



National Institution for Quality & Reliability
NIQR - Dr. V K Medal



1.0 About NIQR

NIQR is an Institution dedicated for promotion of Excellence in Quality. Its Objective is to provide strategic directions to Quality Movement and be an enabler in transforming Indian industry and Service Organizations to be globally competitive and socially responsive, besides rendering support to the academic community to gain knowledge to bridge the gap between Industry and Institution.

The NIQR Framework can help organizations of all sizes and in all sectors of the economy to continuously improve quality and focus on strategy-driven performance, achieve stronger customer and workforce engagement, and improve governance and ethics, societal responsibilities, competitiveness, and long-term organizational sustainability. World Quality Month is not only a time to celebrate organizational improvement efforts and research, but also to offer our sincere appreciation to all dedicated professionals in the quality field. As a mark of respect for the exemplary work done by Dr. V. Krishnamurthy, NIQR has instituted this award to recognize MSMEs who have set high standards of achievement in pursuit of excellence in their respective units.

2.0 About NIQR-Dr. VK Medal for Manufacturing Excellence

NIQR - Dr V K Medal was instituted by National Institution for Quality & Reliability in 2023 to give special recognition to those manufacturing and service organizations under MSME Category. This Medal will be awarded every year to organisations from MSME sector who meet the criteria stipulated.

This medal has been named after Dr V. Krishnamurthy who initiated various measures to improve the quality culture in India. He gave a new thrust to the quality movement so that India could move into the 21st century with pride ensuring production of goods to International Standards, promote exports

It is intended to generate interest and involvement of Indian Industry in quality programs, drive Indian products and services to higher levels of quality and equip such organizations to meet the challenges of domestic and international markets.

3.0 Frequency

NIQR - VK Medal is an annual feature on the basis of the Financial Year. The award for the year 2023 will be considered for results achieved during 12 months prior to the assessment month (for Sept audit data from sept to Aug of the current year).

4.0 Eligibility to Compete

- a) The eligible Applicant Organization is in India and not been convicted by any court for whatsoever reason for the period of assessment year undertaking to this effect will have to be submitted.
- b) Applicant organization is not manufacturing products, like tobacco liquor, etc which are injurious to health.

Note: If an applicant organization has earlier received an award, it is not eligible to apply for an award for a period of three years after being awarded. In case applicant fails to achieve the requirement for the award, it will be assessed for maximum of another two times.

5.0 Fee Structure

5.1 Application Fee - Rs.30,000/- & Site Evaluation – Rs. 20,000/- per day plus Travel + Accommodation + Food for 2

5.2 Feed Back for Improvement– Rs. 20,000/- per visit + Travel + Accommodation + Food for 1 person

- Assessment Fees (No of days to be decided)
- Application Fee and an assessment fee will not be refunded

Evaluation Criteria

The Evaluation Criteria is in Five groups, as found in the chart and each has four sub topics totalling 20 criteria. The Applicant Organization should score min. **70 %** in each of these 20 criteria & min. **80 %** in each of the 5 groups for them to be eligible to earn the NIQR-Dr. VK Medal for Manufacturing Excellence.

Sn	Manufacturing Excellence Criteria	Max. Marks
1	Leadership, Business Results, PD, Value Added Per Employee Cost (VAPCO)	200
2	Lean Manufacturing Implementation	200
3	Quality Management (Cost of Quality, Incoming, In-Process and Customer Quality)	200
4	Resource Management (People, Place, Plant & Provisions)	200
5	CSR, EMS, NPD, Sustenance / Review Mechanism	200
	Total	1000

6.0 Leadership, Business Results, PD, Value Added per employee cost (VAPCO)

6.1 Leadership

The most successful business leaders have a clear vision for the future of the companies which they are leading. Towards making the vision into reality they inspire their employees with their commitment and involvement. They derive the achievable short-term and long-term goals and strategic direction and guidelines. They encourage their employees and lead the company with their leadership traits to satisfy the Stake holders – Board, Customer, Supplier, Employees, Shareholders. The applicant organisation would detail in the application form with data reflecting effectiveness of the company's leadership.

6.2 Business Results

If you do not get the desired business results, then the efforts put-in running the organization is in vain.

The applicant organisation could explain in the application form the ways and means or the methods adopted to achieve the business results and the part played by the leader and other managers' concern in achieving the Top and Bottom-line results.

6.3 Policy Deployment

Leadership will ensure his vision is translated into a mission statement and from there the departments to decide their departmental targets. Policy Deployment Tool X-Matrix is used for this purpose. PD helps to bring in line the Organizational Top Line and Bottom-Line Targets uniformly from Top Management staff to Shop floor supervisor level and explicitly told to the Individuals. PD will transform the entire operations into an engine of growth. It also drives innovation on Individuals with insight, besides facilitating individuals to grow in self-development and strategic leadership. The applicant organisation would detail in the application form the salient features of the different departments' X-Matrix.

6.4 Value Added per Employee Cost (VAPCO)

VAPCO Stands for Value Added Per Employee Cost; It is the ratio of value of Sales minus total Variable Cost whole divided by Rupee Total Employee Cost. This number for any healthy MSME must be above 6; It is an Indicative of the efficient & effective running of the Company.

$$\text{VAPCO} = \frac{\text{(Sales – Total Variable Cost)}}{\text{(Total Employee Cost)}}$$

7.0 Lean Manufacturing Implementation

7.1 Lean Tools & Techniques

Transforming the processes in all spheres of the activities in the Organization to Lean Operations is a leap forward towards Manufacturing Excellence. One significant advantage is Waste Elimination. The applicant organisation would detail in the application form the actions initiated for company-wide implementation of Lean Tools & Techniques (5S, 3M, PY, SMED, LCA, Line re-layout etc.,) and indicate the benefits accrued there on, with a specific reference to number of waste elimination opportunities identified and Kaizens implemented to eliminate them and their corresponding effect on Productivity and Quality Improvements.

7.2 Value Stream Mapping

Value stream mapping is a lean Mfg. technique used to analyse the Process through the Five Types of flows viz. Information Flow, Material Flow, Energy Flow, Process (within) Flow, Process (Between) Flow required to bring a Product / Service to a Customer and by applying various tools to suggest and design an improved flow of all the Five Types so that the Customer Value of the Product / Service is enhanced significantly, thereby enhancing competitiveness. The applicant organisation would detail in the application form giving adequate data & VSMS, considering all the Five Flows mentioned above.

7.3 Standard Time Master & Process Improvement

Those who cannot measure cannot manage. The applicant organisation would detail in the application form giving adequate data to support that they have calculated the Cycle time of each sequence and total cycle time of a main parts, sub-assemblies and main assemblies and created a standard time master and explain with data the progress made to eliminate secondary operations, combining operations, eliminating / modifying operations. The resultant data could be Output per man per hour of Sub Assy & Main Assy.

7.4 PY / LCA / SMED / Containerisation

If you want to eliminate human error, then introduce Poka Yoke. If you want to reduce or eliminate human effort, then introduce Low-Cost Automation. SMED will help reduce inventory with increased number of changeovers in addition to appreciable jump in production output. Containerisation (3C – Constant Container, Constant Quantity, Constant Location) is a prerequisite for JIT / Kanban. The applicant organisation would detail in the application form the action taken in all the above areas.

8.0 Quality Management (COQ, Incoming, In-Process and Customer Quality)

8.1 Cost of Quality

Cost of Quality consists of Cost of Good Quality and Cost of Poor Quality. While Preventive cost such as APQP, FMEA, FTA, Process Capability study costs and Appraisal Cost such as Inspection, calibration and Auditing could go into Cost of good Quality, all Internal Failure Costs such as Re-work, scrap etc. and External Failure Costs such as Customer Returns Warranty will together

contribute to Cost of Poor Quality. The company would detail in the application form giving adequate data to support that they are in control of this costs and should show the past 12 months progress.

8.2 Incoming Material Quality

Do not embark into allowing a somewhat defective material for consumption. It will have a cascading effect of increasing your labour and time and finally will cause to lose your customer. The applicant organisation would detail in the application form giving adequate data (ppm trend) to support that they are in control of all incoming material quality.

8.3 In-Process Quality

The applicant organisation would detail in the application form giving adequate data (ppm trend) to support that they are in control of in- process quality with Cpk trend, use of 7QC Tools, Poke Yoke (Number of PYs). Number of Presentations of Problem Solving for all major operations of Parts, Sub-assemblies, Main Assemblies

8.4 Customer Quality

The applicant organisation would detail in the application form giving adequate data (ppm trend) to support that they are in control of outgoing quality with 7QC Tools, Poke Yoke and explain the ways of dealing with customer returns and warranty claims

9.0 Resource Management – People, Place, Plant, Provisions

9.1 People

Number of Kaizens implemented per employee per month is an indicator of people are in improvement culture. Together the applicant company needs to furnish the training details for 3M and give an account of the type wise Muda (wastes) the company generated for the past 12 months. The confirmed and temporary employee head count month wise need to be given along with absenteeism details. Number of counselling carried out by HR to contain absenteeism. Skill Matrix which is in place. Number of people trained in what subject month wise to be given

9.2 Place

Well Organized place creates motivation among employees and periodic disposal of unwanted items create space and neatly maintained work place gives a pleasing work environment. 5S is the main tool to enable this. There were real life situations where in the Tier-1, 2 Companies lose customer orders because of ill-organized work place. Zone wise 5S Score and overall company score to be provided week wise or month-wise for the past 12 months. Sales per Sq. ft area and the Rupee value of scraps disposed, number of parts for which 3C introduced, the parts and information retrieval time reduction status, (Search time reduction), the frequency of global cleaning is carried out are all the data required to be provided by the company.

9.3 Plant

Key m/c and plants b/d history, preventive maintenance data and OEE / OLE to be given, along with planned maintenance documents. Details of Autonomous Maintenance and CLIT charts status machine wise, plant wise and SOP for maintenance to be furnished.

9.4 Provision

There should be a strict inventory control of the materials covered in the BOM. ITR (Material cost of sales annualized divided by RM+WIP+FG as on date) to be on the progressively increased over the past 12 months. Action details on alternate materials, alternate source, cost reduction and vertical integration to be provided.

10.0 CSR, EMS, NPD & Sustenance / Review Mechanism

10.1 Corporate Social Responsibility - CSR

Charitable giving, Supporting poor children education, medical help, Conducting social awareness camps, medical camps are a few. Company to explain in what areas they are involved. Initiatives on Diversity, equality, and inclusion can also be mentioned.

10.2 Environment Management System - EMS

Reducing carbon footprints. Making the plant and surroundings environmentally friendly, Supporting sustainable legislation. Usage of Parts, Processes that are environmentally friendly can be mentioned

10.3 New Product Development - NPD

Lead time reduction details for the new products introduced is an indicator of achievement.

10.4 Review Mechanism

Instituting a Review Mechanism to review the performance of every business / manufacturing activity would help the company to hold on the gains and sustain the improvements. More you miss to review the progress, more opportunities for any course correction you miss. Daily Work Management (DWM), Weekly Review and Monthly Review Meetings (MRM) are vital for any Organization to know their SWOT and the review triggers timely course correction. In MRMs, the Managers give an account of their deeds towards Company Targets and Top and Bottom-Line results. The applicant organisation would detail in the application form the methods of conducting the review.

11.0 Timeline for 2023

1	Announcement by NIQR	17-06-23
2	MSME to send e-Mail Confirming intent of participating	24-06-23
3	MSME to pay the Application fee	30-06-23
4	MSME to Courier post three sets of Application Booklets to NIQR	24-07-23
5	MSME to e-mail the Booklet (pdf)	24-07-23
6	Jury study the Application	31-07-23
7	Video Discussions with MD/CEO	Aug 2023
8	Site evaluation by NIQR	Sep-Oct 23
9	Submission of Jury Report	31-10-23
10	Announcement of Winners	2 nd Week Nov23
11	Presentation of the Medal	Nov 2023

12.0 Application Procedure

1.Applicant Company should, after making sure that they are falling under MSME category, send a mail to NIQR before **24-06-2023** confirming their intend to challenge the Medal

2.Remit the required Application fee. (Obtain bank details from NIQR Office) by **30-06-2023**

3.Three Sets of the Application Book let detailing company's progress status for the period July 2022 to June 2023 on all the 20 parameters in the five main criteria. Number of pages should be min. 40 pages and max. 60 pages

3. Three Booklets should be couriered to NIQR before **24-07-2023** E-Mail ID and Postal, Website are printed on the last page

13.0 Evaluation Process

Preliminary Screening. All the applications along with the "Self-Evaluation Report". Scrutinized for completeness of the information and whether the applicant organization is eligible for challenging the NIQR- Dr.V.K.Manufacturing Excellence medal. Once the application is received there will be virtual discussions with the MD/CEO of the organization for certain clarification.

14.0 Selection of Awardees

The evaluation will be carried out by the expert /Evaluation committee based on the criteria during the site visits. The number of visit dates will be based on the size of the organization. Based on the Recommendations and the site inspection, evaluation of all parameters listed in the criteria and interview with the top management, middle management and a few employees at the operational level will be submitted to the core committee of NIQR by the evaluation committee. Core Committee will approve the organization that meets the eligibility criteria listed above. The decision of the core committee is final .The medal will be presented to the winning organization represented by the chief of the organization in a grand function which will be organized by NIQR

15.0 Benefits to the Medal Winners

The Medal winning organization will be recognized as the champion of total quality in INDIA. These organizations will recognized as customer-oriented organizations. The customers will place looking up at their high level of commitment and process capabilities. The customer will get benefited by getting consistent quality products. These organizations will have leverage in business on being recognized as the best and will be above to improve their marketing share significantly.

16.0 Confidentiality

The data and information collected during the review of the application , evaluation, and site audit will be kept confidential. NIQR will advertise the medal armory highlighting the medal winner organization in popular media (Print & Digital). NIQR will promote the medal winners to the relevant forums as appropriate. NIQR VK Medal shall be and in the organization letter pad, visiting cards etc., (as per the works provided by NIQR)

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