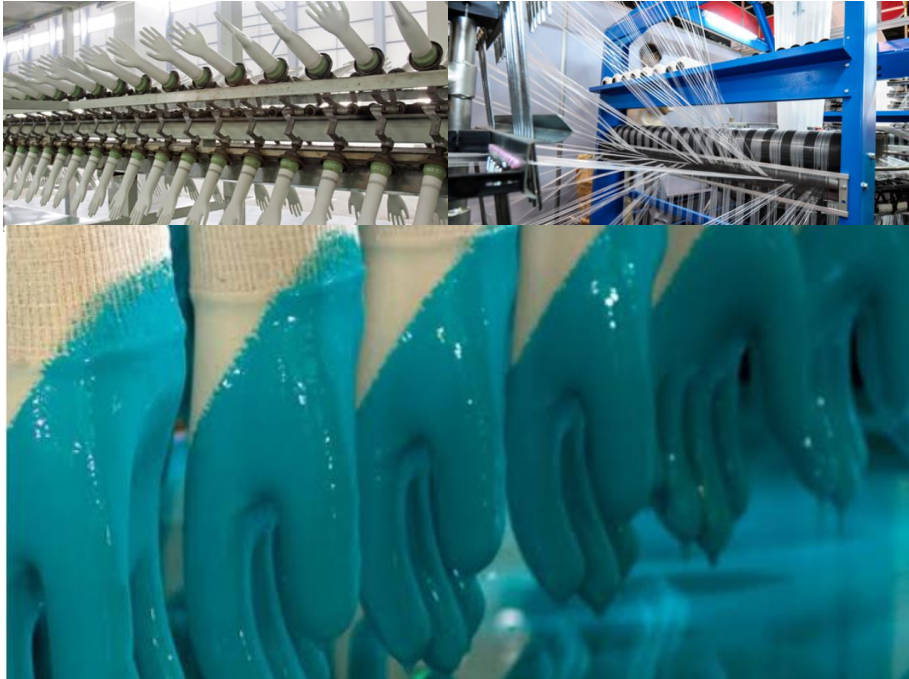


Deming's Fourteen Points – Total Quality Management

Study of Midas Safety



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Introduction

Quality is one of prime important factor of any business. Customers demand and expect value for money and also customers need to be satisfied on quality of the product. If business fail to maintain an adequate quality standard, business would not sustain that longer. However maintaining an adequate standard of quality is also costly. Rapid developments in international competition has obliged textile enterprises to take new approaches in order to gain a competitive advantage. The limits of acceptable quality levels for the textile enterprises have fallen back down to critical points due to the emerging quality requirements in international markets. From the first investigation to find out what the potential customer for a new product really wants, through the processes of design, specification, control manufacture and sale. Therefore, it is one of the crucial task in a manufacturing enterprise to ensure the output is in right quality as expected.

There are several factors on which quality fitness of garment industry is based such as performance, reliability, durability, visual and perceived quality of the garment. Quality needs to be defined in terms of a particular framework of cost as well. Especially in apparel industry there must be a constant endeavour to produce work of good quality.

This assignment has the motive of benchmarking quality control practices of Midas Safety with Deming's 14 points. Midas Safety is a Canadian based company which has operations in more than 20 countries. There are three companies alone in Sri Lanka which has located in Seethawaka, Biyagama and Katunayaka free trade zones. Midas has the expertise, passion and experience to bring the manufacturing processes right from the spinning of the yarn to the dipping, packaging and delivery of the finished gloves. There is a wide variety of product range manufacturing of gloves.

Overview

There are several quality management tools widely used by global enterprises. Total Quality Management (TQM) keeps vital role in improving productivity, product quality and reduces manufacturing cost by reducing rework and scrape. TQM was first developed in Japan, and then spread in popularity. However, while TQM may refer to a set of customer-based practices that intend to improve quality and promote process improvement, also there are number of theories introduced by scholars such as Deming's theory, Crosby's theory, Joseph Juran's theory, Ishikawa's theory, etc.

In the garment industry quality control is practiced right from the initial stage of sourcing raw materials to the stage of final finished garment. For textile and apparel industry product quality is calculated in terms of quality and standard of fibres, yarns, fabric construction, colour fastness, surface designs and the final finished garment products. However quality expectations for export are related to the type of customer segments and the retail outlets.

Deming's theory is one of the theory widely used by global enterprises for the purpose of total quality management. Deming's theory comprises of fourteen points of management he identified, the system of profound knowledge, and the cycle Plan-Do-Check-Act. This study focusses on benchmarking those fourteen points with the quality management practices at Midas. The company's practices satisfy each point of the theory in most of the quality control practices (Neave, 2011).

Deming's Theory

According to Diasz (2017) as per Deming's Theory, quality is equal to the result of work efforts over the total costs. If a company is to focus on costs, the problem is that costs rise while quality deteriorates. Deming's system of profound knowledge consists of the following four points:

1. **System Appreciation** - an understanding of the way that the company's processes and systems work
2. **Variation Knowledge** - an understanding of the variation occurring and the causes of the variation
3. **Knowledge Theory** - the understanding of what can be known
4. **Psychology Knowledge** - the understanding of human nature

Deming's 14 Points are as follows:

1. Create constancy of purpose for improving products and services.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier.
5. Improve constantly and forever every process for planning, production and service.
6. Institute training on the job.
7. Adopt and institute leadership.
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations and targets for the workforce.
11. Eliminate numerical quotas for the workforce and numerical goals for management.
12. Remove barriers that rob people of pride of workmanship and eliminate the annual rating or merit system.
13. Institute a vigorous program of education and self-improvement for everyone.
14. Put everybody in the company to work accomplishing the transformation.

1) Create constancy of purpose for improvement of product and services

For the company that wants to stay in business, the two general types of problems that exist: which are the problems of today and which are the problems of tomorrow. It is easy to become wrapped up with the problems of today, but the problems of the future demand, first and foremost, constancy of purpose and dedication to keep the company alive. Decisions need to be made to cultivate innovation, fund research and education, and improve the product design and service, remembering that the customer is the most important part of the production.



Innovation Culture at Midas

Midas Safety has been at the forefront of innovation with several patents and an ambition 2-4 patents every year. It drives for innovation results in producing the highest quality products in the market with unique benefits that exceed customers' expectations. This is achieved through Integrated Product Development. Midas manage the development with cross-functional teams to assure all aspects of product success are considered and acted on (Groberg, 2011).



Midas safety has sustainability projects and career opportunities to ensure the consistency of the business through a well-established CSR programs. Also, Midas practices a succession planning and head hunting mechanisms to ensure the sustainability of human resources.

NEW PRODUCTS & INNOVATIONS

	<p>HPT™</p> <p>A unique proprietary technology developed at the Midas Innovation Center. This special coating provides the end user with a dual benefit: the best combination of comfort and performance. With the addition of the winter HPT, workers can enjoy the benefits all year round. More</p>
	<p>CORAL™</p> <p>Coral is where innovation meets performance: an ergonomic design that delivers the best in comfort and mechanical chemical protection. Coral offers the best in terms of choices: winter and cut-resistant versions, gauntlets up to 45 cm and in different colors, liners and cut levels. Tough yet comfortable to wear all day long! More</p>

Source- Midas websites

2) Adopt the new philosophy.

Government regulations and antitrust activities need to be changed to support the well-being of people. Commonly accepted levels of mistakes and defects can no longer be tolerated. People must receive effective training so that they understand their job and also understand that they should not be afraid to ask for assistance when it is needed. Supervision must be adequate and effective. Management must be rooted in the company and not allowing job-hop between positions within the company (Robbins, 2011).

Leadership at Midas emphasizes and acts as the main driver for total quality management, creating an environment that ensures, everyone has the same benchmarks for quality across the global locations. Also, 'build trust with strategic partners by offering products and services that match their needs' is one of the core values of Midas. Also, there is a culture of gaining a zero-defect, no-waste attitude by everyone in the company.

However, Midas has a culture of possibility in job-hop between positions. That means a person who has survived in one position can be shifted to another related position in case of necessity at any time. Midas considers this as a positive sign though this is a non-compliance according to this theory.



3) Cease dependence on inspection to achieve quality.

Inspection is too late, ineffective, and costly. It is too late to react to the quality of a product when the product leaves the door. Quality comes not from inspection but from improving the production process. Corrective actions are not inspection, scrap, downgrading, and rework the process (Suduzzaman, Islam, Habib and Ahmad, 2014).

Manufacturing process at Midas has been fully integrated and automated from procurement of raw materials, spinning and plying own yarn, till the manufacturing of the end product. Midas, with its associates, is one of the few, glove suppliers that can spin and ply its own yarns from raw materials. This vertical integration translates to a quick turnaround on highly customizable orders and a constant source of material for our world class R&D department, not to mention the cost savings that get passed to our customers.

Nevertheless, Midas has the quality accreditations such as ISO 9001:2018, ISO 14001, OHSAS 18001, ISO17025 and ISO13485. All these standards would ensure the consistency of standard process in production flow. Thus, it will eliminate the requirement of post inspections.

4) End the practice of awarding business on the basis of price tag. Instead, minimize total cost.

Price and quality go hand in hand. Trying to drive down the price of anything purchased without regard to quality and service can drive good suppliers and good service out of business. Single-source suppliers are desirable for many reasons. For example, a single-source supplier can become innovative and develop an economy in the production process that can only result from a long-term relationship with the purchaser (Srinivasan and Kurey, 2014).

Midas has the core quality concept of building trust with strategic partners by offering products and services that match their needs and also it has the concept of gaining a zero-defect, no-waste attitude by everyone in our company. These will reduce the total cost in long run for the company.

Further, the company has achieved following awards for waste and energy management which demonstrate the excellency of the company in terms of cost efficient production approach.

- Geo Responsibility Award for Total Waste Management (2012)
- Excellence Award in Energy Efficiency
- Merit Certificate in Recognition of Good Performance in Material Efficiency and Water Efficiency

5) Improve constantly and forever the system of production and service

There is a need for constant improvement in test methods and for a better understanding of how the customer uses and misuses a product. In the past, American companies have often worried about meeting specifications, while the Japanese have worried about uniformity, i.e., reducing variation about the nominal value. Continual process improvement can take many forms. For example, never-ending improvement in the manufacturing process means that work must be done continually with suppliers to



improve their processes. It is important to note that, like depending on inspection, putting out fires is not a process improvement (Slack and Lewis, 2015).

From spinning the yarn to dipping the glove to give it the golden touch, Midas Safety derives continuous improvement by ensuring lean manufacturing to generate greater efficiencies and effectiveness. Also, the Research & Development team at Midas has been putting a great effort in continuous improvements to the existing products to in view of satisfying the customized needs of customers.

6) Institute training on the job

Management needs training to learn about all aspects of the company from incoming materials to customer needs, including the impact that process variation has on what is done within the company. Management must understand the problems the worker has in performing his or her tasks satisfactorily. A large obstacle exists in training and leadership when there are flexible standards for acceptable work. The standard may often be most dependent on whether a foreperson is having difficulty in meeting a daily production quota. It should be noted that money and time spent would be ineffective unless the inhibitors to good work are removed (Robbins, 2011).

Employees' learning is always polished and up-to-date through training at Midas safety. This is critical in their role of delivering quality products as per the concept of quality culture at Midas. There is a budget for each department for training and development especially for the middle level and senior level management. Also, there is a staff competency frame work developed by HR which will assist to identify the knowledge acquisition requirements to figure out the required staff for training and development. Eventually this will have an impact on quality of final outputs.

7) Adopt and Institute leadership.

Supervision by management is in need of overhaul, as well as supervision of production workers.” Management should lead, not supervise. Leaders must know the work that they supervise. They must be empowered and directed to communicate and to act on conditions that need correction. They must learn to fix the process, not react to every fault as if it were a special cause, which can lead to a higher defect rate.

Midas has a competent leadership team throughout the group and there is a centralised global team to connect each country heads. Also, the country board should report to the Midas global board as well. There is an appraisal process as well twice a year which will evaluate the work performed with the goals set in advance. Although, these will not have a direct impact on the quality of products, these HR practices will eventually enhance the quality of product.

8) Drive out fear, so that everyone may work effectively for the company.



No one can give his best performance unless he feels secure. Employees should not be afraid to express their ideas or ask questions. Fear can take many forms, resulting in impaired performance and padded figures.

The company does not concentrate much on engagement of lower level employees. Decision making authority is mostly lying with the top management. Such practices creates a demotivation among the staff and it will eventually impact on quality of products.

9) Break down barriers between departments.

Teamwork is needed throughout the company. Everyone in design, sales, manufacturing and all the departments can be doing superb work, and yet the company can be failing. That is because functional areas are sub-optimizing their own work and not working as a team for the company. Many types of problems can occur when communication is poor (Neave, 2011).

Synergy is a key concept which happens when there is a team work. When departments are working on achieving their own goals, destination the company wants to achieve would not be achieved. However, at Midas Safety there are several planning sessions such as strategy planning and budget meetings happening at the beginning of the year. Also, there is a weekly management meeting to evaluate the performance on weekly basis. These practices will help to enhance the synergy of the company.

10) Eliminate slogans, exhortations, and targets for the work force

Such exhortations only create adversary relationships, as the bulk of the causes of low quality and low productivity belongs to the system and thus lies beyond the power of the work force. Exhortations, posters, targets, and slogans are directed at the wrong people, causing general frustration and resentment. Posters and charts do not consider the fact that most trouble comes from the basic process.

Midas Management believe that its responsibility should be to improve the process and remove any special causes for defects found by statistical methods. Goals are set by individual staff with supervisor's assistance, but numerical goals set for other people by considering the group level targets. Midas has the concept of Gain a zero-defect and no-waste attitude followed by everyone in the company. The Quality Mindset extends from supply chain, manufacturing, maintenance, processing, human resource, complaint handling, auditing/assessment, statistical process control tools, team formation, customer service to delivery and post-delivery operations. All these department would ensure the concept of zero defect and minimization of waste.

11) Eliminate numerical quotas for the workforce and numerical goals for management

Never-ending improvement is incompatible with a quota. Work standards, incentive pay, rates, and piecework are indicators of management's lack of understanding, which leads to inappropriate supervision. Pride of workmanship needs to be encouraged, while the quota system needs to be eliminated. Whenever work standards are replaced with leadership, quality and productivity increase substantially, and people are happier on their jobs (Russell and Taylor, 2014).



Job satisfaction is a crucial factor for any organization. Same as that Midas also concentrate on this and Human Resource department has many employee engagement programs conducted time to time. Monthly awarding system based on performance, performance bonus and other events are conducted by HR department to enrich the employee satisfaction. Also, there is an annual survey conducted through queries and which will be analysed on monthly basis to identify areas where improvements are needed.

12) Remove barriers to pride of workmanship

This means, inter alia, abolishment of the annual or merit rating and of managing by objective.” Merit rating rewards people who are doing well in the system; however, it does not reward attempts to improve the system. The performance appraisal erroneously focuses on the end product rather than on leadership to help people. People who are measured by counting are deprived of pride of workmanship. The indexes for these measurements can be ridiculous (Groberg, 2011).

There evaluation process followed at Midas is 360-degree evaluation which is basically evaluating top to bottom and bottom up approach. Also balance score card theory is followed to measure the performance of employees in 4 different perspectives. Both methods ensure the value addition an employee has given to the company. All these processes will remove the barriers to pride of workmanship. However, the lower level factory workers are paid hourly basis and they are paid overtime as well if exceeded 8 hours. Also, the management does not do a comprehensive evaluation of lower level employees’ needs and their inputs. This part is not that perfect in the company.

13) Institute a vigorous program of education and self-improvement

An organization needs good people who are improving with education. Management should encouraged everyone to get additional education and to engage in self-improvement.

There is a staff competency framework at Midas which describes the specialization of each employee and also there is a policy on professional qualification reimbursement. This is for the purpose of encouraging people to get qualifications. Therefore, this will improve the knowledge of people and then the innovative thinking will enhance the quality of products.

14) Put everybody in the company to work to accomplish the transformation

Management needs to take action to accomplish the transformation. To do this, first consider that every job and activity is part of a process. A flow diagram breaks a process into stages. Questions then need to be asked about what changes could be made at each stage to improve the effectiveness of other upstream or downstream stages (Slack and Lewis, 2015). Everyone can be a part of the team effort to improve the input and output of the stages. Everyone on a team has a chance to contribute ideas and plans. A team has an aim and goal toward meeting the needs of the customer.



Midas safety is a company which has a firm commitment towards its customers based on below concepts;

1. Build trust with strategic partners by offering products and services that match their needs
2. Exceed expectations of strategic partners by offering innovative quality products.
3. Comply with all internal and external safety, regulatory and quality requirements for manufacturing and product testing
4. Gain a zero-defect, no-waste attitude by everyone in the company.

Conclusion

As per the above study, most of the Deming's points are satisfied by Midas Safety as it has been discussed in detail under each point of the theory. Quality is a core value at Midas Safety. This inflexible principle is owned by everyone in the organization. At Midas Safety, following key characteristics can be found in culture of quality:

- Leadership emphasizes and acts as the main driver for total quality management, creating an environment that ensures that everyone has the same benchmarks for quality across the global locations.
- Employees' learning is always polished and up-to-date through training. This is critical in their role of delivering quality products.
- The Quality Mindset extends from supply chain, manufacturing, maintenance, processing, human resource, complaint handling, auditing/assessment, statistical process control tools, team formation, customer service to delivery and post-delivery operations

All above characteristics shows the strong position of the company towards quality in terms of Deming's theory. However, there are areas which Midas Safety can consider improving. Thus, I have listed below areas as suggestions to improve.

Shifting one person from a particular field after becoming matured is not a better practice followed by the company. Therefore, any person who is specialized in a field could be encouraged in same till the maturity level.

Midas is quite negligent in avoiding unwanted costs as it does not have better practices such as lean concepts. This will lead to increase in cost and that would increase the price of the product.

Job security and working with passion for the company is lacking at Midas in certain cases. There should be motivations provided to lower level employees who are the key in day today operation. Therefore, company should consider financial and non-financial motivations for this purpose. Also, the lower level staff should be engaged in decision makings.

Midas Safety can promote the culture of 360 degree of knowledge transferring to improve employee engagement. This provides an opportunity for the lower level employees as well to involve in expressing their views. Also, monthly awarding practices can be implemented for the staff based on performance



in 3 different concept such as innovation, care for customer, obsession for performance. These practices would encourage people, sharing innovative knowledge because it can yield better job performance and not being fearful of their needs.

Since the performance appraisal focuses on the end product rather than on leadership to help people, people who attempt to do innovative things on trial and error basis are ignored. This will demotivate the staff who really performs for the company. Therefore, performance evaluation processes can be revamped to consider such hidden talents. This would motivate the staff to perform well and eventually to make improvement in quality of product.

By considering above suggestions, internal processes of the company will be enhanced with the improvement of staff competency and eventually there will be an improvement to the products.

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