

# QUALITY - Striving for Excellence

NATIONAL CENTRE FOR QUALITY MANAGEMENT



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**30 Years in the  
Service of Quality**

## Quality in Manufacturing Excellence

*President's Page*



B. Banerjee

Manufacturing excellence is an integral part of business excellence awards such as Ramkrishna Bajaj National Quality award. It has eleven interrelated core values each one contributing to the excellence journey. Let's examine their individual contribution and collective effort toward excellence.

It starts with visionary leadership and ends with systems perspective. Leaders should ensure the creation of strategies, systems & methods for achieving performance excellence, stimulating innovations, building knowledge & capabilities and ensuring organizational sustainability.

Customer driven excellence is the next to follow. Performance and quality of an organization are judged by its customer profile. Customer driven excellence has both current and future components. It is much more than merely reducing defects & errors and meeting specifications or reducing complaints. It addresses not only product & service characteristics that meet basic customer requirements but also those features & characteristics that differentiate the organization from its competitors.

Organizational & personal learning come from employees and partners' Ideas, R & D, customers' inputs, best practices sharing and bench marking. Valuing workforce members and partners means committing to their engagement, satisfaction, development and well being.

Agility is simply speed in response. All aspects of time performance now are more critical and cycle time has become a key process measure. Time improvement often drives simultaneous improvements in work systems, quality, cost, supply chain integration, productivity and sustainability in challenging economy.

Focus on the future includes developing your leaders, workforce and suppliers, accomplishing effective succession planning, creating opportunities for innovation and anticipating societal responsibilities and concerns.

Managing for innovation is the seventh core value of business excellence model.

Innovation means taking ideas to market – making meaningful changes to improve your organization's products, services, programs, processes, operations and business model to create new value for the organization's stakeholders.

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## President's Page (continued from 1st page)

Management by fact is a cardinal principle for success of an organization which depends on measurements and analysis of performance. The measures or indicators you select should best represent the factors that lead to improved customer, operational, financial and societal performances. A comprehensive set of measures tied to customer and organizational performance requirements provide a clear basis for aligning all processes with your organization's goals.

Managing societal responsibility requires the organization to use appropriate measures and leaders must be accountable for their actions.

By focusing on results and creating value for your key stakeholders your organization builds loyalty, contributes to growth of the economy as well.

Eleventh and final core value is systems perspective for managing your organization and its key processes to achieve results and to strive for performance excellence. A systems perspective includes your senior leaders' focus on strategic directions and on your customers.

Thus a systems perspective means managing your entire organization as well as its components to achieve excellence at all spheres of its activities.

**B.Banerjee**

### SPECIAL NEWS – BEQET WORKSHOP

You may be aware that NCQM has been facilitating BEQET (Best Educational Quality Enhancement team) competition for the past 9 years. Through quality of projects has improved over the years, it is felt significant improvement is still needed particularly in the area an “use of quality improvement tools”, which, as you know, is the backbone of all the studies.

To fill this gap, NCQM has decided to hold one full day workshop on 28<sup>th</sup> December 2015. First half of the day will be spent in highlighting seven basic QC tools and root cause analysis techniques. Second half will be exclusively devoted on case study presentations by past winners of the trophy. This will also be useful to you in your NAAC & NBA accreditation.

We can assure you that the day will be quite useful.

No fee will be charged for this workshop. We would advise you to kindly attend the day long workshop and take advantage of this unique offer and make this annual event a successful one.

For administrative reason maximum three persons will be permitted from each institute.

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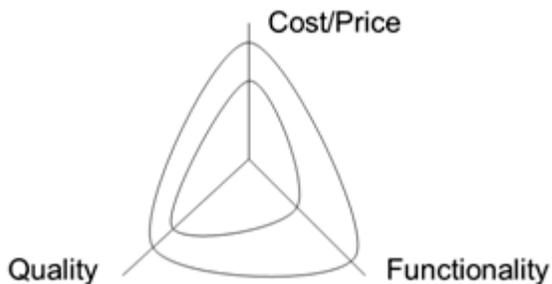


## Manufacturing Excellence

by Jai Prakash Chaurasia, Mahindra & Mahindra, Mumbai

### Why Manufacturing Excellence?

In an era of unprecedented competition, multiple launches every now and then and products offerings with most advanced technological features, customers are spoilt for choice. As depicted in figure below, to survive, thrive and drive sustained profits for all stake holders, overall cost reduction and thus achieving manufacturing excellence is no more an option.



*Manufacturing Excellence* is consistently providing the highest quality products and service to customers at the lowest cost possible while achieving above average returns (ROCE).

There are various names e.g. Lean manufacturing, Toyota Production System (TPS), Total Productive Management (TPM), Total Quality Management (TQM), World Class Manufacturing (WCM) for the approaches followed in industry towards achieving manufacturing excellence. These approaches are akin to various religions which differ in their methods yet leading to the same destination i.e. God of manufacturing excellence.

Manufacturing excellence had its early moorings in 'Division of Labour' in 1765, got a fillip with F. W. Taylor's time and motion studies in 1900s and led to huge productivity gains. The cost of Ford's Model T dropped from \$850 in 1908 to \$290 in 1925. From 1952-1962, the Toyota Production System (TPS) was developed by Taiichi Ohno on the shop floor to meet the business goals. In recent times, TPM, TQM and BPR (Business Process Re-Engineering) have been developed significantly to aid the industry in sharpening its saw of manufacturing excellence and adapt it to changing customer needs.

In today's times, in which change is the only constant, to remain relevant is to keep changing and therefore, the path of manufacturing excellence is a must for every proactive business.

### Journey at Mahindra & Mahindra

This article focusses on the journey of Mahindra and Mahindra Kandivli Plant. In the year 1994, it was decided to take a comprehensive re-look at the manufacturing activity afresh and evaluate whether manufacturing business was being done the way it should be done. At that juncture it was concluded to carry out 'Business Process Re-engineering'.

### BPR – Building the Foundation

“BPR is the Fundamental rethinking and Radical Redesign of Business processes to achieve dramatic improvement in terms of Performance such as - Cost, Quality, Service & Speed. It is doing more & more with less & less.”

**Make Vs Buy** team was entrusted with the task of comprehensively reviewing the make vs buy decisions based on a four step approach and align the business with current global trends.

### Manufacturing System Design

Plant had the issues of large transfer batches and high lead times, high inventory levels, large non-value added activities and functionally split organization. As an outcome of BPR, entire business was re-organized into sectors with sector president being the owner of end to end activities within the sector. Likewise, at next level, Kandivli plant was re-organized from functional organization to process based organization. Entire plant was converted into six product units – Product Unit being a logical entity towards becoming a process based organization. Each product unit consisted of Manufacturing Module, Supplies Module, Maintenance, Manufacturing Engineering and ER (Employee relations). The units were empowered with resources to operate as factory within factory. Unit Head was empowered as owner accountable for Quality / Cost / Delivery. The central functions like HR, Administration and Procurement were re-organized on the governing principle of Policies at Central Level and Activities at PU Level.

Cellular Manufacturing was adopted and physical restructuring of entire factory layout was done to support it with “ U “ Layout, Single Piece flow, Multi-machine manning, Multi skilling, Self-Inspection and working as per MOST (Maynard's Operation Sequence technique).

**Supplies Module** team was given the mandate of re-organizing the supplies chain and later integrated with manufacturing system design team.

**Strategic Sourcing** team had the responsibility to develop and strengthen the strategic sources of supply and provides the strategic inputs to purchasing decisions.

**Integrated Design and Manufacturing** team had the onerous task to enhance the design capabilities for future.

As a result of BPR, plant achieved Productivity improvement of 130% Lead time reduction of 69 %, improvement in Inventory turns by 400, Floor space utilisation improvement by 40 % etc.

This period also saw the re-launch of suggestion scheme, implementation of ISO 9000 and culmination of historic settlement with union laying out the future direction for the progress of the plant.

### **TPM – Total Productive Management**

Although the plant had achieved above results, there were gaps between Target & actual Production, many breakdowns & defects existed and leakage and losses were not un-common in and around equipment. Before the complacency could set in, it was found that the need of the hour was Optimal utilization of equipment, Continuous quality improvement, Cutting costs by innovative manufacturing & shifting Focus from Macro Level i.e. Structure, Process to Micro level i.e. Equipment & losses. TPM was one methodology that tackled all these issues and helped businesses to remain competitive.

TPM evolved out of Total Productive Maintenance. It entails culture change. Its philosophy is Prevention & Participation. It requires a company-wide approach involving all the personnel right from CEO of the company to the machine operator. It works around the basic notion of preventing the losses before their

occurrence by devising suitable systems to affect cause side factors. The objective remains Production Increase and Cost reduction and it is in true sense Total Productive management for organizations for boosting their bottom lines. Towards, this end it has a well-structured eight-pillar approach.

### **Kobetsu Kaizen (Focused Improvement)**

Activities are aimed at elimination of 16 losses as defined by JIPM and specific losses as identified by organizations. Cross functional (KK) teams are formed to carry put various Kaizen story projects. Loss tree, cost tree and loss cost matrix are deployed to bring the sharp focus on cost reduction. Design of experiments, Industrial engineering techniques, Value engineering techniques and various analytical tools find wide application for analyzing and reducing the losses.

### **Jishu Hozen (Autonomous Maintenance)**

Empirically 70 % of failures are caused by Forced deterioration i.e. lack of basic condition. Jishu Hozen means autonomous maintenance –taking care of the equipment oneself similar to a human being brushing one's teeth, taking bath/food, doing exercise etc. for upkeep of one's own body.

Jishu Hozen has 7 steps approach. Step 1 begins with initial cleaning of the equipment. The idea is to identify abnormalities ('Abnormality' leads to a potential breakdown of machine, generation of defects e.g. loose fitment, leakage of air, water, oil etc.) by Discover to discover, Discover by cleaning, Cleaning for inspection and discovery of areas where cleaning / inspection/ lubrication is difficult. Countermeasures to resolve these abnormalities are developed in in Step 2. Tentative standards for Cleaning, Inspection and Lubrication of equipment are established in Step 3. These are key to ensuring the basic condition of the equipment. Under Step 4 & 5, operator's knowledge is developed about equipment and process so as to create equipment competent and process competent operators respectively. Standards of work, quality, safety, tools etc. are part of step 6 and finally under step 7 operator becomes autonomous manager of his work area.

Human body is also an equipment. TPM for it is Total Perfect Medicine. Sedentary life style, Stress, excess Salt, excess Sugar and inadequate Sleep are the factors causing forced deterioration of human body. By regularly doing Jishu Hozen, humans too can avoid 70% health problems and the remaining 30% can be

prevented by carrying out preventing checks, the concept of which has been explained in following paragraph.

### Keikau Hozen (Planned Maintenance)

Having tackled forced deterioration through Jishu Hozen there is a drastic reduction in breakdowns. However natural deterioration still continues and this is where Planned Maintenance assumes critical importance.

Planned maintenance prevents equipment deterioration by routine PM inspection of various machine elements like limit switches, couplings, belts, electrical contractors, slide ways etc. at a defined frequency so as to identify the abnormality before breakdown and take corrective action. PM inspection involves a good amount of time from maintenance technicians and it will be a really good idea to be able to replace parts without having to inspect it at all. This is possible if forced deterioration has been eliminated from equipment and machine spare parts are having a fairly stable life. This activity is carried out under Time Based Maintenance (TBM). TBM is also followed on those machine elements where inspection is not possible due to no access.

TBM suffers from over maintenance. This necessitates use of some technique to accurately predict the life of the part. This can be achieved by employing Condition Based Maintenance (CBM). CBM captures the deterioration of the part by measuring some typical characteristic indicative of deterioration e.g. vibration measurement for moving elements, current on electrical motors, noise in Gear box etc.

### Hinshitshu Hozen (Quality Maintenance)

The objective here is to achieve and sustain zero defects – i.e. zero internal defects, zero customer complaints and zero supplier defects. The focus is on improving condition of equipment such that defects are prevented at the source. Poka-yokes are deployed extensively.

### Development Management

These activities pertain to shortening the lead time required for procurement of an equipment and launch of a new product. Vertical start up, Life cycle costing and MP (Maintenance prevention) are key concepts used here.

**Education and Training** activities focus on fostering excellence in Skill, Attitude and ability. Employees play a key role in change implementation. They act as agents of Kaizen.

**Office TPM activities** cover the implementation of TPM activities in non- manufacturing activities i.e. Purchasing, Marketing, Design, HR etc.

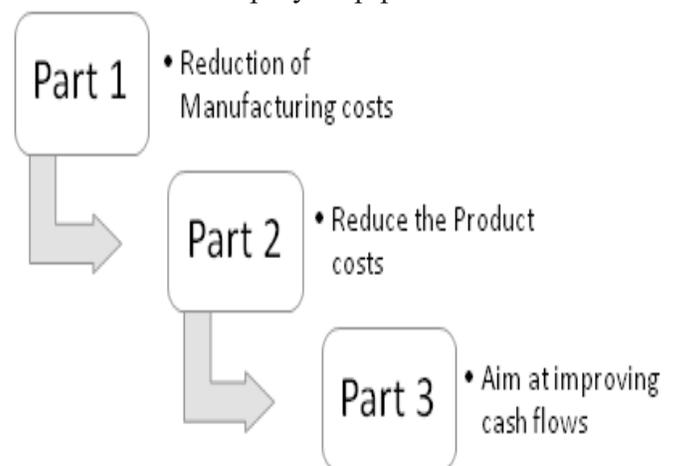
**Safety, Health and Environment** activities are centered on ensuring employee safety, providing healthy working conditions and taking measures for conservation of environment. Focus is on building shop floor, which is - Clean, Bright & safe. This is achieved by eliminating tasks, which are - Dirty, Difficult & Dangerous. Aim is to achieve - Zero accident, Zero pollution & Zero health hazards. Deployment of HIRA, EMS, OHSAS and sustainability systems is included here.

The overall benefits of TPM at Kandivli plant included significant improvement in value added output per employee, manufacturing cost, quality, schedule adherence and number of Kaizens per employee. The focus continues to enhance the depth & reach of TPM in operations horizontally and vertically so as to reduce product cost, improve quality and achieve customer satisfaction.

### Total Profit Management

Further, TPM activities are measures to achieve management targets and in brief, measures to make profit. Making profits require elimination and prevention of losses since they impede speed and flexibility.

To achieve this a step-by-step process as mentioned



### Activities under each part:

Part 1	Part 2	Part 3
<ul style="list-style-type: none"> <li>• Reduction in loses pertaining to               <ul style="list-style-type: none"> <li>➤ Equipment</li> <li>➤ Direct &amp; Indirect material</li> <li>➤ WIP inventory</li> <li>➤ Manpower</li> </ul> </li> <li>• Reinforce the QCD at the manufacturing plant.</li> <li>• Create a safe and cheerful working environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in loses pertaining to               <ul style="list-style-type: none"> <li>➤ Total inventory</li> <li>➤ New product costing (gap between target &amp; actual costing)</li> <li>➤ Purchasing cost (gap between target &amp; actual purchase cost)</li> </ul> </li> <li>• Improve product functionality, applications &amp; quality</li> <li>• Establish QCD for products, manufacturing &amp; sales.</li> <li>• Implement environment conservation activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Maximize input resource, e.g. ROA, to ensure profitable management system</li> <li>• Be at the top in market share of new products, cost competitiveness, quality, resource maintenance ability</li> <li>• Establish QCD for R&amp;D &amp; Purchasing</li> <li>• Carry out environmental conservation and resource conservation.</li> </ul>

TPM is intended to finally maximize the input resource efficiency by promoting the activities of Part 1, 2 and 3.

- 1) Part 1 & 2: Make profits by solving the factors that waste cash.
- 2) Part 3: implement activities to prevent losses found in cash inflow.

TPM part 1,2,3 activities necessitate a long term top management commitment.

### TPM, TPS and TQM – Three Jewels

Companies that adopt all three of these together, become really strong because a kaizen having the percepts of all three is really powerful.

TPS tries to make the flow of goods smooth and uninterrupted. The distinguishing features are Just-In-Time (JIT) and Jidoka (Automation with human intelligence). JIT is about manufacturing the required amount of goods at the time when needed and supply them to the place required. Jidoka highlights the causes of problems because work stops immediately when a problem first occurs. This leads to improvements in the processes that build in quality by eliminating the root causes of defects.

Breakdowns of equipment, rework and bottleneck in process capability were major obstacles in achieving the targets of TPS. It was Nippon Denso (presently, Denso) which noticed this and inducted plant management. JIPM provided consultation for the establishment of plant management system, and that is how TPM was born.

Denso also believed that the operators who run the equipment have interest in their equipment and must have the capability to detect the abnormalities in them and repair simple problems. Following a similar view, Dr. Deming introduced QC which evolved as TQC and TQM later, and has a big contribution in improving the product quality.

The coherence with TPM can be seen in the fact that TPM too has Quality Maintenance as one of its pillars and believes in building quality through equipment and aims at enhancing the quality from the equipment point of view.

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Admissions Open for  
January 2016 Batch

POST DIPLOMA IN  
TOTAL QUALITY MANAGEMENT

Quality Council of India empanelled

One year distant leaning  
programme with contact sessions  
for guidance and solving  
students' difficulties

Exam Centres: Ajmer, Coimbatore, Mumbai, Noida and Pune



## How does quality relate to productivity

by Dr. Purshottam Poddar, Senior Faculty, NCQM

Do these performance variables reinforce each other or are they mutually exclusive? Must improved quality come at the expense of productivity?

Management traditionally has viewed quality and productivity essentially as tradeoffs. To achieve significant improvements in one, some degradation in the other must be accepted. Quality could only be improved at the expense of productivity and vice versa. Yet many firms today operate under the philosophy that improved quality results in improved productivity.

If quality is viewed in an absolute sense—improved quality equating with absolute goodness or tighter tolerances—it may indeed be difficult to improve quality without added cost. If on the other hand quality is viewed as conformance to specifications, a relationship to productivity becomes more apparent. If the product is produced with defects, then it must be reworked, reprocessed, or reproduced. The result is more resources—people, material, and equipment.

This leads to the concept of process quality, which has a clear and direct correlation with productivity. While our finished products may ultimately conform to specifications, the quality of the process that produced those products can vary widely and will have a major bearing on the productivity of the organization.

Poor quality performance increases the inputs required to produce a given amount of good output. Rework certainly increases the amount of labor required and probably increases the capital, material, and energy inputs as well. Waste and scrap increases the need for tighter inspection and controls, which of course require added resources.

**If substantial amounts of product must be reworked or reprocessed, if raw materials are**

**defective, if waste and material losses are excessive, if scrap losses are high, the organization can never reach the higher levels of either quality or productivity.**

With poor quality a substantial amount of organization's resources must be devoted to correcting defects and handling wastes rather than producing goods. As quality improves, the resources required to produce a given amount of output decreases, and that translates to improved productivity.

**Quality cannot be inspected into the product.** According to Edward Deming, “You don't get ahead by making products and separating the good from the bad, because that is wasteful.”

The concept of conducting extensive inspection activities in order to catch the defective items is becoming outdated. Today's emphasis is on the prevention of defects rather than inspection. This requires the collective effort of the employees and the management.

**Quality is everyone's job.** Accountability for quality should lie with those doing the work. The role of quality professional is shifting from an enforcer to a facilitator—one who educates, trains, and advises. He is the person who should establish a culture for quality improvement in the organization.

Just as productivity improvement must be an explicit responsibility of everyone in the organization, so must quality improvement. It should be an integral part of everyone's job.





## Quality is our responsibility

by Mr. Mohd. Anas Siddiqui, QA Manager FAASOS

As rightly said above and only a Team can make a difference; when it comes to producing Quality Oriented outcome either through Product/Service. Hence, it's imperative for an organization to involve everyone. And Define, Communicate, Measure and Sustain their performance.

A Quality department shall always strive to **influence**, the Operations Team and change their mindset to **Quality Our Responsibility**. No organization can survive unless they have defined and practicing process which adds value added to their customer. In-short **Customer Oriented Organization**.

Moreover, as a Quality department it's significant to define process and system which are Operational Friendly, Practically Possible and Effective. At the end of the day the production team sits on the driver seat to drive the define system. And a Quality team can only act as a guider sitting next to driver.

So, the system must be practically possible and a trial session must be enforced; before publishing the system remains. Obtaining possible feedback from all team members is the most important and crucial. As traditional mind set "A Quality and Operations Department are never friendly and they always collide beyond truce; since transcendence.

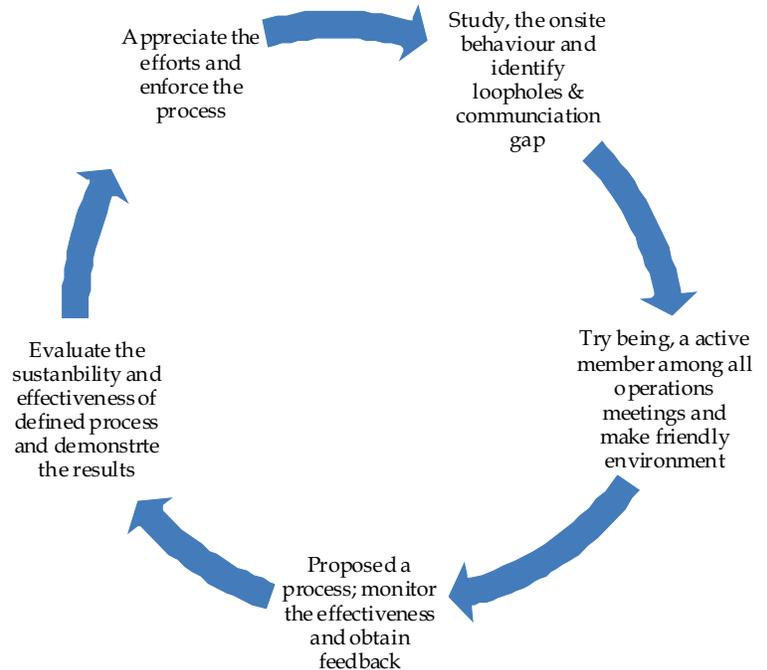


Henceforth, it's how we built a bridge and streamline the process. Quality department are abided to simplify, the work load in every possible angle and handover to Operations Team. Regular meeting and mapping the operational layout can also be effective. Try maintaining a personal touch over every member to gain, enhance core knowledge of every happening within the organizations.

A **labor** can rightly define and identify possible anomaly, deviations or areas for improvement in a system. So, emphasize on their grooming and

maintain good relationship and respect their recommendations.

At every stage, challenges must intrude in building and sustaining healthy relationship between Quality and Operations department.



Aforesaid cycle, can act as a **methodology** for channel removing communication gap and obtaining optimum information. Training and development enforcement shall be incorporated on topics related to Health, Safety and Personality development. This can motivate, the team to believe in Quality Department. Try to extract their difficulties, challenges and good practices during the session. Emphasize on people who had supported or followed recommendation from Quality Team.

Add punch line concluding **"It was only possible, because we intended to get it done together"**.

**Dear Members,**  
**We requesting original articles from your side for NCQM Next Newsletter October-December 2015 issue titled on "Quality of Nation Success Stories"**  
**Chairman, Publication Committee, NCQM**

## Annual General Meeting : 2014-15

Annual General Meeting for the year 2014-15 was held on August 1, 2015 at the NCQM Learning Centre at 3.00 pm. Mr. B. Banerjee, President, NCQM Chaired the Meeting. Confirmation of minutes of last AGM, approval of annual report, annual accounts and auditor's report for the year 2014-15 and appointment of auditor for the year 2015-16 were transacted during the meeting.



Mr. Santosh Khadagade welcoming members



Dr. Poddar, Treasurer reading accounts part



A section of audience



## Annual Day Function: 2015

Annual Day Function was held on August 1, 2015 at the NCQM Learning Centre at 4.30 pm. Mr. Jai Prakash Chaurasia, Mahindra & Mahindra Ltd., Mumbai was the Chief Guest. He presented an update on “**Manufacturing Excellence**”. He appreciated NCQM's contribution in the noble venture. The presentation was well received and appreciated by the entire audience.



Mr. Banerjee introducing the Chief Guest  
Dias L to R - Mr. Santosh Khadagade, Mr. Jai Prakash Chaurasia, Mr. B. Banerjee, Dr. H. M. Mehta, & Dr. P. Poddar



Chief Guest Mr. Chaurasia delivering the Lecture

## 1. Corporate Awardees

Brief profiles of the Awardees of Corporate members are as follows:-

### Sustaining Members 20 Years

#### 1.1 Textiles Committee, Mumbai

The **Textiles Committee** has been established under the Textiles Committee Act, 1963, (No. 41 of 1963), of the Indian Parliament and functioning under the administrative control of Ministry of Textiles, Government of India. The Organization's main objective is to ensure the quality of textiles and textile machinery both for internal consumption and export purposes.



L-R. Mr. R.R. Gorokhia, Director Textile Committee, receiving trophy from Chief Guest

The Textiles Committee, as corollary to its main objective of ensuring the quality of textiles and textiles machinery has been entrusted with the following functions, under Section 4 of the Act as follows:

1) To undertake, assist and encourage, scientific, technological and economic research 2) To establish standard specifications for textiles, textile machinery and the packing materials 3) To establish laboratories for the testing of textiles and textile machinery 4) To provide training in the techniques of quality control 5) To provide for the inspection and examination of textiles and textile machinery 5) To promote export of textiles 6) To collect statistics and 7) To advise the Central Government on all matters relating to textiles and textile machinery, etc.

- a. Received National Award for **Best Accessible Website 2014** for empowerment of persons with disabilities.
- b. Received National Award for Intellectual Property in Geographical Indications.

Textiles Committee is NCQM's Sustaining member since 1993.

## **1.2 Bharat Electronics Limited (BEL), Bangalore**

Bharat Electronics Limited (BEL) was established at Bangalore, India, by the Government of India under the Ministry of Defence in 1954 to meet the specialised electronic needs of the Indian Defence services. Over the years, it has grown into a multi-product, multi-technology, multi-unit company servicing the needs of customers in diverse fields in India and abroad.

BEL is among an elite group of public sector undertakings which have been conferred the Navratna status by the Government of India.

During 2013-14, BEL recorded a turnover of Rs.6,174.23 crores.

Bharat Electronics Limited is NCQM's Sustaining member since 1994.

## **1.3 American Spring & Pressing Works Ltd. (ASPEE), Mumbai**

American Spring & Pressing Works Pvt. Ltd. popularly known as ASPEE, a pioneer in the field of agricultural equipment, was established in 1946.

The company began with the production of a Hand Rotary Duster. It wasn't long before ASPEE started developing sophisticated and technologically advanced equipment especially designed for the Indian and international markets. The company soon emerged as one of the undisputed market leaders in the field of agricultural sprayers and dusters.

The ASPEE range comprises of a wide variety of sprayers, dusters and accessories. The company has various types of sprayers, which cover every spraying need for virtually every crop. The company also manufactures a variety of spraying accessories like nozzles, spray guns, telescopic lances, spray booms and spray rigs suitable for every application.

### **The ASPEE Group has within its fold the following companies:**

American Spring & Pressing Works Pvt. Ltd., Mumbai  
 ASPEE Agro Equipment Pvt. Ltd., Bilimora  
 Navyug Krishi Sadhan Pvt. Ltd., Tansa  
 With a total strength of over 500 employees, the ASPEE Group of Companies has revolutionized the functioning of an agricultural company.

### **ASPEE has several "firsts" to its Credit**

The first sprayer company to obtain as ISI Mark Bureau of Indian Standards (BIS)

The first company to make sprayers in India as per specifications of World Health Organization (WHO)

The first sprayer company to receive ISO 9001:2008 Certification

The first company to start a college of horticulture and forestry, popularly known as ASPEE College of Horticulture and Forestry and ASPEE Agri Business Management Institute both at Navsari Agriculture University, Navsari, Gujarat.

### **Superlative R & D**

ASPEE has its own R & D department which continuously fabricates and develops new products and also makes enhancement in existing products based on the suggestion and feedback received from the users.

### **Farm Mechanized Equipment – A New Need**

Looking to the shortage of farm labour and its high costs, ASPEE has now started importing Mechanized Farm equipments like Brush Cutters, Chain Saw, Rotary Tiller, Power Weeder, Earth Auger, Foggers, Tea Pruner, etc from renowned manufacturers from Europe, Japan, China and Korea. The equipment is manufactured by them as per the specifications given by ASPEE under strict quality checks.

These equipments have enabled the users to save cost, labour and time.

ASPEE has a widespread marketing network of over 1600 distributors and dealers in India to make equipment and parts available within easy reach of the end-user. ASPEE regularly trains its dealer and appries them to provide quick and efficient after sales services.

In terms of quality and performance of agricultural products, ASPEE has always stood out amongst its competitors. ASPEE products are manufactured from virgin raw material, making the quality exceptional. Besides, these products are tested at every level of manufacture. The equipment and its accessories are calibrated to ensure the desired performance. This is what makes ASPEE every user's prime preference. ASPEE not only in India but has also made its presence felt in the international market by exporting equipment to various countries such as the Middle East, East Africa, Far East, Iran, Iraq, South Africa, Australia, New Zealand, etc.

#### Pioneer in CSR

ASPEE plays a vital role in serving agriculturists by supporting farmer-oriented research projects. For this purpose ASPEE, along with its distributors, established the ASPEE Agricultural Research & Development Foundation. Having created a fund to the tune of Rs. 13 Crores, the Foundation rewards students of agriculture across India, each year, by way of gold medals and scholarships. ASPEE also gives three ASPEE L. M. Patel Farmers of the year Award to deserving farmers in memory of its founder Late Shri L. M. Patel which are worth Rs. 1 lac each, one is reserved for the Women Farmer.



Mr. Prasad Kalekar representative of ASPEE receiving trophy from Chief Guest

The Foundation has set up a farm for the purpose of research and training for the benefit of the farmer. This

farm is located at Tansa, near Mumbai, and is spread across 48 acres. The farm is equipped with all modern facilities like Tissue Culture Lab, Library, Laboratory, testing facilities and more. Thus, ASPEE enjoys its own identity in the hearts of the farming community and lives up to its promise

#### YOU & ASPEE, A BOND FOREVER!

ASPEE is NCQM's Sustaining member since 1994.

#### Sustaining Members since 10 years

##### 1.4 Institute for Technology and Management, Navi Mumbai

The Institute for Technology and Management (ITM) was started in 1991 under the Chairmanship of Dr.P.V.Ramana. Over the years, ITM Group of Institutions has expanded both in term of location as well as in terms of programs. ITM Group operates Business Schools in Navi Mumbai, Bangalore, Chennai, Warangal, and Dombivli; Hotel Management Colleges in Navi Mumbai, Oshiwara (Mumbai), and Greater Noida; Allied Health Courses in Navi Mumbai, Bangalore and Nagpur, Engineering Colleges in Nagpur, Visakhapatnam, Vadodara, and Raipur, ITM University in Raipur, ITM Vocational University in Vadodara, Bank Sales Training Academy in Raipur, Warangal, Baroda, Bengaluru, and Greater Noida. Fashion and Interior Design in Oshiwara, Culinary Arts in Oshiwara, and Financial Markets education in Navi Mumbai. The Group has LOI for new ITM University in Mumbai. ITM Group has recently launched "ITM University Online" offering Online MBA.



Prof. Murty receiving ITM Institution trophy from Dr. H. M. Mehta, Trustee of NCQM

ITM is NCQM's Sustaining member since 2004.

## 1.5 Smt. P. N. Doshi Women's College, Mumbai

Managed by SPRJ Kanyashala Trust, and conducted by Sarvajanic Education Society, Smt. P. N. Doshi Women's College is one of its kind. The fifty five years old edifice is not just a brick and mortar structure, but a living, breathing, pulsating institution that resonates the temper of the times. Healthy, all round development of girls, who are the future of society, is the fulcrum of the wheel, and all our academic courses spin around this. Thus it is that our students do not learn for a living, they learn for becoming succor and sustenance to their families, their communities and to the nation. The College Vision "To be recognized as a centre of excellence for education that empowers women leading to self actualization", reflects the journey undertaken, 'starting with educating women' to 'self actualization'.

We provide education free of tuition fees to nearly 4500 girls through our Junior colleges (Affiliated to HSC Board), three degree programmes, three professional programme; two post graduate programmes, Diploma course (all affiliated to S.N.D.T. Women's University), Career Oriented Programmes sponsored by U.G.C. and a Career Institute, all under one roof.

The college has been accredited with 'A' grade twice by National Assessment and Accreditation Council. Though Internal Quality Assurance Cell, activities for quality sustenance are undertaken. The college strives to bring in quality enhancement through projects of Quality Circle of administrative heads and QET. We also participate in BEQET competition every year and have won prizes a few times.

Apart from those stated above, the college takes pride in its extensive extension activities in the adopted villages through Institution – village partnership. Comprehensive Village Development Programmes have been undertaken in six such villages so far.



Mr. Banerjee congratulating Dr. Kumudhavally, Principal, SPN Doshi College after receiving Institution trophy

The thrust of all our efforts is to provide inclusive education by bringing girls from underprivileged strata of the society into the mainstream of higher education. We support them with financial assistance and counseling, to enable them to complete their education. Through various programmes, we try to strengthen physical, mental, and emotional wellbeing of students and sensitize them about gender equality.

The future plans of the college include offering courses online which are suited to the changing times, using more ICT assisted teaching-learning methods to make it more effective and improving placement initiatives are oriented towards making our students self reliant and thus be sensitive, successful and responsible citizens of the country.

SPN Doshi Women's College is NCQM's Sustaining member since 2005.

## 1.6 Cheminova India Ltd., Mumbai

Cheminova India Ltd. headquartered at Mumbai in India is a wholly owned subsidiary of Cheminova A/S based in Lemvig, Denmark. Cheminova India Ltd. was formed when Lupin agrochemicals (India) limited was acquired by Cheminova A/S in December 1997

Cheminova India Limited is dedicated in providing crop protection solutions through manufacturing and marketing of agrochemicals and its intermediates. The company has three state-of-the-art independent sites at Panoli (Gujarat), with an impressive portfolio of manufacturing Technicals, Intermediates and Formulations

The company is one of the leading crop protection chemical company in India and employs around 480 people in manufacturing, marketing and other allied services in the country.

The company is committed to safety and health of the Indian farmers, employees and other stakeholders and abide by all guidelines of environment protection by making high capital investments. The company lays special focus on safe use & handling of its products, intermediates at all levels during marketing & distribution.

Cheminova India Limited has a broad portfolio of agrochemicals including insecticides, herbicides, fungicides & growth promoters.

Cheminova India Ltd. is NCQM's Sustaining member since 2004.

## 2. Individual Awardees

### 2.1 Mr. B. S. Angadi, Mumbai

Mr. B. S. Angadi is M.E. Mechanical (Machine Design) V.J.T.I, Mumbai. He has 10 years teaching experience in educational field. He has 10 years industry experience.

Mr. Angadi is NCQM Sustaining Member since 2004.



Mr. Banerjee reading profile of Mr. B.S. Angadi after receiving his medal

### 2.2 Mr. P. Ananthanarayanan, Mumbai

Mr. P. Ananthanarayanan is B.Sc. & DMIT (B.Tech). He is Trained Auditor (IRCA approved) EMS / OHSAS

Have been Trained at AOTS, Japan – Quality Control Techniques

He was working with Pallavan Transport Corporation, Chennai 1972-78, Tata Motors when it was TELCO 1978-93, since 1993 he has started his own Free lance Facilitator / Auditor training.

Social Work : At Ashram shalas ( Schools for Adivasis) / Associated with Rain Water Harvesting Projects in Villages, etc.



Mr. Ananthanarayanan with Chief Guest after receiving the medal

Mr. Ananthanarayanan is NCQM's Sustaining Member since 2004.

### 2.3 Ms. Shambhatee Thakker, Thane

Ms. Shambhatee Thakker is a Director of Pristine Aerosols Pvt. Ltd., Thane.

Ms. Shambhatee Thakker is NCQM's Sustaining Member since 2004.

### 2.4 Mr. Sharad Ganesh Beke, Thane

Mr. Sharad Ganesh Beke is completed M. E. (Production Engg). He is working with **Quality Life Inc**, which is partnership consultancy. He is Senior Partner, they are providing Management consultancy to various organization. Also he is Third Party Auditor for ISO 9001:2008.

Mr. Beke is NCQM Sustaining member since 2004.

### 2.5 Mr. Deepak S. Kulkarni, Pune

Mr. Deepak S. Kulkarni is completed Diploma in Electrical Engineering. He has total 24 years work experience. He has worked with Kirloskar, Tata Yazaki, Saint Gobain, Pricol, Johnson Controls. Currently working as Dy. General Manager heading Quality of Pune location 5 plants of Sigma Electric Mfg. Corp. Ltd., a Goldman Sachs company located at North Carolina USA and India at Pune, Jaipur.

Areas of expertise – Quality Engineering, new product development, manufacturing.

Achievements- He helped organizations develop a QMS, implement and sustain. He is Lead Auditor and MR for last 10 years to TS 16949 as well as ISO 9001 standard. He has Implemented with indigenization systems such as JCMS, YPS. Elected as a core member and auditor on Saint Gobain Group pan India WCM panel.

Mr. Kulkarni is NCQM's Sustaining member since 2004.



Dr. Kumudhavalli Presented medal to Mr. Deepak Kulkarni

## 2.6 Mr. Rajeev Arora, Delhi

Mr. Rajeev Arora is B. E. (Mech. Engg). Then completed Post Graduate Diploma in Quality Management and then completed Master of Business Administration (TQM).

He is working as Consultant, Trainer, Facilitator & Auditor for Management Systems and Product Certifications.

He has provided Consultancy Services to establish & implement ISO 9001 to Delhi Police Units, Tihar Jail, Establishments & Laboratories of Defence Research & Development Organisation.

He has provided Process Compliance Services to Tata Communications & Bharti Airtel.

Also he has provided Consultancy Services in India, Nepal, Afghanistan and Qatar.

His areas of expertise : ISO 9001, ISO 14001, ISO/TS 16949, OHSAS 18001, ISO/IEC 27001, ISO/IEC 17025, SA 8000, BSCI, Ethics Management Systems and CE Marking, etc.

He has honoured by Delhi Armed Police as 'Sheet Anchor' for the services provided to establish & implement ISO 9001 in 2006.

Mr. Rajeev Arora is NCQM's Sustaining Member since 2004



Mr. Santosh Khadagade presenting medal to Mr. Rajeev Arora

## 2.7 Shri Mahesh Vadilal Gandhi, Mumbai

Mr. Mahesh Vadilal Gandhi is B.Sc. through Jai Hind College Mumbai in 1963, with major in Chemistry, subsidiary - Physics subjects. After graduation, joined the nucleus of Industries in Textiles, Rubber, Electronics, Chemicals, Exports etc. founded by his late father under his guidance.

He is eldest son of Late Shri Vadilal Chatrabhuj Gandhi, Ex. M.L.A. (Mumbai), Industrialist, Social Worker, Philantropist from Ghatkopar, Mumbai and leading family name in Gujarati and Jain community.

He is Chairman of Industrial Development & Investment

Co. Ltd., Manufacturers, Processors, Exporters of Art Silk Textiles and Real Estate (Prop. Of Ashok Silk Mills).

He is Director of various companies, Trustees of various Educational Institutions, Medical Institutions, Religious institution & Social Institutions.

He was Past-President of NCQM in 2005-2008.

Currently he is one of the Trustee of NCQM.

Mr. Mahesh Gandhi is NCQM's Sustaining Member since 2004.

## 2.8 Prof B.V.R.Murty, Navi Mumbai

Prof. Murty is M.Tech (IIT, Madras). July-2015.

Current profession is Consultant in ITM after retirement. Previously HOD – Operations & SCM, Alumni Relations and International partnerships at ITM, Kharghar, Navi Mumbai. Over 13 years as Core Faculty in the area of Operations Management, 7 years as Deputy Director- ITM Global Leadership Centre offering 3 focussed PGDM programmes with Specialisation in International Business, Retail Management and HR.

Over 27 years industrial experience with leading organisations – L&T, DRDO (Defense –GOI) in the area of product development, operations, maintenance and projects.

Presented and published research papers in National and international conferences.

Organised 2 International Conferences on Quality Management (2007 and 2009) in association with NCQM.

Active Rotarian and associated with Social/cultural organisations (ISKON).

Currently pursuing PhD in Lean Six Sigma.

He was Treasurer of NCQM in 2011-12.

Head of NCQM Extension Centre, Navi Mumbai.

Prof. Murty is NCQM's Sustaining Member since 2004.



Mr. Ashok Samtaney presenting medal to Prof. Murty

## 2.9 Mr. Ashish M. Shah, Mumbai

Mr. Ashish M. Shah is Diploma Electronics Engineering. The brainchild of Mr. Ashish Shah, 'AMBETRONICS' has been going from strength to strength. This technocrat began a small manufacturing company Digital Panel Meters & Digital Indicators. Now company expanded their product portfolio to over 100 products. The company today has an experienced and well qualified team of technical experts, professionals and capable office staff. Company infrastructure not only includes a full-fledged manufacturing unit & office, but have also conference room & testing laboratory.



Mr. Viswanathan presenting medal to Mr. Ashish Shah

Mr. Shah is NCQM's Sustaining member since 2004.

## 2.10 Mr. C. Y. Deshpande, Mumbai

Mr. C. Y. Deshpande is B. E. (Met.). He has starting his carrier since 1975. He has IRCA certified QMS 2008 Lead Auditor, EMS Auditor, OHSAS Auditor with certification nos. He has International Gen. Certificate in OH&S, Unit: Control of International Workplace Hazards. Certified also SA 8000 Basic Auditor. Currently he has Consultant, Auditor and Trainer. The scope of services includes Consultancy, Auditing and Training services in Welding Engineering and various Management Systems, as per the customer's requirements. The services are provided as Self-Employed Professional/Freelancer.

Mr. Deshpande is NCQM's sustaining Member since 2004.



Mr. Gururaj Kulkarni presented medal to Mr. Deshpande

## NCQM Fellowship Awardees - AGM 2015



Prof. Murty after receiving Fellowship of NCQM, telling about NCQM's and his relations



Mr. Ashok Samtaney receiving Fellowship Certificate from Mr. Rameshchandra Kamothi



Mr. Pratap Rane receiving Fellowship Certificate from Dr. P. Poddar

Mr. Banerjee receiving Fellowship certificate from all of NCQM Governing Board Members and Chief Guest



Mr. Khadagade receiving Fellowship certificate from all of NCQM Governing Board Members and Chief Guest



## Manufacturing Excellence in India some thoughts

by Mr. S. V. Viswanathan, Governing Board Member, NCQM

**Manufacturing Excellence** is a philosophy of organizational leadership that stresses the application of a variety of principles, systems, and tools toward the sustainable improvement of key performance metrics. Much of this philosophy is based on earlier continuous improvement methodologies, such as Lean Manufacturing, Six Sigma, and Scientific Management. The focus of Operational Excellence goes beyond the traditional event-based model of improvement toward a long-term change in organizational culture.

Manufacturing has been the engine of every successful economy of countries across the globe & India too have taken significant steps to boost the country's manufacturing sector be it engineering, pharma, chemical, food or any other.

Success of manufacturing companies lies in the ability to evaluate, predict and improve processes, products and performance while maintaining complete focus on the customers and their needs.

Seven Principles for performance excellence in manufacturing as per Lockheed Martin Missiles and Fire Control the 2012 Malcom Baldrige National Quality Award winner are:

**Leadership** is essential for creating a positive and productive work environment. A good leader is a role model for employees and builds effective relationships to engage and empower the team

**Workforce focus** is the key to success. Recruit the best people. Train, develop, challenge, motivate and reward them to ensure the performance of the end product.

**Customer focus** requires open, two-way communication and effective relationship building. Put the customer first by identifying what they value and need most

**Strategic planning** relies on ability and agility: the ability to recognize market trends and the agility to rapidly adjust and stay ahead of them

**Measurement and analysis** ensures continuous improvement by applying customer and internal data to a company's strategic decision making and customer-centric business rhythms

**Operations and process management** increases the efficiency, agility and resiliency of a company. Monitor and refine work processes to increase revenue and profits

**Continuous improvement** is the driver of future business. Continuous product and process improvement

extends our core markets by eliminating waste, reducing variation, improving product quality and meeting evolving customer needs.

With the Prime Ministers thrust to **“Make in India”** progressive companies are eyeing this opportunity possibly a revolution that is expected to make best their global competitiveness.



For a manufacturing excellence man the core principles are:

- Create value for the customer
- Respect every individual
- Lead with humility
- Seek perfection
- Assure quality at the source
- Flow and pull value
- Embrace Scientific Thinking
- Focus on process
- Think systemically
- Create constancy of purpose

In coming days India a success story will be due to manufacturing sector:

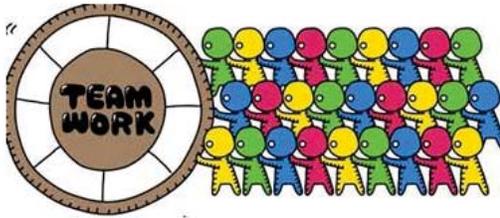
India is one of the fastest growing economies in the world The Indian economy is the world's seventh-largest by nominal GDP and third-largest by purchasing power parity (PPP). Following market-based economic reforms in 1991, India became one of the fastest-growing major economies; it is considered a newly industrialized country.

GDP from Manufacturing in India increased to 5407.38 IND Billion in the second quarter of 2015 from 4796.95 IND Billion in the first quarter of 2015. GDP From Manufacturing in India averaged 4125.69 IND Billion from 2011 until 2015, reaching an all-time high of 5407.38 IND Billion in the second quarter of 2015 and a

record low of 3455.83 IND Billion in the fourth quarter of 2011. Note: GDP From Manufacturing in India is reported by the Central Statistical Organization, India.

Manufacturing contributes to say, 79% of FDI investment, 27% of India GDP, and 53% of Indian exports

India is World's second largest small car market. One of only three countries that makes its own supercomputers. India is the world's largest producer of milk, tea and pulses and the world's largest livestock population. India is the second largest producer of food including fruits and vegetables. India is the world's largest diamond cutting and polishing center and the second largest jewelry market. Indian manufacturing competitively positioned for a high growth rate era, Indian economy expected to grow at 8% to 10% over the next decade.



The quality of Indian work force is one of India's key competitive advantages. India is a stable democracy with strong macro-economic fundamentals.

**Indian Manufacturing Excellence Award** is an on-site assessment and awards program in recognizing and benchmarking industries across all sectors and categories. Global best manufacturing practices are ever evolving since inception in 1988 of *Shingo* Prize for Operational Excellence that recognizes world-class, lean organizations and operational excellence

A manufacturing assessment is done on the basis of strategic goals towards organizations business growth, the organizational objectives towards enhanced competitiveness and the facility's operational performance towards manufacturing effectiveness.

The robust and objective on-site assessment methodology based on the Global Manufacturing Excellence Model captures the facility's operational performance across 12 parameters and business results (for financial and non-financial goals) across 3 parameters. The India Manufacturing Excellence Awards is seen as a pragmatic approach toward identifying opportunities for improvement within the

organization. The assessment team identifies the current standing of the facility on the software driven model and the resultant charts capture, extent and balance of growth, the alignment of strategic and implementation achievements and actual comparative metrics within the industry sector.

#### The assessment provides:

1. **A Facility Scorecard:** Quantitative and parametric scores highlighting strengths and weaknesses
2. **Industry Benchmark:** Statistical comparison amongst peers across each operational parameter
3. **Closing Feedback:** Key observations of the assessment and focus areas for plant heads to prioritize and drive excellence initiatives

**Self-assessment** is done on the basis of three year data of the following:

1. **Are Customer ratings available?** Say at least for the last 3 years and used for self-improvement processes.
2. **Possession of Quality certifications & ratings:** Been through one review processes and certification used to improve the processes.
3. **Rate of new product introduction and acceptance:** Say on a regular basis and new product launched at least every year.
4. **Place for everything and everything in its place:** 5S implemented throughout the plant.
5. **Material flow:** No buffers- well balanced lines
6. **Visibility of team's performance on PQCDMSM parameters:** Visible throughout the plant.

\*Each company will have to define for themselves, looking at all losses, which affect plant performance: These are some examples:

- P – Production output lost due to want of material
- Manpower productivity
- Production output lost due to want of tools
- Q – Mistakes in preparation of cheques, bills, invoices, payroll
- Customer returns/warranty attributable to BOPs
- Rejection/rework in BOP's/job work
- Office area rework
- C – Buying cost/unit produced
- Cost of logistics – inbound/outbound
- Cost of carrying inventory

Cost of communication  
 Demurrage costs  
 DEPB benefits – on time  
 D – Logistics losses (Delay in loading/unloading)  
 Delay in delivery due to any of the support functions  
 Delay in payments to suppliers  
 Delay in information  
 S – Safety in material handling/stores/logistics  
 Safety of soft and hard data  
 M – Number of Kaizens in office areas.  
 In Broader way, it's a targets of TPM:  
 TPM Targets:  
 P  
 Obtain Minimum 80% OPE.  
 Obtain Minimum 90% OEE (Overall Equipment Effectiveness)  
 Run the machines even during lunch. (Lunch is for operators and not for machines!)  
 Q  
 Operate in a manner, so that there are no customer complaints.  
 C  
 Reduce the manufacturing cost by 30%.  
 D  
 Achieve 100% success in delivering the goods as required by the customer.  
 S  
 Maintain an accident free environment.  
 M  
 Increase the suggestions by 3 times. Develop Multi-skilled and flexible workers.

7. **Yield monitoring:** Well established throughout the plant
8. **Material handling systems:** Complete deployment of forklifts, conveyors, AGV's etc.
9. **What is the overall inventory turnover, including FG, WIP & RM:** Say above 25+
10. **Non-moving inventory:** say less than 5%
11. **Skill matrix and competency mapping:** Well established throughout the plant
12. **What percentage of workers are active members of formal work teams, quality teams or problem solving teams:** say 91 to 100%
13. **Does maintenance have and follow a predefined Preventive maintenance schedule:** Well established throughout the plant

14. **Operator routine maintenance:** well established throughout the plant
15. **Supplier certification:** All supplier's certified.
16. **Supplier performance is measured and reported back to them:** Well established for all categories.
17. **Evaluation of logistics efficiency:** Improving trends in the matrices and performances on defined matrices are monitored over 3 years
18. **What portion of manufacturing employees have had basic SPC training? (%):** At least greater than 94%
19. **Use of Information Technology in the plant:** ERP system in use for more than 3 years
20. **Level of automation:** Automation resulting in reduction of variations, manpower, losses and improvement of operations
21. **Measurement of NPD efficiency:** Improving trends in the matrices & Performance on defined matrices is monitored for over 3 years.
22. **Benchmarking Technology and Processes:** Benchmarking is a regular exercise with focus on continuous improvement. Studies are being conducted for past 3 years and improvements have been initiated.

#### Site Data for 3 years:

1. **Total number (last data) of company's employees**
2. **Total (average) number of casual/ contract employees**
3. **Area of facilities in square meters:** Built up area: Built up area / Total covered area of the facility which is directly or indirectly used for production.
4. **Production capacity:**
  - a. Current capacity with units of measurement: Total current production capacity of the unit with unit of measurement
  - b. Future expansion if any in the next three years: Additional capacity that will be added. (Applicable only if there is a future plan to expand in next 3 years.)

**Growth indicators:**

5. Market Share of Major Product Family (%)
6. Annual Sales (in Crore Rs. In a financial year)
7. Sales Margin (%)
8. EBITDA Margin (%)
9. Current Ratio/ Working Capital Ratio
10. Quick Ratio
11. Inventory Turnover Ratio (ITR)
12. Payroll Expenses (as percentage of turnover)
13. Sales of New Product to Total Sales (in %)
14. Contribution %
15. Expenditure on R&D (% of turnover)
16. ROCE
17. Total Asset Turnover

**Cost Heads (From P&L as percentage of sales)**

18. Cost of Labour to Sales (in %)
19. Cost of Raw Material to Sales (in %)
20. Cost of Consumables to Sales (in %)
21. Cost of Power and Fuel to Sales (in %)
22. Manufacturing Over Heads to Sales (in %)
23. Sales Overheads to Sales (in %)
24. Marketing Over Heads to Sales (in %)

**Manufacturing Health Matrices**

25. Customer Delivery reliability (in %)
26. Customer Return Rates (PPM)
27. Warranty/Product liability cost as a % of Sales Turnover
28. First Pass Yield (in %)
29. Internal Reject Rates (in %)
30. Supplier Return Rates (PPM)
31. Supplier Delivery Reliability (in %)
32. Predictive / Preventive maintenance as a percentage of total maintenance time
33. Capacity Utilization (in %)
34. Employee suggestions implemented per employee per year
35. Training Man-days per employee per year
36. Employee Attrition Rate (in %)
37. Accident frequency rates (in %)

**In Conclusion** it is clearly seen through various business excellence modules such as Ramakrishna Bajaj award, Malcom Baldrige award, Shingo prize, or IMEA award, that leadership, customer relations,

employee relationships, modern practices, innovation, robustness of the organization, continuous improvement play a very important role in ensuring organizations surge forward in global competitiveness and India is not lagging behind in this march of manufacturing excellence.

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**NCQM's BEST EDUCATIONAL QUALITY  
ENHANCEMENT TEAM (BEQET)  
PRESIDENT AWARD-2015**

To encourage Quality Improvement Teams in Educational Institutions in the country, NCQM has instituted **Best Educational Quality Enhancement Team (BEQET) President Award**. These annual awards have been introduced since 2006. The first award competition was held on January 11, 2007 and is being pursued year after year.

One of the thrust areas of NCQM has been to promote Quality Values among educational institutions in our country. For the past few years, NCQM's senior consultants have been successfully facilitating numbers of schools and colleges in their journey towards quality improvement.

It is heartening to note that, as an outcome of this process of facilitation, a large number of Quality Improvement projects have been successfully undertaken and many more are being attempted.

The improvement areas covered so far are in academics, administration, infrastructure and house keeping. All of them have been following structured quality improvement methodologies, using the powerful team approach coupled with applications of appropriate statistical techniques.

To make this event a memorable one, entries are specified from Schools, all Colleges, and Technical / Management Institutes.

**1. Entry into competition:**

- 1.1. Each school or college or institution can nominate upto three (3) teams to compete for these awards.
- 1.2. Only those teams whose projects have been completed during the past two years, and the benefits are being maintained are considered for these awards.
- 1.3. Each nomination is required to be made on the Standard Application Form and submitted to NCQM, along with following entrance fee (inclusive service tax as applicable).

NCQM Members - **Rs.1000/- + Service Tax as applicable**  
Non-members - **Rs. 1500/- + Service Tax as applicable**

**2. Time Schedule:**

Call for Entries	: November 2015
Acceptance/Acknowledgement	: December 2015
Competition	: January 2016
Award Presentation	: -

For details, list of participated colleges and their presentations visit our website. Application form can also be down loaded from the website [www.ncqm.com](http://www.ncqm.com)

## NCQM Forthcoming Programme

- Performance Management System - Oct 9
- Supervisory Skill Development - Oct 10
- Supply Chain Management - Oct 17
- How to Manage for Sustained Success of an Organization?  
"A Quality Management Approach" - Nov 2-3
- Internal Quality Audit ISO 9001:2008 - Nov 20-21
- Being Cost Effective through 6S & 8W - Dec 4
- Root Cause Analysis & Use of QC Tools - Dec 7
- Value Engineering - An Effective Management Tool for Competitive Edge - Dec 8

## Our Other Forthcoming Programs are:-

- Safety Induction and Accident Reduction in Industries
- How to fight Low Price Competition?
- Benchmarking HR Initiative for HR Practice
- Six – Sigma Yellow Belt
- Six – Sigma Green Belt
- Supply Chain Management
- Total Productive Maintenance (TPM)
- Delegation to develop the Team
- Energy Management System Based on ISO 50001:2011
- Statistical Process Control

## Just in

**16 Pages Pocket Booklet on  
WORKPLACE MANAGEMENT THRU' 5S**  
is available with NCQM for **Rs. 25/-** only +  
Forwarding charges will be extra



## Publications for Sale

Sr. No.	Name of Publications	Prize
1.	TQC at Enterprise Level (English & Hindi)	110/-
2.	Statistical Process Control with applications by B. Banerjee	700/-
3.	Quality – Best Practices – Selected Case Studies - QCI-DL Shah Quality Award	300/-
4.	Quality Management Practices – by R. P. Mohanty	900/-
5.	Total Quality Management and Purchasing by S. M. Mody	30/-
6.	5S Booklet	25/-
7.	Implementing ISO 9001:2008 QMS Reference Guide (2nd Edition) by Divya Singhal & K R Singhal	195/-

**For details of above programs & publications please contact at the address given below:**