सूक्ष्म , लघु और मध्यम उद्यम मंत्रालय
MINISTRY OF
MICRO, SMALL & MEDIUM ENTERPRISES

सत्यमेव जयते

MSME SUSTAINABLE (ZED) CERTIFICATION

MODEL AND STANDARD

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- Secretary, Ministry of MSME
- Additional Secretary & Development Commissioner, Ministry of MSME
- Joint Secretary (AFI), Ministry of MSME
- Director (T&P), Ministry of MSME
- Secretary General, Quality Council of India
- ZED Division, Quality Council of India

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- Joint Secretary (AFI), Ministry of MSME – Chairman
- EA, IFW – Member
- Director (T&P), Ministry of MSME – Member Secretary
- Bureau of Indian Standards (BIS) – Convener
- Quality Council of India (QCI) – Member
- National Productivity Council (NPC) – Member
- Representative of Ministry of Environment, Forest & Climate Change – Member
- Representative of American Society of Quality (ASQ, India/South Asia) – Member
- Representative of CII – Member (On rotation basis)
- Representative of IamSME of India – Member (On rotation basis)
- Representative of Schneider Electric – Member (On rotation basis)
- Quality Expert- Former Executive Director-Quality, BHEL – Member (On rotation basis)

The contributions by individual experts, Industry Associations and other organizations, involved in various stages of development of this model is also humbly acknowledged.

ABOUT MINISTRY OF MSME

Ministry of Micro, Small & Medium Enterprises (M/o MSME) envisions a vibrant MSME sector by promoting growth and development of the MSME Sector, including Khadi, Village and Coir Industries, in cooperation with concerned Ministries/Departments, State Governments and other Stakeholders, through providing support to existing enterprises and encouraging creation of new enterprises.

The Micro; Small and Medium Enterprises Development (MSMED) Act was notified in 2006 to address policy issues affecting MSMEs as well as the coverage and investment ceiling of the sector. The Act seeks to facilitate the development of these enterprises as also enhance their competitiveness. It provides the first-ever legal framework for recognition of the concept of "enterprise" which comprises both manufacturing and service entities. It defines medium enterprises for the first time and seeks to integrate the three tiers of these enterprises, namely, micro, small and medium. The Act also provides for a statutory consultative mechanism at the national level with balanced representation of all sections of stakeholders, particularly the three classes of enterprises; and with a wide range of advisory functions. Establishment of specific funds for the promotion, development and enhancing competitiveness of these enterprises, notification of schemes/programmes for this purpose, progressive credit policies and practices, preference in Government procurements to products and services of the micro and small enterprises, more effective mechanisms for mitigating the problems of delayed payments to micro and small enterprises and assurance of a scheme for easing the closure of business by these enterprises are some of the other features of the Act.

ABOUT QUALITY COUNCIL OF INDIA

The Quality Council of India, an autonomous body, was set up by the Ministry of Commerce and Industry, Government of India jointly with the Indian Industry represented by the three premier industry associations i.e. Associated Chambers of Commerce and Industry of India (ASSOCHAM), Confederation of Indian Industry (CII) and Federation of Indian Chambers of Commerce and Industry (FICCI), to establish and operate national accreditation structure and promote quality through National Quality Campaign.

Quality Council of India (QCI) is registered as a non-profit society with its own Memorandum of Association and is governed by a Council with equal representations of government, industry and consumers. The Council plays a pivotal role at the national level in propagating, adoption and adherence to quality standards in all important spheres of activities including education, healthcare, environment protection, governance, social sectors, infrastructure sector and such other areas of organized activities that have significant bearing in improving the quality of life and wellbeing of the citizens of India.

ZED DIVISION

The ZED Division of QCI leads various projects of National importance with a focus on 'Atmanirbhar Bharat'.

The division is involved in flagship programmes of Ministry of Micro, Small & Medium Enterprises, Ministry of Tourism, Ministry of Defence, Ministry of Housing & Urban Affairs and others.

BACKGROUND & RATIONALE OF ZERO DEFECT ZERO EFFECT (ZED)

Addressing the nation on India's 68th Independence Day, Hon'ble Prime Minister Shri Narendra Modi urged the industry, especially the Micro, Small and Medium Enterprises (MSMEs) of India, to manufacture goods in the country with "zero defects" and to ensure that these goods have a "zero effect" on the environment. He said "We should manufacture goods in such a way that they carry zero defect and that our exported goods are never returned to us. We should manufacture goods with zero effect that they should not have a negative impact on the environment".

In line with this vision of the Prime Minister, the Ministry of Micro, Small & Medium Enterprises (MSME) has launched the MSME Sustainable (ZED) Scheme for the benefit of MSMEs of India. QCI is the Implementing Agency for this scheme.

The basic rationale of the Government support to MSMEs for undertaking MSME Sustainable (ZED) Certification is to assist in enhancing their quality and at the same time emphasize that the goods being manufactured have minimal impact on the environment. This will not only have numerous social benefits in terms of training of labour, creation of knowledge, increased productivity, introduction of new production equipment/methods in manufacturing etc. but will also boost the confidence of foreign buyers and investors in goods and services produced in India.

MSMEs are the backbone of the economy and therefore ensuring their competitiveness is critical. As the MSMEs are amongst the strongest drivers of economic development, innovation and employment, it becomes imperative to strengthen their ecosystem. The Zero Defect Zero Effect (ZED) initiative is envisioned by the Government of India to enhance MSME competitiveness and transform them as National and International Champions thereby contributing towards the realization of the vision of ‘Atmanirbhar Bharat’.

MSME SUSTAINABLE (ZED) CERTIFICATION MODEL

The ZED Certification model (as presented in this document) has been developed for the manufacturing sector. The Model aligns best practices in an integrated and holistic manner to help the MSMEs adopt systems that would help them embark on the ZED journey while enhancing their competitiveness and sustainability.

MSMEs can apply for certification at any of the following three levels:

- Certification Level 1: BRONZE (5 Parameters)
- Certification Level 2: SILVER (14 Parameters)
- Certification Level 3: GOLD (20 Parameters)

An organization applying for a particular certification level i.e., Bronze/Silver/Gold under the MSME Sustainable (ZED) Scheme will be assessed on the following parameters, as applicable:

S. No.	Parameters	Bronze	Silver	Gold
1.	Leadership	✓	✓	✓
2.	Swachh Workplace	✓	✓	✓
3.	Occupational (Workplace) Safety	✓	✓	✓
4.	Measurement of Timely Delivery	✓	✓	✓
5.	Quality Management	✓	✓	✓
6.	Human Resource Management		✓	✓
7.	Daily Works Management		✓	✓
8.	Planned Maintenance & Calibration		✓	✓
9.	Process Control		✓	✓
10.	Product Quality & Safety (Testing / Certification)		✓	✓
11.	Material Management		✓	✓
12.	Energy Management		✓	✓
13.	Environment Management		✓	✓
14.	Measurement and Analysis		✓	✓
15.	Supply Chain Management			✓
16.	Risk Management			✓
17.	Waste Management (Muda, Mura, Muri)			✓
18.	Technology Selection & Upgradation			✓
19.	Natural Resource Conservation			✓
20.	Corporate Social Responsibility			✓

The Model also recognizes the efforts of the MSMEs that have already attained specific certifications and allows a provision of exemption(s) from assessment on relevant parameter(s) for the MSMEs with existing Certifications as specified in the scheme, like ISO 9001, ISO 14001, ISO 45001 etc.

The MSME Sustainable (ZED) Certification Model presented in this document will be applicable on all sectors of the manufacturing MSMEs. To understand the process of Certification, please refer to the Scheme Guidelines.

The Standard of each Certification Level of MSME Sustainable (ZED) Certification Model is appended below:

MSME SUSTAINABLE (ZED) STANDARD – BRONZE

S. No.	Parameter	Description	Requirement
1.	**Leadership**	The leadership plays a key role in making any initiative successful. Commitment to the ZED values can be demonstrated by taking accountability of the effectiveness of the system, reviewing the performance of ZED parameters and promoting improvement.	▪ Roles & Responsibilities at all levels are clearly defined ▪ Regulatory compliances are reviewed periodically
2.	**Swachh Workplace**	A Swachh work place not only enhances the image of the organization in the eyes of stakeholders including the customers, but boosts the morale of the people working in the organization as well. Further, in several sectors, maintaining a clean, hygienic, uncluttered & organized work environment (Swachh workplace) is mandatory. There are various ways like Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), 5S etc. to maintain a Swachh workplace.	▪ Processes for cleaning & hygiene are in place addressing the nature of product, processes, customer & regulatory requirements ▪ All equipment, tools, work spaces & areas are maintained clean, uncluttered & organized as defined & required
3.	**Occupational (Workplace) Safety**	This parameter assesses the organization's ability to provide a safe work-place and safety compliances. Lapses in safety may lead to the loss of property and lives resulting in legal action and loss of reputation. To	▪ Safety risks are identified and measures are taken to eliminate or minimise them ▪ Relevant PPEs are used by the employees

		create a safe working place, an organization should create a Safety Policy and comprehensive action plans to address the safety concerns of all stakeholders including (but not limited to) employees, contract workers, supply chain and community.	▪ Safety trainings are imparted to all relevant people
4.	**Measurement of Timely Delivery**	Timely delivery is the outcome of all the scheduling & planning of production activities. It is one of the key aspects that determines customer satisfaction. This parameter assesses the ability of various activities to deliver on time in terms of "on-time full delivery" which indicates how many deliveries are supplied On Time, In Full (OTIF).	▪ Mechanism to record deliveries is in place ▪ Adherence to process delivery contracts is measured
5.	**Quality Management**	Quality Management is key for any organisation to sustain and stay ahead of the competition. The organisation should define its Quality Management System covering all products and processes across the organisation and supply chain.	▪ Quality requirements for products and processes are established and monitored ▪ Training is imparted to all relevant people

Note: MSME units possessing the existing certifications, as listed below (from NABCB accredited Certification Bodies or by an Accreditation Body which is signatory to the respective Multilateral Recognition Arrangement (MLA) of International Accreditation Forum (IAF)), will be exempted from assessment of the following relevant parameters:

Parameter No.	Parameter Name	Certification required for exemption
3	Occupational (Workplace) Safety	**ISO 45001**
5	Quality Management	**ISO 9001**

MSME SUSTAINABLE (ZED) STANDARD – SILVER

S. No.	Parameter	Description	Requirement
1.	**Leadership**	The leadership plays a key role in making any initiative successful. Commitment to the ZED values can be demonstrated by taking accountability of the effectiveness of the system, reviewing the performance of ZED parameters and promoting improvement.	▪ Roles & Responsibilities at all levels are clearly defined & documented ▪ Organogram is established ▪ Organisational Performance including regulatory compliances, quality, product & occupational safety and environmental performance is reviewed regularly for compliance and meeting the set objectives
2.	**Swachh Workplace**	A Swachh work place not only enhances the image of the organization in the eyes of stakeholders including the customers, but boosts the morale of the people working in the organization as well. Further, in several sectors, maintaining a clean, hygienic, uncluttered & organized work environment (Swachh workplace) is mandatory. There are various ways like Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), 5S etc. to maintain a Swachh workplace.	▪ SOPs for cleaning & hygiene are in place addressing the nature of products, processes, customer & regulatory requirements ▪ All equipment, tools, work spaces & areas are maintained clean, uncluttered & organized as per the SOPs & requirements ▪ Cleanliness & hygiene is propagated & emphasized across the organisation ▪ Mechanism for periodic audit for cleaning, hygiene & cleaning validation (wherever applicable) is in place
3.	**Occupational (Workplace) Safety**	This parameter assesses the organization's ability to provide a safe work-place and safety compliances. Lapses in safety may	▪ Formal safety policy is in place ▪ Systems are in place to

S. No.	Parameter	Description	Requirement
		lead to the loss of property and lives resulting in legal action and loss of reputation. To create a safe working place, an organization should create a Safety Policy and comprehensive action plans to address the safety concerns of all stakeholders including (but not limited to) employees, contract workers, supply chain and community.	✓ identify all safety aspects and communicate regularly to all employees and contract workers ✓ impart regular safety trainings to employees and contract workers ✓ ensure that relevant PPEs are used by the employees ✓ conduct mock drills involving employees and contract workers ▪ The organisation has implemented ✓ all relevant safety systems ✓ mechanism for investigation of accidents/incidents/near-misses with Root Cause Analysis (RCA) and Corrective & Preventive Actions (CAPA) ✓ periodic mock drills involving employees and contract workers ✓ periodic safety audits ▪ Periodic review of safety systems & performance is conducted by the Senior Management
4.	**Measurement of Timely Delivery**	Timely delivery is the outcome of all the scheduling & planning of production activities. It is one of the key aspects that determines customer satisfaction. This parameter assesses the ability of various activities to deliver on time in terms of "on-time full delivery" which indicates how many deliveries are supplied On Time, In Full (OTIF).	▪ Adherence to process delivery contracts is measured and monitored ▪ Mechanism to periodically review the delivery performance by the Senior management, is in place

S. No.	Parameter	Description	Requirement
5.	**Quality Management**	Quality Management is key for any organisation to sustain and stay ahead of the competition. The organistaion should define its Quality management system covering all products and processes across the organisation and supply chain.	▪ Quality Policy is in place ▪ Quality requirements for products and processes are established and monitored ▪ Training is imparted to all relevant people ▪ Periodic quality audits are in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism of Review of Quality Management System by Senior management is in place
6.	**Human Resource Management**	People/employees of an organization play an important role in the success of any organization. Therefore, the organization must focus on developing the skill-set of its people. In order to systematically develop the skills of its people, the organizations must understand their competence or skill levels, identify training & skill development needs and gaps to design effective people development plans at all levels to enhance the skills of the workforce. Further, the organisation should have processes to keep the employees engaged.	▪ HR Processes are defined ▪ People development plans including induction training and employee engagement is in place for all employees ▪ Detailed technical skill mapping in place extending to soft skills, environmental, safety and energy conservation areas backed with training for deploying people for different tasks ▪ Review mechanism of people development and engagement plans/initiatives
7.	**Daily Works Management**	Daily Works Management (DWM) is the system that provides the ability to manage departments and functions wherein processes	▪ Process to set & review targets for Quality, Cost & Delivery (QCD) is in place

S. No.	Parameter	Description	Requirement
		are defined, standardized, controlled, and improved by the process owners.	▪ Daily targets on QCD are suitably displayed and all relevant employees are aware ▪ Status & trends on QCD are displayed and shared ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism to review the effectiveness of Daily Works Management is in place
8.	**Planned Maintenance & Calibration**	Planned maintenance of machines, equipment & devices helps to run operations without interruption, ensuring timely production & delivery. Planned maintenance means that there is a system of identifying the maintenance requirements (including calibration) of the machines, equipment & devices to create a schedule of maintenance so that they do not breakdown unexpectedly.	▪ Preventive Maintenance and calibration plan, as applicable, is in place for all critical machines/equipment /devices ▪ Maintenance and calibration, as applicable, are carried out periodically, as per the plan ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Trends of Mean Time To Repair (MTTR) & Mean Time Between Failure (MTBF) are reviewed
9.	**Process Control**	Process control is an important aspect of production system as it aims to ensure that the processes deliver the desired output consistently. A robust Process Control means active changing/adjustment/correction of the process, based on the results of process monitoring.	▪ Critical processes are proactively planned and established considering the process control requirements based on product, process, customer, organizational & legal requirements

S. No.	Parameter	Description	Requirement
			▪ SOPs for control of all critical processes are established ▪ Monitoring of the critical processes is in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place
10.	**Product Quality & Safety (Testing / Certification)**	To maintain product quality & safety, the organisation is required to identify and ensure relevant testing and certification requirements for the products & processes (as applicable)	▪ All relevant product quality and safety requirements are identified ▪ The relevant product quality and safety requirements are fulfilled through requisite testing/certification, as applicable ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism of review of product quality & safety by Senior management is in place
11.	**Material Management**	Material Management is an approach for planning, organizing, and controlling all those activities that are concerned with the flow of materials into an organisation. An efficient material management system is important for any organization to stay competitive. The fundamental objectives of the Material Management function, often called the famous 5 Rs of Materials Management, are acquisition of materials and	▪ Material management planning is done for maintaining optimal inventory ▪ Inventory control mechanism is in place ▪ SOPs/processes are established for ensuring timely availability of materials and suitable handling & management of the materials to reduce

S. No.	Parameter	Description	Requirement
		services of the right quality, in the right quantity, at the right time, from the right source, at the right price.	contamination, damages, losses, unintended hazards etc. ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place
12.	**Energy Management**	Robust Systems for Energy efficiency is an indicator of responsible manufacturing as it not only conserves essential resources but also reduces carbon footprint. Further, energy is one of the major cost components of a manufacturing organization that directly impacts the bottom line. Energy in this parameter includes electrical energy, fossil fuel & renewable energy.	▪ All energy sources are identified & targets are set for energy saving ▪ Employees are trained in energy management ▪ Periodic energy audits are in place ▪ Root Cause Analysis (RCA) and Corrective and Preventive Action (CAPA) processes are in place
13.	**Environment Management**	The organisation is required to ensure that it meets the regulatory requirements and should have implemented relevant processes to monitor and enhance compliance	▪ Systems are in place to identify and manage: ✓ the emissions, effluent discharge and waste management to conform to regulations/norms ✓ plant, equipment and systems required to meet the emissions/discharge norms and waste management requirements are in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Actions (CAPA) processes are in place

S. No.	Parameter	Description	Requirement
			▪ Employees are trained on Environment Management Systems ▪ Periodic Environmental audits are conducted
14.	**Measurement & Analysis**	To objectively evaluate the performance of the organisation, the Senior management must identify and measure the key processes with an aim to improve them	▪ Processes to establish targets, measure & periodically review the following, by the Senior management, are in place: ✓ Defects ✓ Rework ✓ Rejection ✓ Customer Satisfaction ▪ Root Cause Analysis (RCA), Corrective Action and Preventive Action (CAPA) processes are in place

Note: MSME units possessing the existing certifications, as listed below (from NABCB accredited Certification Bodies or by an Accreditation Body which is signatory to the respective Multilateral Recognition Arrangement (MLA) of International Accreditation Forum (IAF)), will be exempted from assessment of the relevant parameters. For exemptions on the parameters indicated for Lean, it is permissible, only if the Lean certification is obtained from the Implementing agencies under the MSME Competitiveness (Lean) Certification Scheme, of Ministry of MSME.

Parameter No.	Parameter Name	Certification required for exemption
3	Occupational (Workplace) Safety	ISO 45001
5	Quality Management	ISO 9001
7	Daily Works Management	Advance Lean-C (completion Certificate)
12	Energy Management	ISO 50001
13	Environment Management	ISO 14001

S. No.	Parameter	Description	Requirement
1.	**Leadership**	The leadership plays a key role in making any initiative successful. Commitment to the ZED values can be demonstrated by taking accountability of the effectiveness of the system, reviewing the performance of ZED parameters and promoting improvement	▪ Roles & Responsibilities at all levels are clearly defined & documented ▪ Organogram is established ▪ Organisational Performance including regulatory compliances, quality, product & occupational safety and environmental performance is reviewed regularly for compliance and meeting the set objectives
2.	**Swachh Workplace**	A Swachh work place not only enhances the image of the organization in the eyes of stakeholders including the customers, but boosts the morale of the people working in the organization as well. Further, in several sectors, maintaining a clean, hygienic, uncluttered & organized work environment (Swachh workplace) is mandatory. There are various ways like Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), 5S etc. to maintain a Swachh workplace	▪ SOPs for cleaning & hygiene in place addressing the nature of products, processes, customer & regulatory requirements ▪ All equipment, tools, work spaces & areas are maintained clean, uncluttered & organized as per the SOPs & requirements ▪ Cleanliness & hygiene is propagated & emphasized across the supply chain ▪ Mechanism for periodic audit for cleaning, hygiene & cleaning validation (where applicable) is in place ▪ The audit results are reviewed periodically
3.	**Occupational (Workplace) Safety**	This parameter assesses the organization's ability to provide a safe work-place and safety compliances. Lapses in safety may	▪ Formal safety policy in place ▪ Systems are in place to

S. No.	Parameter	Description	Requirement
		lead to the loss of property and lives resulting in legal action and loss of reputation. To create a safe working place, an organization should create a Safety Policy and comprehensive action plans to address the safety concerns of all stakeholders including (but not limited to) employees, contract workers, supply chain and community	✓ identify all safety aspects and communicated regularly to all employees, contract workers and supply chain partners ✓ impart regular Safety trainings to employees and contract workers. Also includes supply chain partners as required ✓ ensure that relevant PPEs are used by the employees ✓ develop safety systems, as required ✓ conduct mock drills involving employees and contract workers ▪ Safety forms a part of the Key Performance Indicators (KPIs) of employees ▪ The organisation has implemented ✓ all relevant safety systems ✓ mechanism of investigation of accidents/incidents/near-misses with Root cause analysis (RCA) and Corrective & Preventive actions (CAPA) ✓ periodic mock drills involving employees and contract workers ✓ re-training and re-deployment of work accident victims, if necessary, apart from compensation as per WCA ✓ periodic safety audits (internal and/or external)

S. No.	Parameter	Description	Requirement
			▪ Periodic review of safety systems & performance is conducted by the Senior Management
4.	**Measurement of Timely Delivery**	Timely delivery is the outcome of all the scheduling & planning of production activities. It is one of the key aspects that determines customer satisfaction. This parameter assesses the ability of various activities to deliver on time in terms of "on-time full delivery" which indicates how many deliveries are supplied On Time, In Full (OTIF)	▪ Adherence to process delivery contracts is measured and monitored ▪ Mechanism to periodically review the delivery performance by the Senior management, is in place
5.	**Quality Management**	Quality Management is key for any organisation to sustain and stay ahead of the competition. The organistaion should define its Quality management system covering all products and processes across the organisation and supply chain	▪ Quality Policy is in place ▪ Quality requirements for products and processes are established and monitored ▪ Training is imparted to all relevant people ▪ Periodic quality audits are in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism of Review of Quality Management System by Senior management is in place
6.	**Human Resource Management**	People/employees of an organization play an important role in the success of any organization. Therefore, the organization must focus on developing the skill-set of its people. In order to systematically develop	▪ HR Processes are defined ▪ People development plans including induction training, on-going coaching & feedback are in place for all employees

S. No.	Parameter	Description	Requirement
		the skills of its people, the organizations must understand their competence or skill levels, identify training & skill development needs and gaps to design effective people development plans at all levels to enhance the skills of the workforce. Further, the organisation should have processes to keep the employees engaged	▪ Detailed technical skill mapping in place extending to soft skills, environmental, safety and energy conservation areas backed with training and coaching for deploying people for different tasks ▪ Review mechanism of people development plans/initiatives exists
7.	**Daily Works Management**	Daily Works Management (DWM) is the system that provides the ability to manage departments and functions wherein processes are defined, standardized, controlled, and improved by the process owners	▪ Process to set & review targets for Quality, Cost & Delivery (QCD) that are clearly linked with the long-term strategy, for all product lines, is established ▪ Daily targets on QCD are suitably displayed and all relevant employees are aware ▪ Status & trends on QCD are displayed and shared electronically ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism to review the effectiveness of Daily Works Management is in place
8.	**Planned Maintenance & Calibration**	Planned maintenance of machines, equipment & devices helps to run operations without interruption ensuring timely production & delivery. Planned maintenance means that there is a system of identifying	▪ Preventive Maintenance and calibration plan, as applicable, is in place for all machines/ equipment /devices

S. No.	Parameter	Description	Requirement
		the maintenance requirements (including calibration) of the machines, equipment & devices to create a schedule of maintenance so that they do not breakdown unexpectedly	▪ Maintenance and calibration, as applicable are carried out periodically, as per the plan ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Trends of Mean Time To Repair (MTTR) & Mean Time Between Failure (MTBF) are reviewed
9.	**Process Control**	Process control is an important aspect of production system as it aims to ensure that the processes deliver the desired output consistently. A robust Process Control means active changing/adjustment/correction of the process, based on the results of process monitoring.	▪ All processes are proactively planned considering the process control requirements based on product, process, customer, organizational & legal requirements ▪ SOPs for control of all critical and non-critical processes are established ▪ Monitoring of all critical processes is in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place along with periodic review
10.	**Product Quality & Safety (Testing / Certification)**	To maintain product quality & safety, the organisation is required to identify and ensure relevant testing and certification requirements for the products & processes (as applicable)	▪ All relevant product quality and safety requirements are identified ▪ The relevant product quality and safety requirements are fulfilled through requisite testing/ certification, as applicable

S. No.	Parameter	Description	Requirement
			▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism of review of product quality & safety by Senior management is in place
11.	**Material Management**	Material Management is an approach for planning, organizing, and controlling all those activities that are concerned with the flow of materials into an organisation. An efficient material management system is important for any organization to stay competitive. The fundamental objectives of the Material Management function, often called the famous 5 Rs of Materials Management, are acquisition of materials and services of the right quality, in the right quantity, at the right time, from the right source, at the right price	▪ Material management planning is based on the production requirement, nature of materials, storage conditions/requirements and to reduce environmental impact and addresses safety aspects ▪ Optimal inventory is maintained ▪ Inventory control mechanism is in place ▪ SOPs/processes are established for ensuring timely availability of materials and suitable handling & management of the materials to reduce contamination, damages, losses, unintended hazards etc. ▪ Root Cause Analysis (RCA), Corrective and Preventive Action (CAPA) processes are in place ▪ Mechanism to periodically review the effectiveness of Material Management Systems is in place

S. No.	Parameter	Description	Requirement
12.	**Energy Management**	Robust Systems for Energy efficiency is an indicator of responsible manufacturing as it not only conserves essential resources but also reduces carbon footprint. Further, energy is one of the major cost components of a manufacturing organization that directly impacts the bottom line. Energy in this parameter includes electrical energy, fossil fuel & renewable energy	▪ All energy sources are identified & targets are set for energy efficiency & conservation ▪ Energy consumption is measured & recorded, timely corrective and preventive actions are taken when deviations are noted ▪ Employees are trained in energy management ▪ Periodic energy audits are in place ▪ Root Cause Analysis (RCA), Corrective and Preventive Actions (CAPA) processes are in place
13.	**Environment Management**	The organisation is required to ensure that it meets the regulatory requirements and should have implemented relevant processes to monitor and enhance compliance	▪ Systems are in place to identify and manage: ✓ the emissions, effluent discharges and waste management regulations/norms ✓ plant, equipment and systems required to meet the discharge norms and waste management requirements ✓ monitoring system for applicable parameters are in place to check compliance to norms ▪ Periodic Environmental audits are conducted ▪ Root Cause Analysis (RCA), Corrective and Preventive

S. No.	Parameter	Description	Requirement
			Actions (CAPA) processes are in place ▪ People are trained on Environment Management Systems ▪ Mechanism of periodic review for the effectiveness of Environment Management Systems by the Senior management is in place
14.	**Measurement & Analysis**	To objectively evaluate the performance of the organisation, the Senior management must identify and measure the key processes with an aim to improve them	▪ Processes to establish targets, measure & periodically review the following by the Senior management, are in place: ✓ Defects ✓ Rework ✓ Rejection ✓ Cost of Poor Quality (COPQ) ✓ Customer Satisfaction ▪ Root Cause Analysis (RCA), Corrective Action and Preventive Action (CAPA) processes are in place
15.	**Supply Chain Management**	Supply Chain is an integral part of any organisation and therefore partnering with suppliers to improve the processes and product manufacturing capabilities should be considered an important function. A strong collaborative relationship between the organization & its suppliers increases the speed to market and shortens the development cycle	▪ Formal processes are in place for selection, evaluation & development of the vendors/suppliers and other stakeholders involved in the supply chain ▪ Energy, environment and natural resource management is propagated & emphasized across the supply chain

S. No.	Parameter	Description	Requirement
		This also includes outsourced partners. An "outsourced process" is a process that the organization needs for its quality management system and which the organization chooses to have performed by an external party	▪ Mechanism to monitor and periodically review performance of the supply chain is in place for continual improvement
16.	**Risk Management**	Every organization faces several risks which may severely impact the overall well-being of the organization. This parameter aims to assess how well the organization is prepared to manage the risks and ensure Business Continuity	▪ The organization has a comprehensive Risk Management Plan based on identification of all types of risks ▪ Risk assessment & mitigation measures are in place for all the identified risks ▪ Risk assessment plan & mitigation measures are reviewed periodically by the Senior management
17.	**Waste Management (Muda, Mura, Muri)**	Waste is broadly defined as anything that adds to the cost of the product without adding value to it. Wastes can be broadly classified into Muda, Mura & Muri. **Muda**: Any activity that consumes resources without creating value for the customer. These wastes are classified into 7 types: 1. Over-production waste, 2. Processing waste, 3. Transport waste, 4. Waiting-time waste, 5. Inventory waste, 6. Motion waste and 7. Defect. The 8th Waste is unutilized talent or skill **Mura**: Unevenness in an operation; for example, products produced by production to meet targets that are not required by market create an uneven work pace in an	▪ Waste reduction plan to address Muda (7 wastes), Mura & Muri across the organisation is in place ▪ Targets are established for the reduction of the identified wastes ▪ Employees are trained on Muda, Muri & Mura ▪ Mechanism of monitoring, measurement and periodic review to understand trends and ensure continual reduction in waste is in place

S. No.	Parameter	Description	Requirement
		operation causing operators to hurry and then wait. Unevenness often can be eliminated by managers through level scheduling and careful attention to the pace of work. **Muri:** Overburdening equipment or operators by requiring them to run at a higher or harder pace for a longer period of time than the equipment is designed for and appropriate work load to be performed by the operators. Examples of Muri are working on processes that operators are not trained in, poorly laid out work places, Unclear instructions, Lack of proper tools and equipment, Lack of proper maintenance/unreliable equipment, Unreliable processes, Poor communication routes	
18.	**Technology Selection & Upgradation**	Technology selection & upgradation is an important step towards sustained competitiveness. Adoption of the Best Available Technologies (BAT) including Internet of Things (IoT), sensors, Cloud computing, Artificial Intelligence (AI), etc. in a planned manner will help the organization produce superior products, enhance efficiencies and stay competitive. This may also include adoption of relevant developments like Industry 4.0	▪ Technology selection & upgradation is planned and reviewed proactively considering product, customer, market, regulatory & environmental requirements ▪ Relevant advances like digitalization, sensors, IoT, smart machines etc. are considered while planning for selection of technology or upgradation
19.	**Natural Resource Conservation**	There are two types of Natural Resources available to the humankind - renewable resources like solar light and heat, wind,	▪ System is in place for continuous review and management of natural

S. No.	Parameter	Description	Requirement
		ocean waves etc. and non-renewable or finite resources like petroleum and oil products, minerals, surface water etc. This parameter deals with the Organisation's understanding of renewable and non-renewable resources and the approach followed by it towards conservation of non-renewable natural resources and optimal use of renewable resources	resources including raw materials and processes to reduce/eliminate use of non-renewable resources and maximise use of renewable resources ▪ Targets are established for natural resource conservation ▪ Employees are trained on natural resource conservation ▪ Mechanism to periodically review the natural resource conservation targets and progress is in place
20.	**Corporate Social Responsibility**	Through Corporate Social Responsibility, organisations integrate social and environmental concerns in their business operations and interactions with their stakeholders	▪ Policy on Corporate Social Responsibility is in place ▪ Corporate Social Responsibility Practices are clearly defined with action plans including but not limited to: ✓ Organisational Governance ✓ Labour Practices ✓ Environment ✓ Fair Operating Practices ✓ Community Involvement & Development ▪ Mechanism to periodically review the Corporate Social Responsibility Practices by Senior Management is in place

Note: MSME units possessing the existing certifications, as listed below (from NABCB accredited Certification Bodies or by an Accreditation Body which is signatory to the respective Multilateral Recognition Arrangement (MLA) of International Accreditation Forum (IAF)), will be exempted from assessment of the relevant parameters. For exemptions on the parameters indicated for Lean, it is permissible, only if the Lean certification is obtained from the Implementing agencies under the MSME Competitiveness (Lean) Certification Scheme, of Ministry of MSME.

Parameter No.	Parameter Name	Certification required for exemption
3	Occupational (Workplace) Safety	ISO 45001
5	Quality Management	ISO 9001
7	Daily Works Management	Advance Lean-C (completion Certificate)
12	Energy Management	ISO 50001
13	Environment Management	ISO 14001
17	Waste Management (Muda, Mura, Muri)	Advance Lean-C (completion Certificate)