRF Limited, Industrial Synthetics Business
2007 Business Lucas- TVS
2008 Indo-Gulf Fertilizers Limited
2009 Krishna Maruti Limited, Seat Division
2010 Rane Engine Valves Limited
2011 TVS Motor Company Limited
2012 Brakes India Limited, Foundry Division
2013 Rane TRW Steering System Limited, Steering Gear Division
2014 Aashi India Glass Limited, Auto Glass Division
2015 Rane (Madras) Limited
2016 Sanden Vikas (India) Limited
2017 Lucas-TVS Limited (India)
2018 The Deming Grand Prize
2019 Tata Steel Limited (India)
2020 Rane (Madras) Limited (India)
2021 Lucas-TVS Limited (India)

**IV. CASE: TQM JOURNEY OF TATA STEEL**

Tata Steel is among the top ten global steel companies with a crude steel production capacity of 26.5 million tones per annum (mtpa). Tata steel has been practicing TQM since the late 1980s which was when the Tata steel initiated several quality activities – quality circle, ISO certification, quality improvements using juran methods, etc. The steel giant won the deming application prize 2008 & deming grand prize (DGP) 2012 for achieving distinctive performance improvement through the application of total quality management. In 2000, after winning the JRD QV Award, by going through the deming process, Tata Steel discovered the deeper meaning of TQM for achieving the next quantum jump in performance and improvement. In 2005, Tata Steel conducted a TQM diagnosis along with the JUSE team for getting the status of TQM implementation in the organization.
V. AFTER WINNING THE PRIZE

The defect rate in the manufacturing process at Tata Steel decreased substantially and customer returns came down as a result of these quality control initiatives. Tata Steel noticed many tangible and intangible benefits in their journey of TQM. There were all-round improvement in customer satisfaction, new product development, supplier satisfaction, employees and their family satisfaction, breakthrough achievement in business results. Tata Steel believes that Deming Prize is not only a ticket for TQM journey towards organizational excellence. Quality goals are moving targets. It knows that its future lies in further improving the product quality and productivity along reducing costs and implementing lean manufacturing systems and TPM.

VI. LEARNING

Compulsion of competitive business environment is not merely to do well, but to do well than the competitiveness. This challenging situation is compelling industries to opt for new strategies leading to superior performance: the goal of TQM system. This calls for rethinking and reworking of an organization’s existing processes, position, posture and attitude with a view to transforming the organization to enable it to cope with the changing context of business, where customer is king. TQM provides the vehicle for change and transformation by making the organization more customer focused, people driven, flexible and committed to continuous improvement.

The present study has resulted in the following valuable lessons:

1. Globalization has thrown new challenges as well the opportunities.
2. Implementation of TQM leads to improvement in performance.
3. Culture is an important issue for the success of TQM.
4. Awards models provide a roadmap, a framework for excellent.
VII. CONCLUSION

Continuous improvement is an integral part of culture in Tata Steel. Tata Steel addresses all aspects of social, environmental and economic performance like safety and health of the people, resource conservation, development of innovative products and processes, value creation for all stakeholders and contributing to the prosperity of the communities and nations. Tata Steel Quality policies guide in its approach such that quality principles and practices are applied throughout the business using ISO9001, the global quality and customer relationship standard. With the Tata Steel better understanding of TQM on the Deming Application Prize journey, its customer focus and market orientation have undergone a sea-change. We must understand that although our companies have won the crucial battle of saving their home turf, the war is still not over as long as we do not make our stronghold in the international arena. So far, our companies have been attaching the highest priority to attaining ISO certifications, but they keep in mind that if ISO clauses are not implemented seriously, the companies may be deceiving themselves. The crux of the issue is that whatever quality philosophy we follow, be it TQM, Six Sigma, ISO 9000, or something else, we must have a continuous zeal and serious intentions of improving the quality of our products and services. Tata Steel has inculcated the philosophy of Total Quality Management and Business Excellence as part of the company’s Corporate Business Strategy. Any company can gain competitive advantage and move towards Business Excellence as described in this paper. Tata Steel has done this because of its foresight and the vision it had among the Top Management Leadership and support from all its employees in the company. These companies have as prepared themselves to compete and be successful in a competitive globalize world.

VIII. REFERENCES


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