Quality Guidelines

October 2024

KIOXIA

Quality Policy

KIOXIA Corporation (hereinafter referred to as (KIC)) declares the following details as the quality policy for (KIC) products, and will make it known to all employees of (KIC) based upon the slogan of “Uplifting the world with ‘memory. ’” The purpose of this is to supply high-quality, safe and environmentally conscious products that meet customer requirements, through the constant pursuit of cutting-edge technology and service in accordance with the management philosophy of (KIC), which is to continue to develop leading-edge memory technology and services to enrich people's lives and expand the potential of society.

1. **We will comply with applicable statutory and regulatory requirements related to memory products, applied products, and related software products, and will supply products which meet the quality reliability that the customer requires.**
2. **We will build in quality from the design and development stage to the mass production stage, and our employees will actively work on the securing of product safety, consideration for the environment, and the improvement of technology levels.**
3. **We will aim for substantial improvement by pursuing the true cause and will make continuous improvements to the quality management system.**

Quality Strategies

The following quality strategies are used by KIOXIA Corporation (the Company) in order to effectively promote its quality assurance activities and improve product quality and reliability:

1. **Integrate quality and reliability during the design phase (Designed-in Q & R)**
   To integrate highly reliable technologies in the design phase, we:
   1) Enhance Design Review/Approval Test (DR/AT).
   2) Develop evaluation and analysis techniques suitable for leading-edge technology.
   3) Use prevention methods (FMEA/ study of failures, etc.) in an effort to improve design quality and reliability.

2. **Integrate quality and reliability in manufacturing processes (Built-in Q & R)**
   To integrate quality and reliability in processes by source management, we:
   1) Accumulate manufacturing know-how and strive to improve processes management, etc.
   2) Actively use the Statistical Process Control (SPC) method to reduce causes of fluctuations.

3. **Improve quality through failure detection and analysis improvement (Improvement)**
   To assure the quality of shipped products, we:
   1) Monitor product quality by initial quality inspection, manufacturing process data, and periodic reliability tests.
   2) Continue to make efforts to improve analytical techniques in order to increase the probability of identifying causes of failure.
   3) Investigate the causes of defects through failure analysis and incorporate this as feedback in processes.

4. **Total customer service (Customer satisfaction)**
   To meet market quality requirements and improve customer satisfaction, we:
   1) Actively feed back the various customer quality requirements to the manufacturing and design processes.
   2) Provide sufficient information services.

Chapter 2. Quality Integration

1. Quality Assurance System (Quality Assurance Organization Overview)

1-1. Quality Assurance Organization

Figure 2-1-1 shows the Company's quality assurance organization overview to explain the overall quality assurance activities.

In Figure 2-1-1, the President of the company operates the company's quality assurance meeting concerning overall quality assurance (quality management systems and quality risk management systems) at the Company with members including the Division Managers and Technology Executives through the Chief Quality Executive and Representative Director, and strives to maintain and improve the overall quality assurance system.

The Quality Planning Department formulates basic policies and regulations for overall quality assurance and plans, supervises, and promotes overall quality assurance activities.

The Division Quality Department strives to maintain and improve the quality and reliability of developed products. It conducts concrete activities to resolve the complaints of customers and quality problems and constantly gathers and analyzes market quality information and provides feedback to related departments. In addition, Division Quality Assurance Meetings are held by the Division General Manager in an effort to improve the overall quality assurance system.

The Plant Quality Assurance Department strives to maintain and improve the quality and reliability of Plant products. The department is responsible for the quality assurance of incoming parts and materials, quality assurance of the manufacturing process, quality and reliability assurance at the time of shipping, post-shipping quality services. In addition, Plant Quality Assurance Meetings are held by the plant General Manager in an effort to improve the overall quality assurance system.

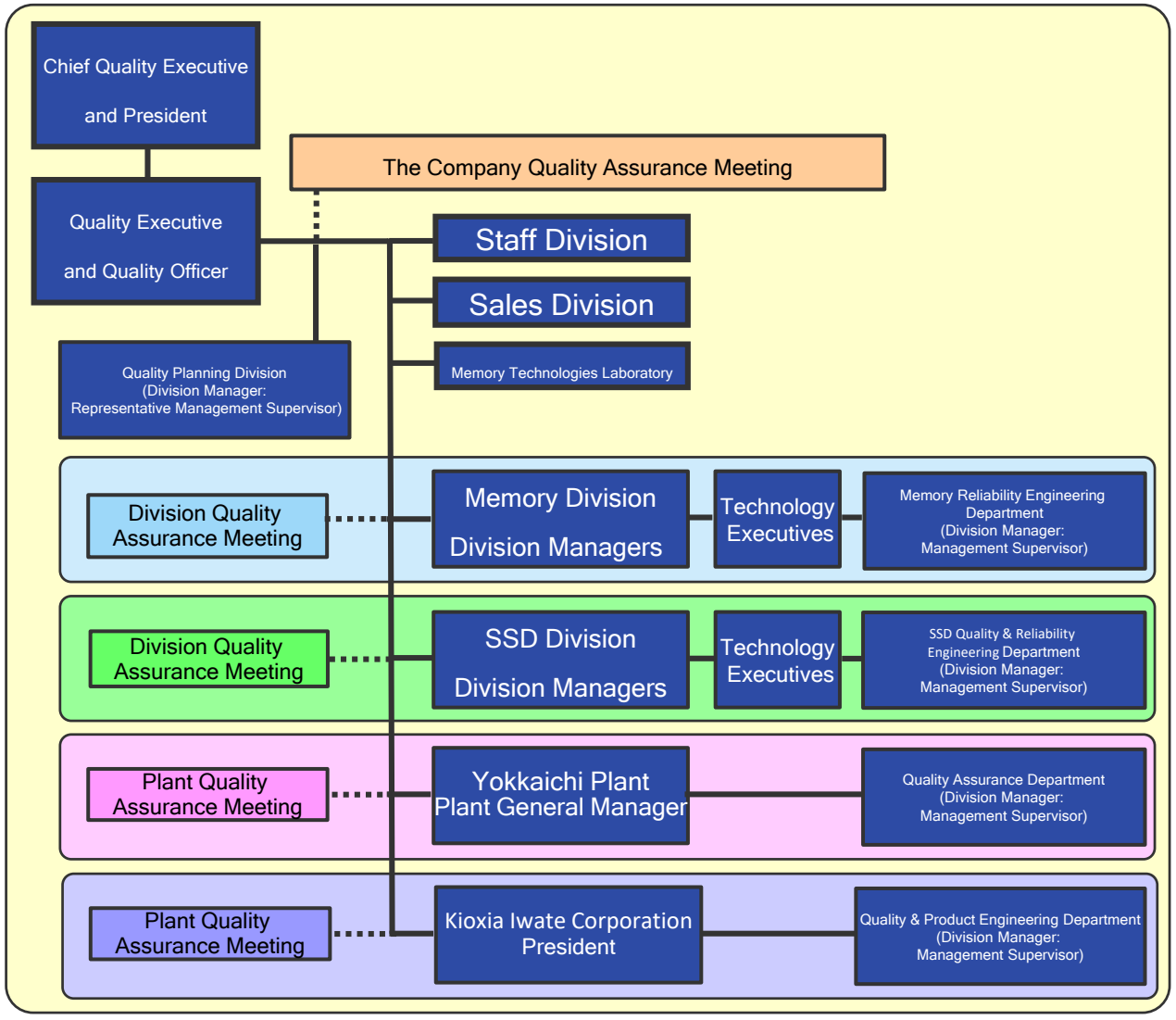

Figure 2-1-1 The company's Quality Assurance Organization Overview

1. Quality Assurance System (Quality Assurance Procedure)

1-2. Quality Assurance Procedure

The Company makes every effort to understand customer needs and incorporate the quality and reliability required by the conditions under which the products will be used by customers into product design. In the design review (DR) phase, the products are checked by each department, paying due attention to factors such as product safety and product liability.

For products under development, the Company conducts a quality and reliability evaluation based on Company reliability test standards compliant with standards such as JIS, JEITA, IEC, ANSI and JEDEC, and conducts a Design Approval Test (DAT).

If a product passes the Design Approval Test (DAT), the Engineering Department standardizes the parts and materials as well as the process and inspection plans. In addition, detailed Plant standards regarding the work to be performed are developed in the Plant where the products are to be mass-produced. A Quality Approval Test (QAT) is then conducted to evaluate the quality and reliability of sample mass-produced products manufactured based on these standards. If the product quality and reliability are approved, the Plant will be put in charge of quality assurance for the actual production process.

During mass production, the Manufacturing Department carries out process, environment and facility management, and the Reliability Engineering Department carries out acceptance inspections, change control, measurement control, regular reliability confirmation and process audits. Departments such as the Manufacturing Engineering and Production Engineering Departments also join in problem solving and in improvement and automation of manufacturing processes.

If any modification is made on products after produced in volume, a Production Approval Test (PAT) is conducted and the result is returned to the manufacturing process.

At the time of shipment, the Quality Assurance Department monitors product quality by initial quality inspection as well as reliability testing and monitoring. Furthermore, in customer related quality services such as specification development, quality and reliability meetings, and defect investigation and reporting, the Company continually strives to satisfy its customers with prompt action.

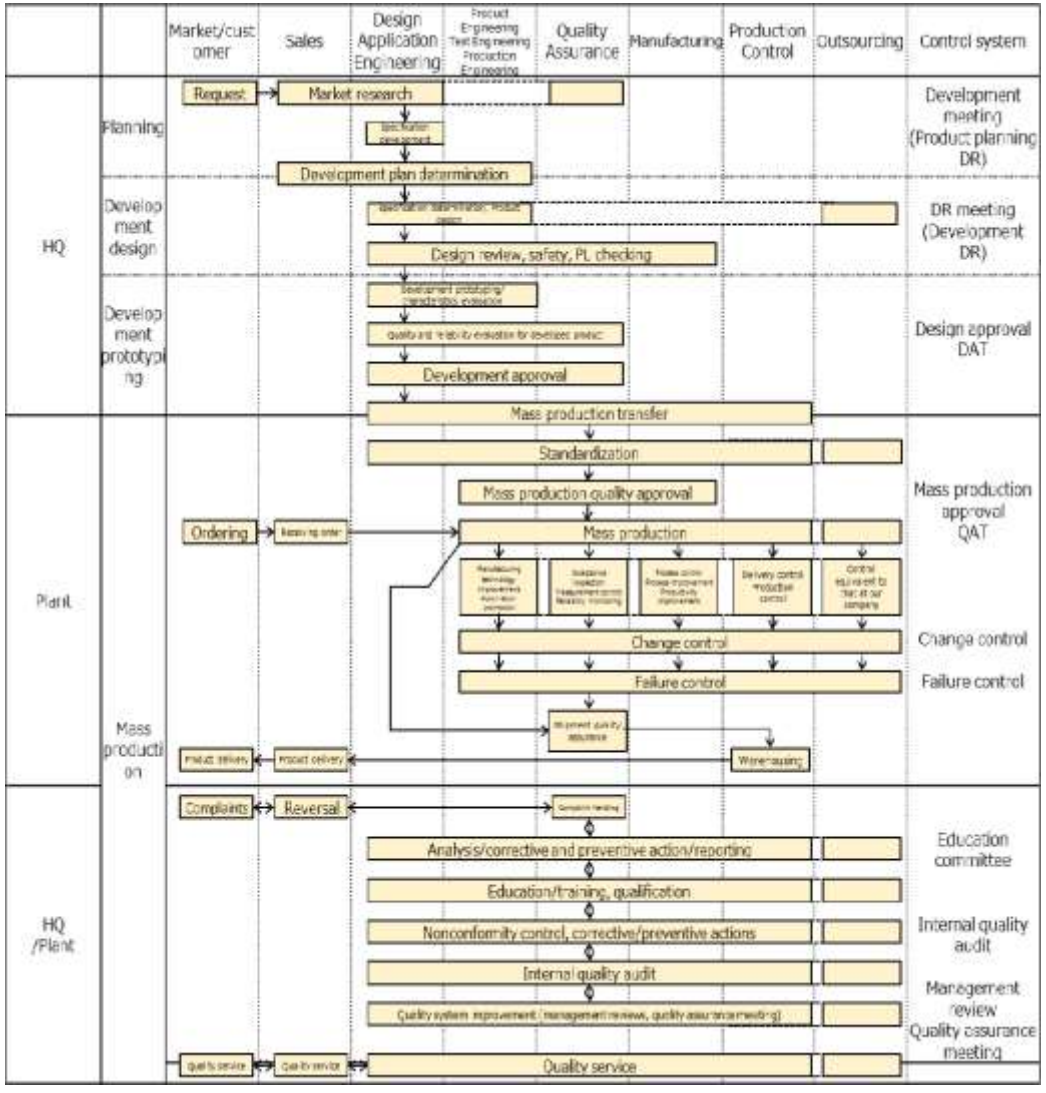

Figure 2-1-2 Quality Assurance Procedure for Semiconductor Products

2. Quality and Reliability in Product Development and Design Changes

Overview

The Company's semiconductor products are manufactured for a variety of applications, from consumer products to general industrial goods, and automobiles. This section describes the system for developing products of high quality and reliability, from product planning to mass production.

2-1. Planning

When developing a new semiconductor product, first and foremost sufficient market research must be performed to ensure that the product satisfies customer objectives and the required quality and reliability, and to ensure the product's general marketability. The Company classifies its products, according to customer applications, into two groups: general-product and high-reliable product that are graded on quality.

The Sales Department, Application Engineering Department and Quality Assurance Department thoroughly survey the type and actual operating environment of the device in which the product will be used. Circuit conditions, target reliability, design derating, operation conditions and maintenance control are also investigated, in addition to initial functionality and component failure rates. They then determine the specifications for development that incorporate the target reliability and subsequently formulate the development plans.

2-2. Development Design

The quality of semiconductor products depends largely on the design. Product design is based on development specifications carefully studied during the planning phase. Circuit, layout, process and structural designs of sufficient design tolerances are comprehensively considered so as to allow variance in processes and to achieve a design with integrated reliability.

To ensure design quality, a design review is held to deliberate on the design from every perspective, and confirm factors such as design standards, rules and safety. Design review participants include departments such as Development and Design, Manufacturing Engineering, Application Engineering, and Quality and Reliability. When a problem arises, a design review is conducted.

After the design review, a characteristics evaluation mainly designed to verify target characteristics and functions is performed using trial products, and a design approval test (DAT) is conducted with an emphasis on accelerated testing under assumed usage to verify the target quality and reliability. The design margin and limit levels are ascertained based on these results. In the unlikely event that a defect is found, the state of the defect is surveyed and various analyses are performed from the perspective of failure physics to determine the cause, and the results are fed back to the design and manufacturing departments so as to improve quality and reliability.

After completion of the above evaluations, a DAT review meeting is held and, once approval is obtained, the trial production phase is entered.

2-3. Trial Production Approval

During the trial production approval phase, quality and reliability evaluations are conducted to maintain the designed quality and reliability and ensure continued stable production, and a quality approval test (QAT) is conducted to identify process capability, i.e., variations and yields, from the viewpoint of initial flow control.
Based on the evaluation results, the standards used are assessed with respect to appropriateness and information feedback is improved.
Product instructions, QC process charts and other work standards required for production are then prepared, and measurement instruments for manufacturing equipment, jigs and tools are adjusted. After these, evaluation are conducted with trial samples.
Lastly, a QAT review meeting is held to review the above items and, once approval is obtained, a production transfer meeting is held and the mass production phase is entered.

2-4. DR/AT System

The Company develops products using the Design Review/Approval Test (DR/AT) system.

Design Review (DR) System

At the end of the design phase, a design review is held with the participation of the Development and Design, Manufacturing Engineering, Application Engineering, and Quality Assurance departments. During the meeting, design standards, design rules (including studies of past incidents), and Contractual Liability/Product Liability (CL/PL) items are confirmed and evaluation standards that take into consideration the various elements that affect the application, quality and reliability of the trial product are deliberated upon from various angles, based on departmental knowledge collected using independently developed design review check sheets. In particular, due attention is paid to the confirmation of safety, also taking into consideration international safety standards (UL, VDE and others).

The design review results are used as a basis for redesign and for measures such as the addition of AT test items.

Approval Test (AT) System

The approval test (AT) is performed after completion of the design review. First, the engineering grade of the product is assessed and then various evaluations and tests are conducted according to the grade. Table 2-2-1 lists the engineering grades and corresponding AT classifications. In addition, a reliability test by product family unit such as the design/process family or package family is conducted to effectively implement the AT. For details, see the chapter on Reliability Testing in the Reliability Handbook.

2. Quality and Reliability in Product Development and Design Changes

2-5. Change Control

Semiconductor products are continually improved to enhance performance, decrease size, reduce cost, and improve manufacturability (such as better stability and efficiency). Changes for such improvements require detailed product evaluation and process control to maintain and improve quality and reliability.

The previously described evaluation and design review/approval test (DR/AT) system checks and evaluates improvements and changes, preventing quality problems that may arise in association with such improvements and changes.

If a change or improvement requires modification to product structure, functionality or characteristics, or will have a significant effect on reliability, customer approval is obtained in advance. The Company has established the change control system shown on the right for this purpose.

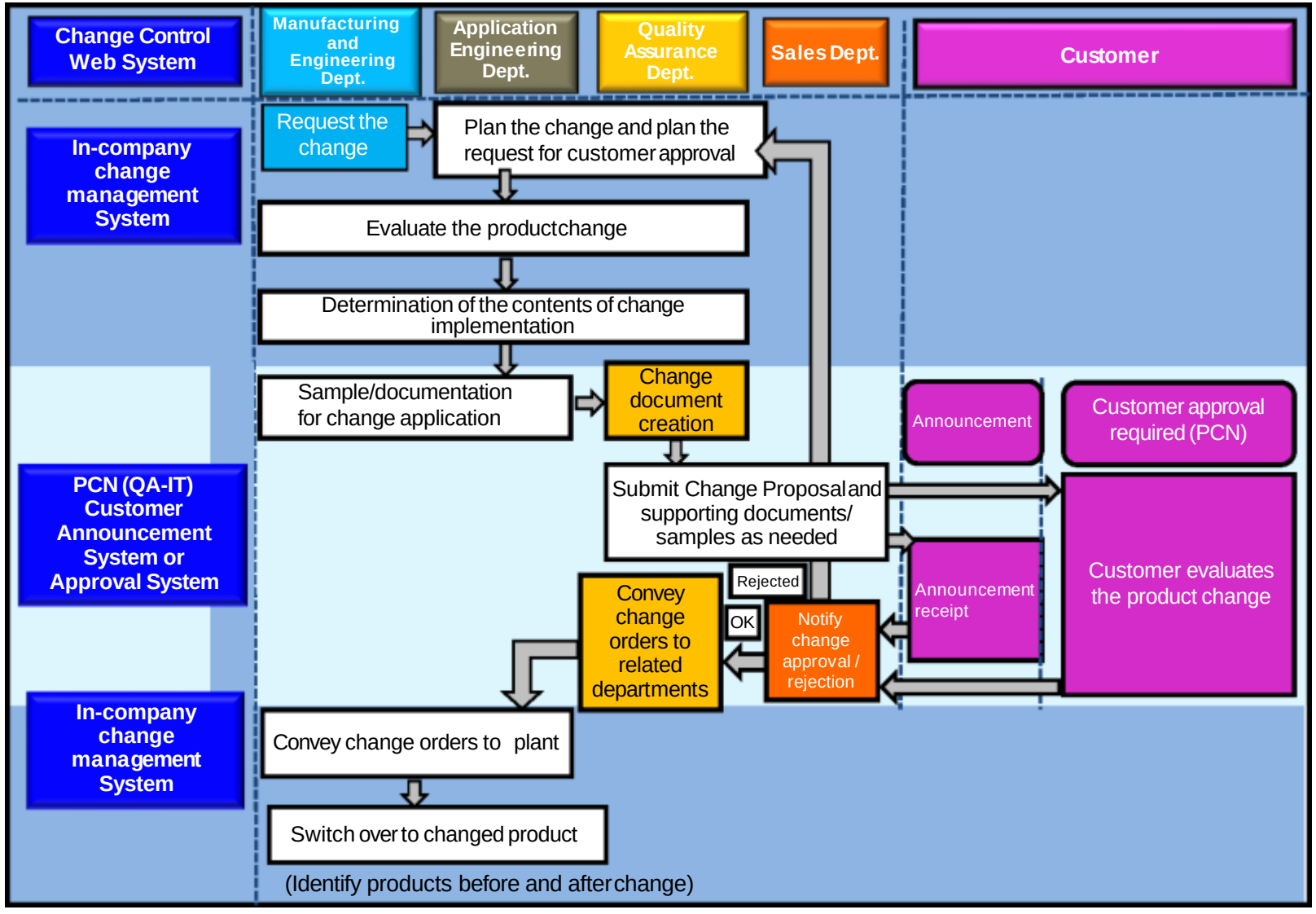

Figure 2-2-1 Change Control Procedure

3. Control of Parts, Materials and Subcontracting

3-1. Parts and Materials

The assurance of high-quality parts and materials for the manufacturing process is essential to continued stable production at the designed levels of quality and reliability. Therefore, the specifications and required quality standards for parts and materials are clearly defined in the manufacturing design phase. This information is used in the incoming parts and materials inspection and approval process (in the case of chemicals, periodic analysis).

A number of different measures are carried out to ensure thorough management of parts and materials procured from outside vendors. This is achieved through a quality assurance agreement with outside vendors, systemization of the quality assurance implementation plan, guidance and education for quality control (trend management, etc.), management guidance based on the ISO 9000 Series, and periodic process auditing.

With respect to the environment, green procurement is promoted. For details on green procurement, please refer to the chapter on Environmental Activities.

In addition, parts and materials are stored in an appropriate environment in accordance with established rules to prevent deterioration over time and assure quality. For details, see the chapter on environmental measures.

Table 2-3-1. Procedure for Authorizing New Outsourcees/Parts and Materials Manufacturers

Item	Description	Main responsible department
(1) New Outsourcees/Parts and Materials Manufacturers Specifications Meeting	We meet with new outsourcees/parts and materials manufacturers based on the purchase specification prepared by the Company regarding the parts and materials concerned.	Engineering Department
(2) Selection of Outsourcees/Parts and Materials Manufacturers	We take quotations, technology, quality level, specifications, etc. into consideration when selecting outsourcees/parts and materials manufacturers.	Engineering Department Procurement Department
(3) Prototypes	We order the prototype and confirm the technology and quality levels.	Engineering Department
(4) Contracts	We conclude the “basic contract.”	procurement department
(5) Primary Approval	We confirm that the parts and materials concerned satisfy the required functions.	Engineering Department
(6) AT Implementation	We make sure that the parts and materials concerned possess sufficient quality and reliability when used in products.	Engineering Department
(7) Executing the purchase specification	We execute specifications for purchased parts.	procurement department
(8) Manufacturer Approval	We audit the manufacturer's outsourcer’s/parts and materials manufacturer’s quality assurance system and production line and confirm that products of sufficient quality are ready for mass production.	Quality Assurance Department Procurement Department
(9) Secondary Approval	We confirm that the quality level of the parts and materials concerned is at the same level as the primary approval result, including variations.	Quality Assurance Department Procurement Department
(10) Executing the “Quality Assurance Agreement”	As a rule, outsourcees/parts and materials manufacturers are to sign the “Quality Assurance Agreement.	Quality Assurance Department Procurement Department

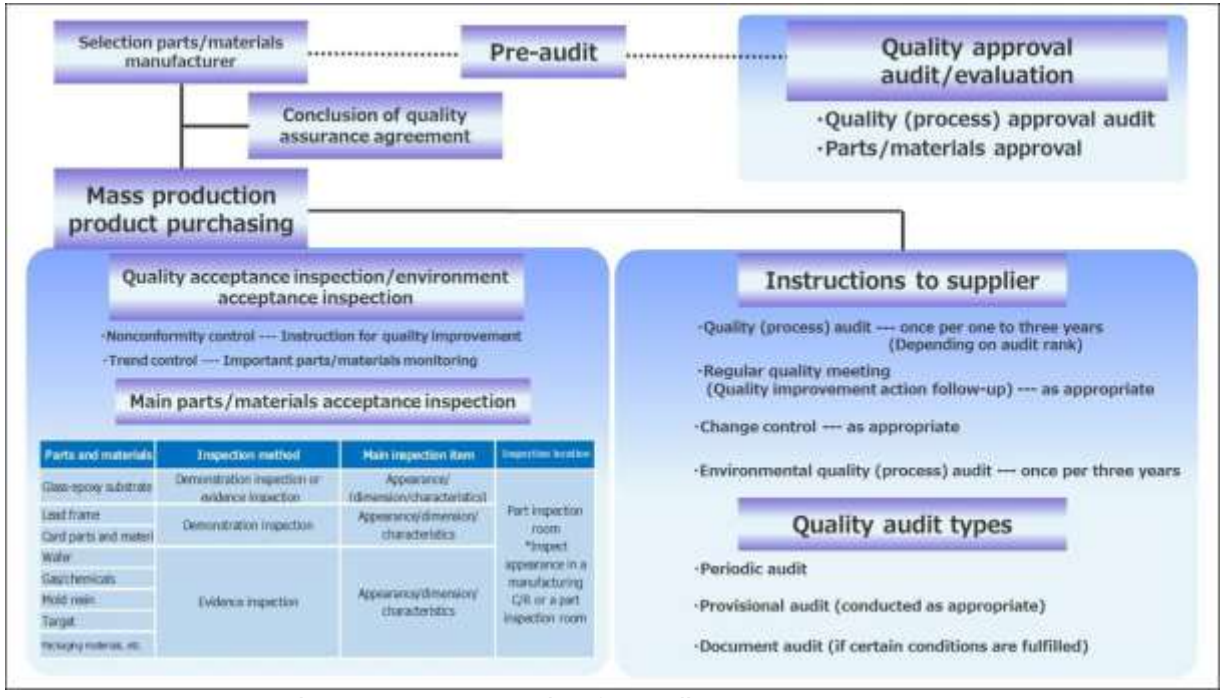

Figure 2-3-1. Example of Supplier Management

3. Control of Parts, Materials and Subcontracting

3-2. Subcontracting(Outsourcees)

When selecting an outsourcee to do part of the semiconductor product manufacturing process, items such as QC, management, technology and facilities are investigated and confirmed.

After production starts, support is provided to aid outsourcees in quality and engineering training and guidance, and in facility planning. In addition, periodic quality audits are performed to check the process control and environment status. Furthermore, outsourcee quality meetings are held periodically to obtain action plans for items reported during quality audits, to verify the status of other quality items, and to provide guidance in quality improvement. Such continual improvement activities maintain and improve quality. Table 2-3-2 shows an example of an outsourcee control plan and its implementation.

Table 2-3-2. Example of Outsourcee Management

Planning			Implementation		
Overview	**Dept. in Charge**	**Related Depts.**	**Overview**	**Dept. in Charge**	**Cooperating Depts.**
(1) Outsourcee selection (a) Management survey (b) Engineering status survey (c) QC status survey (d) Facility and other surveys	Production	Engineering Manufacturing QA	Business activity survey / Engineering level survey Specialty experience and development capability survey QC system, job instruction availability survey, validity check Facility control and measurement control survey Material control status survey Contractual arrangements	Production	Engineering Manufacturing QA
(2) Outsourcee quality control	QA	Engineering Manufacturing Production	Process control survey and guidance Quality assurance meeting	QA	Engineering Manufacturing
(3) Outsourcee technology guidance	Manufacturing	Engineering Production	Dispatch of engineer upon request Communication meetings as needed Technical guidance	Manufacturing	Engineering
(4) Outsourcee evaluation	QA	Engineering	Regular quality audit	QA	Engineering Manufacturing

4. Manufacturing Process Control

4-1. Facilities

The Company establishes facility control regulations to guide the improvement and expansion of production facilities and the implementation of facility safety control. To maintain functionality, facility control incorporates the concept of total productive maintenance (TPM) whereby specific methods, such as facility inspections at the beginning of work, are defined and self-imposed/planned safety measures and inspections are implemented with the aim of identifying quality problems before they occur and stabilizing quality.

4-2. Working Environment

The quality and reliability of semiconductor products depends largely on the work environment of manufacturing processes. Cleanliness, temperature, humidity, and static electricity, in particular, require strict control.

The Company clean rooms are controlled to the level required. To maintain and improve a clean room, dust is monitored and the source of the dust is periodically analyzed and controlled. In addition, temperature and humidity are monitored and controlled as specified.

The purity of the ultra-pure water used in great amounts in the wafer process also greatly affects the quality and reliability of semiconductor products. Therefore, the water is purified using methods such as ion exchange and micron filtering, and managed through monitoring and periodic analysis.

Furthermore, the miniaturization and an increasing variety of packaging has led to a growing problem with device failure due to electrostatic discharge (ESD). The Company has therefore created guidelines for controlling ESD effectively, particularly during the assembly process.

4. Manufacturing Process Control

4-3. Process Control

Semiconductor products are formed through a combination of component processes that include wafer processing including oxidation, diffusion, deposition, pretreatment, etching, ion implantation and photolithography, and assembly processing including dicing, die bonding, wire bonding and molding.

SSD products are formed mainly through component mounting and testing processes.
The processes are controlled through an online system (travel sheet is used for some processes), and the production record including the conditions, processing start and end time, instruments used, workers, actions during failures for each is clearly recorded.

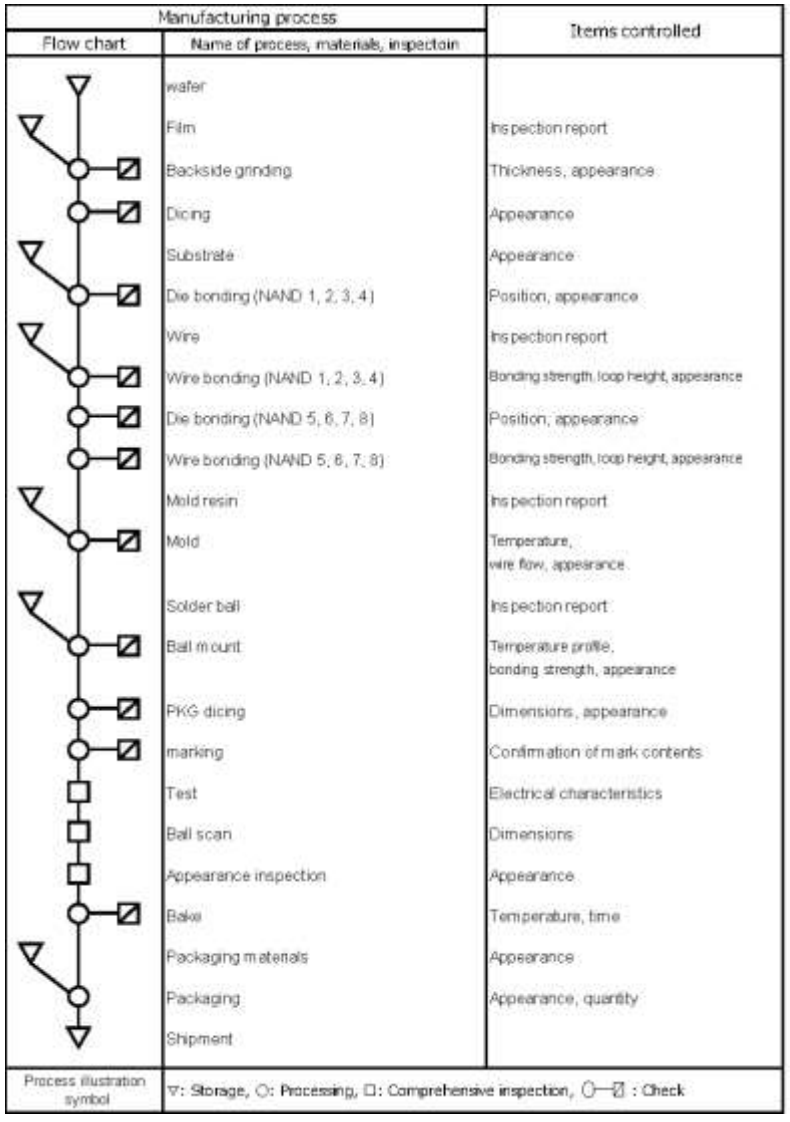

Figure 2-4-1. Example of Memory QC Process Diagram

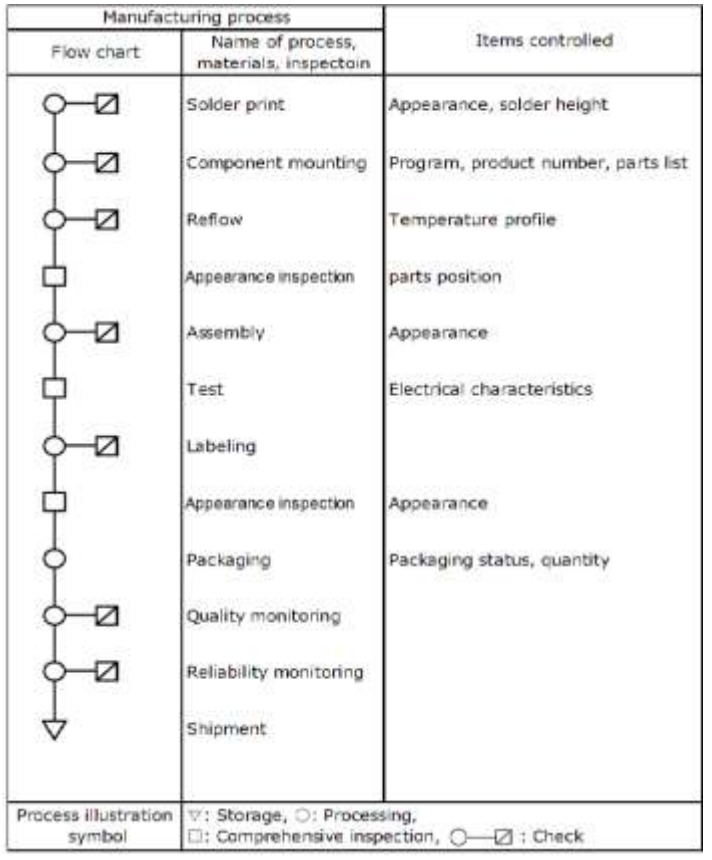

Figure 2-4-2. Example of SSD QC Process Diagram

5. Identification and Traceability

5-1. Processes

To control materials in processes and clearly define manufacturing history, the Company employs the following identification control methods:
Storage racks and containers for materials, semi-finished, finished, repaired and returned products are identified by shape, color and signage to ensure that the storage and processing status of each item is clearly understood. At manufacturing process inspections and final inspections, the inspection status (before inspection, inspection in progress, inspected) is indicated so that it is clearly understood.
The process history of lots located amidst manufacturing processes is clearly defined using travel sheets and check sheets.

5-2. Products

Product identification is controlled by marking production lot codes on products so that the manufacturing history of any product can be traced. The figure to the right shows the typical Company production lot code assignment method.

The manufacturing history can be traced from the Company control trace code (production lot code) printed on the internal carton box label and weekly code. If marking of the production lot code is not possible due to package size restrictions, manufacturing history for the product is traced from the Company control trace code and weekly code marked on the internal carton box label.

For SSD, the manufacturing history can mainly be traced from the Company control trace code printed on the internal carton box label and the serial number of the product label.

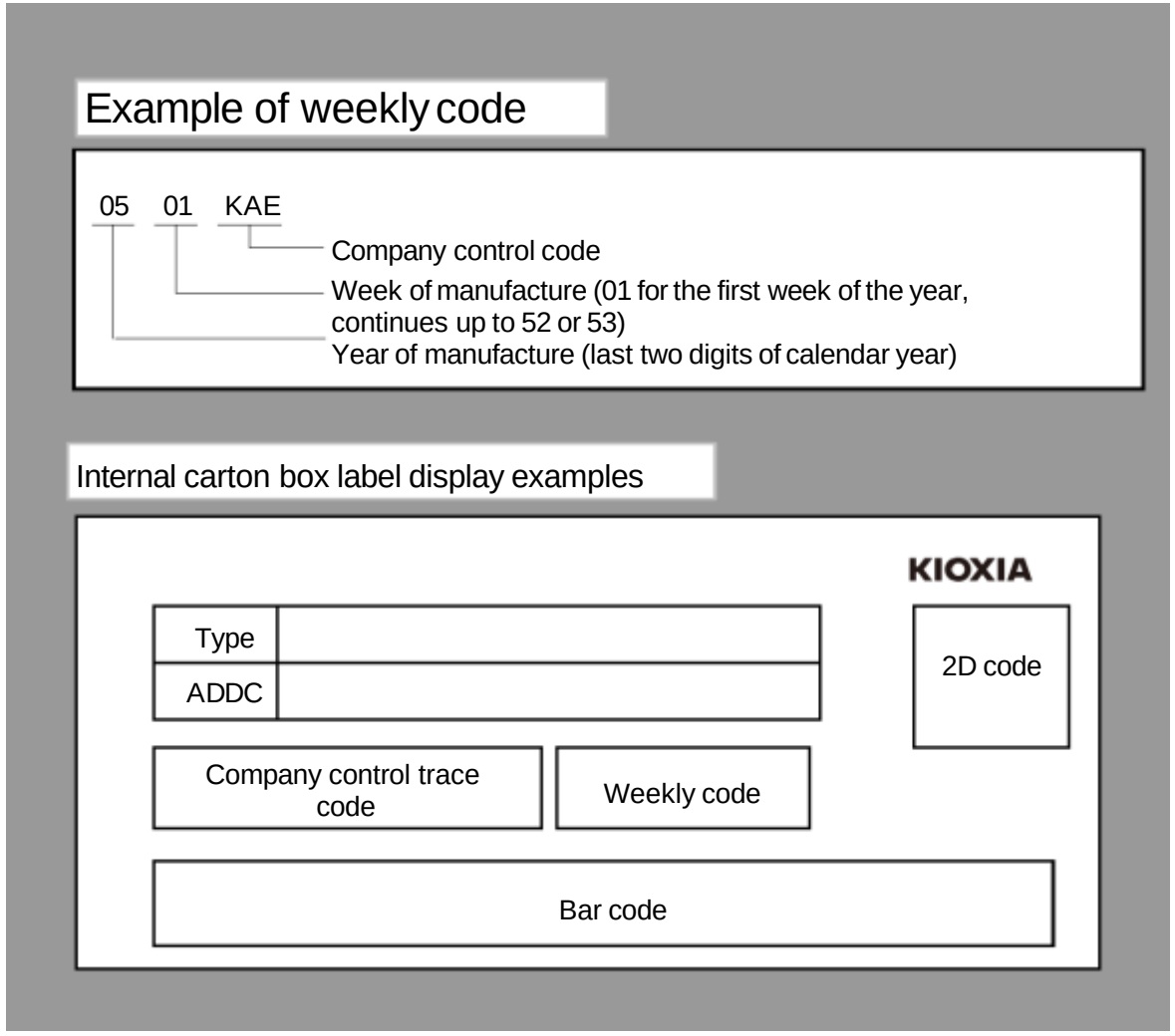

Figure 2-5-1. Various Code Display Examples

6. Action at the Time of Failure

For defects in the manufacturing process, parts, or products, we investigate the cause and confirm the affected range, and promptly handle the target products, parts, and processes using the path shown in Figure 2-6-1.
If the defects discovered during the process extend to products that have already been shipped, we promptly contact the customer and handle the products.
In addition, we conduct a root cause investigation and carry out corrective and preventive actions, including quality system changes. Depending on the details, we perform corrective and preventive actions after obtaining prior approval from the customer.
After corrective and preventive actions are taken, we confirm the effect and verify the details of their implementation. This series of details is reported to relevant departments and kept as quality records, and is deployed horizontally across the organization as necessary to prevent recurrence.

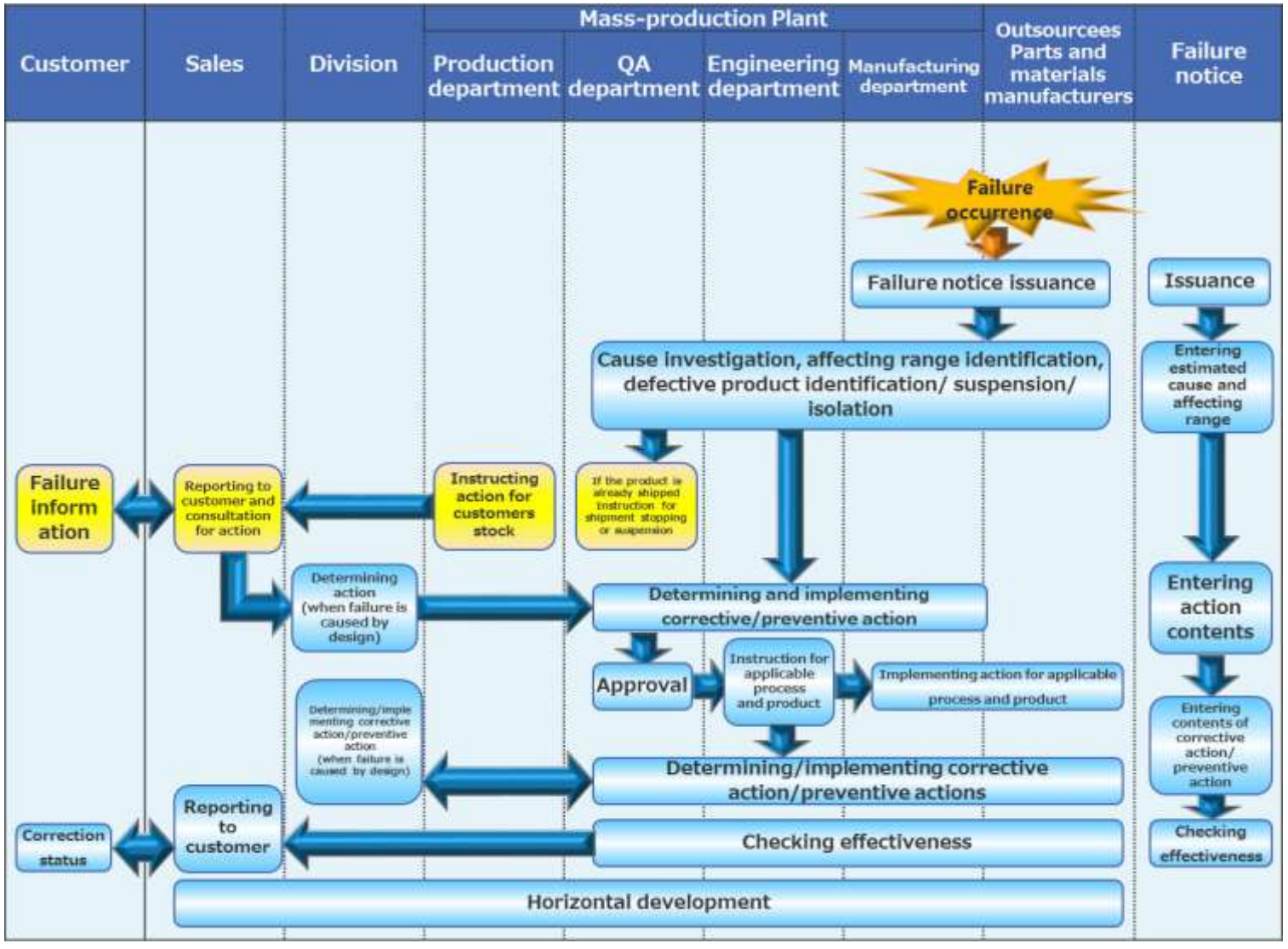

Figure 2-6-1 Flow of Action at the Time of Failure

7. Statistical Process Control

We use statistical methods for each process, quantitatively analyze the variation affecting quality, and use the results to improve quality.

Specifically, using methods such as FMEA as shown in Figure 2-7-1, we determine the critical control items based on those that affect quality and reliability, had serious trouble in the past, correlate with defect mechanisms, etc.

Based on that, we investigate the capabilities of each process, carry out process improvement on items with a poor process capability index level, and perform continuous quality improvement activities. A computer integrated manufacturing (CIM) system is employed to improve data entry efficiency and enhance Statistical Process Control (SPC) effectiveness.

Furthermore, educational curricula are incorporated in training to promote the use of statistical methods among operators and engineers, so as to broaden the use of SPC and further improve quality.

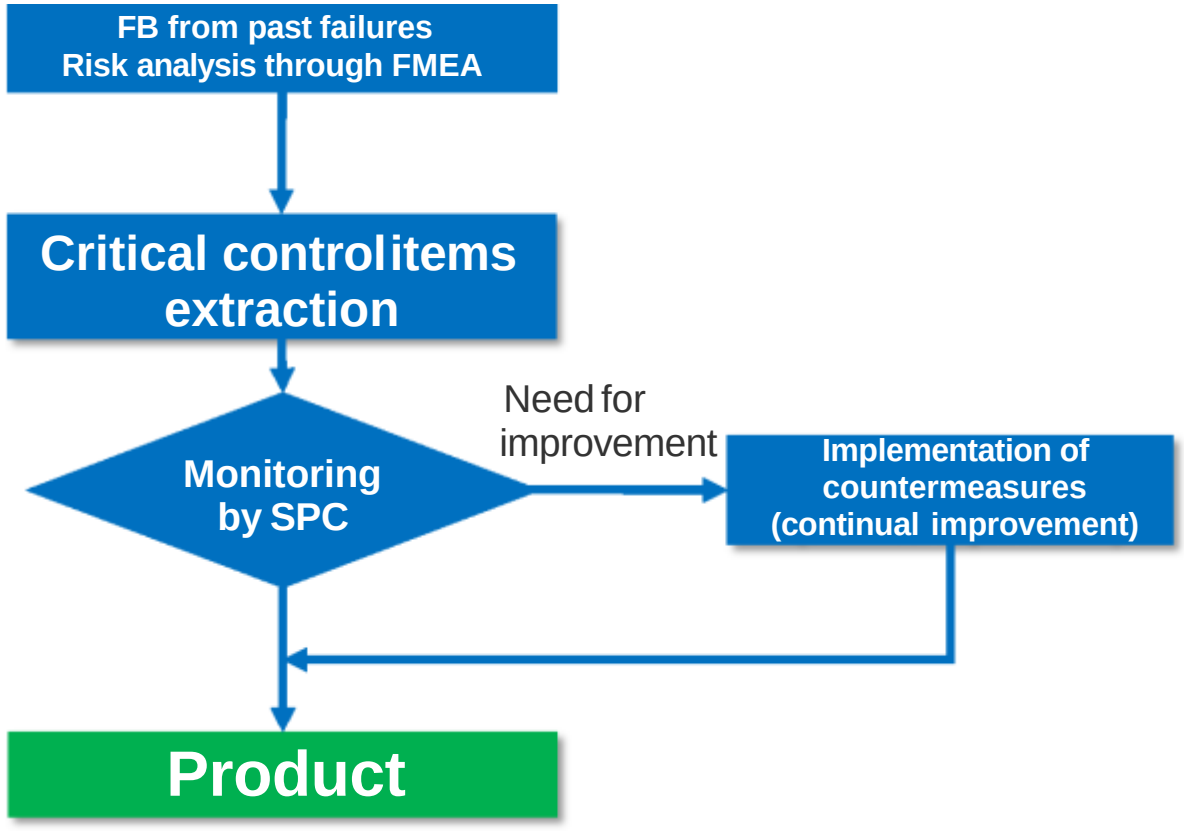

Figure 2-7-1. Example of Statistical Quality Control Flow

8. Product Shipment Quality Assurance

To guarantee the quality and reliability of semiconductor products, it is important to incorporate quality and reliability in the products during the design and manufacturing stages. We conduct all electrical characteristics inspections in the manufacturing process to confirm there are no quality control omissions at each stage and to ensure the quality and reliability of the final products.

We also regularly monitor quality and reliability levels.
Quality monitoring is used to verify the initial electrical characteristics and appearance of randomly selected sample produc ts. This process assures the quality and reliability of shipped products. Conversely, reliability monitoring is used to verify the reliability level based on the end product process or package family type.
Quality/reliability levels are confirmed, thereby aiding in quality and reliability level maintenance and improvement of the manufacturing process.

The Company works to improve quality and reliability levels with the aim of achieving quality and reliability that satisfies customers.

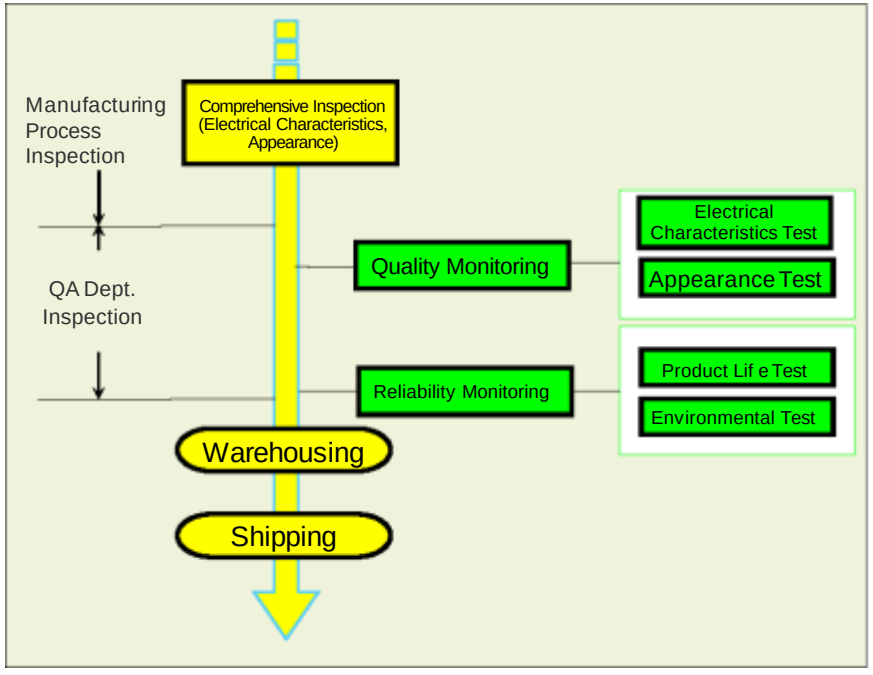

Figure 2-8-1 Inspection Procedure

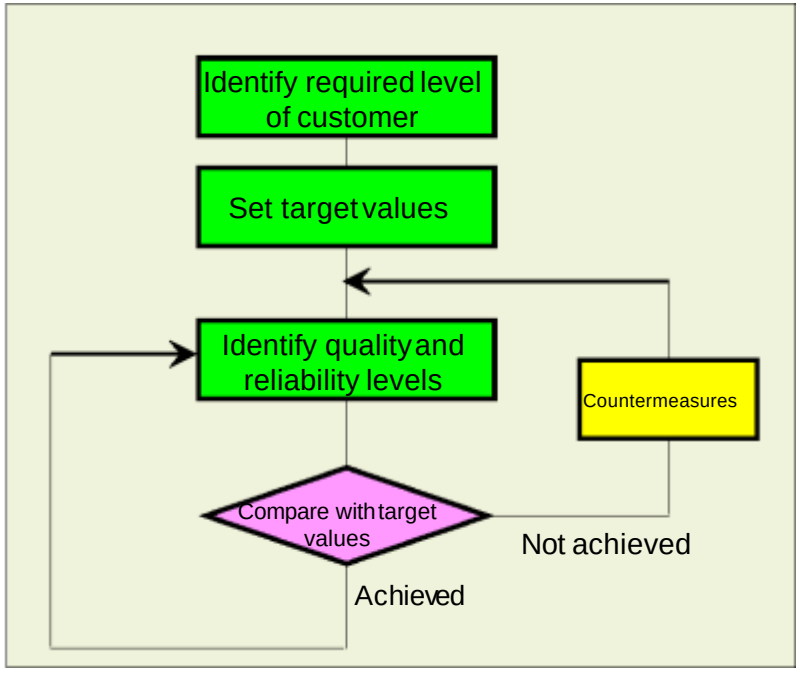

Figure 2-8-2 Quality and Reliability Level Confirmation Procedure

9. Logistics Quality Management System

The Company has established a proprietary logistics management system that provides just-in-time delivery to customers. Quality management at Company warehouses around the world complies with common standards to achieve the logistics system with unified control that satisfies customers. Products manufactured at the factories are distributed to the right customers according to their orders using this logistics management system. Furthermore, as a logistics quality management activity, the Company makes efforts to improve package management and transportation management.

9-1. Package Management

In consideration for the global environment, we believe that it is important to manage package materials and their specification in order to protect products and packages in transit from various damage and ensure their quality and reliability. The Company manages product packages based on the following two points:

Firstly, out of consideration for the global environment, the Company promotes the selection and use of package materials based on the Company Green Procurement guideline and that satisfy the 3Rs (Reuse, Reduce, and Recycle).

Secondly, various characteristics evaluations including finish, sizing, mass, and electrical characteristics and verification through transportation tests are conducted to ensure that products in transit are not damaged and product quality and reliability is maintained. Also, in consideration for support of customer equipment that will incorporate or process the Company products, the Company is promoting the use of package materials that comply with JEITA/IEC standards in order to use the same types of package materials used by other semiconductor manufacturers.

9-2. Logistics Quality Improvement

The Company manages logistics quality in accordance with the management points listed in Table 2-9-1. These management criteria are stipulated in order to avoid degradation in product quality. By automating the logistics system, the Company makes efforts to upgrade the capability to detect product mishandlings due to mistakes, such as incorrect labeling, made in the logistics process.

The Company promotes improvement of processing of individual claims from customers. To satisfy customer claims, the lot tracing system uses a two-dimensional code, which enhances inspection accuracy. Furthermore, the Company is promoting enhancement of logistics quality by establishing check systems in various ways such as introducing a logistics management system that complies with ISO9001 and ISO/IATF16949 and a supply chain management (SCM) system.

Table 2-9-1. Points in Logistics Quality Management

Characteristics	Cause of Quality Degradation	Possible Problem
Storage	Temperature, humidity, dust	Discoloration, deformation of packages, contamination
Handling	Mishandling (Impacts like dropping products and mishandling of sheets and forms)	Deformation of packages, contamination, mislabeling
Delivery	Vibrations and impacts	Deformation of packages, contamination
	Transportation	Destination errors, stow age control errors, delays in delivery

Chapter 3. Common Support Systems

Chapter 3. Common Support Systems

1. Education and Training
2. Document Control
   - 2-1. Standardization System
   - 2-2. Document Control System
3. Measurement Control
4. Internal Quality Audit
5. Customer Support
   - 5-1. Customer Quality Support
   - 5-2. Analysis flow
6. Specifications and Quality Agreements
7. ISO/IATF Certification Information

1. Education and Training

The Company provides education and training programs for each level and position, including programs for new employees, general employees, supervisory manager and corporate managers.

Constructive quality-related education and training is carried out based on curricula designed to maintain and improve product quality and proactively promote quality control. Figure 3-1-1 shows a quality-related education system example. Two types of education and training courses are offered: those for engineers engaged in manufacturing, engineering or quality assurance and those for onsite supervisors.

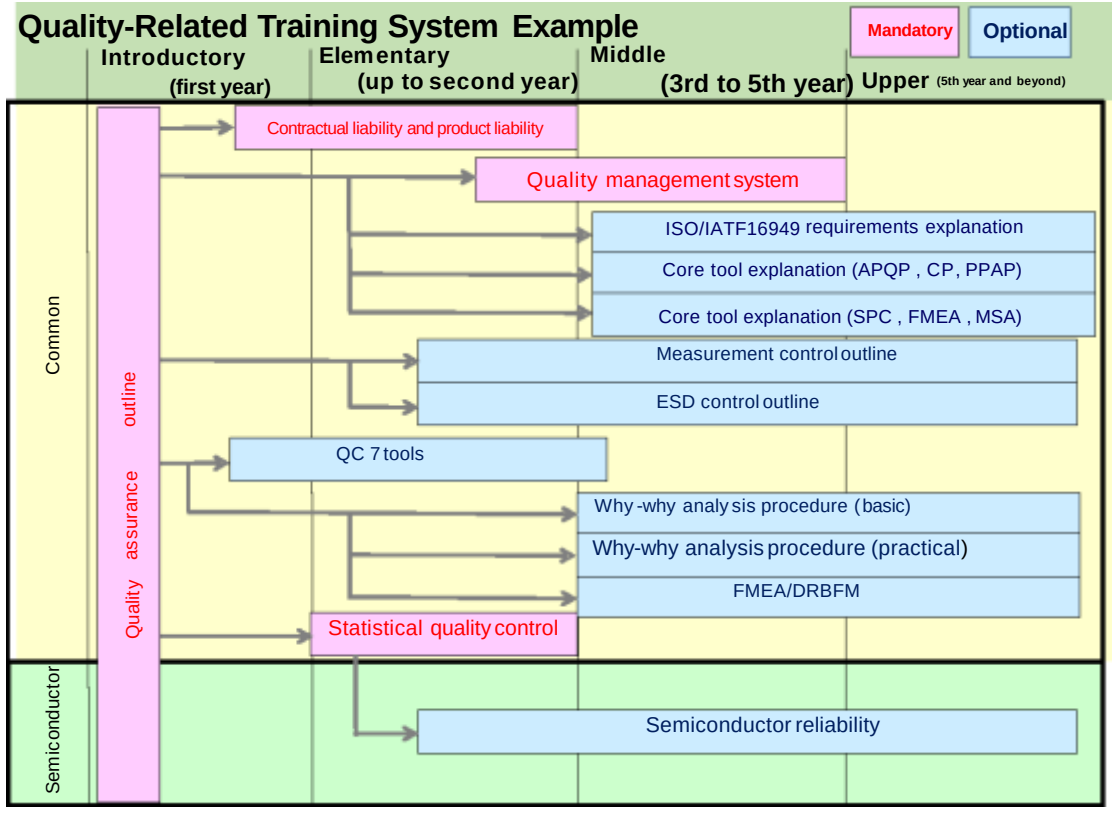

Figure 3-1-1. quality-related education system example

Courses for engineers cover a wide range of quality control education that takes into consideration the student's level of knowledge and experience.

To stably manufacture high quality and reliable semiconductors, each manufacturing department provides basic and specialized education related to semiconductor manufacturing periodically and on an as-needed basis to operators, using the qualification system shown in Figure 3-1-2.

The process of qualifying personnel for particular tasks in this way raises and equalizes the skill levels of employees, helping to stabilize quality.

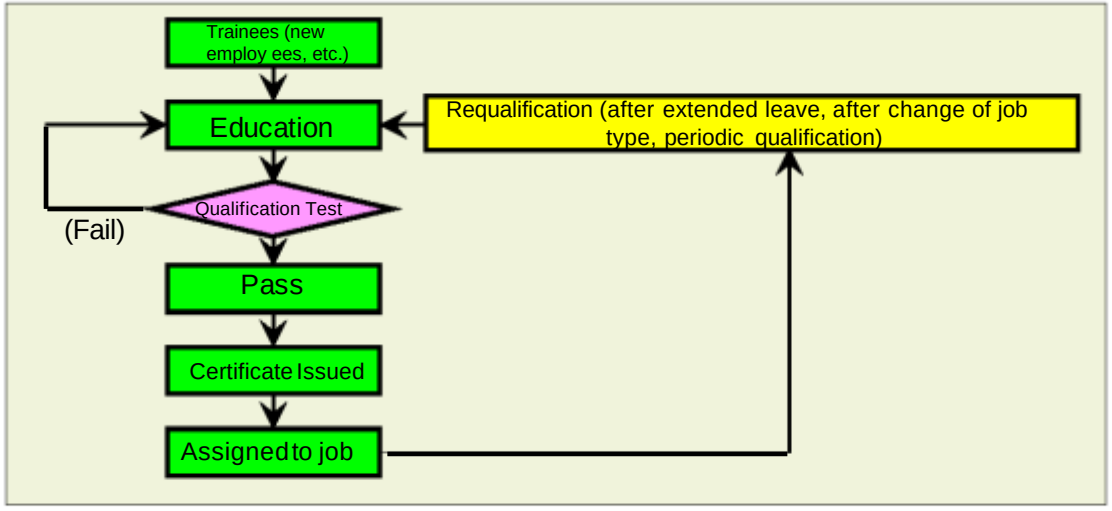

Figure 3-1-2. Operator Qualification System

2. Document Control

2-1. Standardization System

The Company standards are controlled at every phase, from design to manufacturing, using an internal network system. A procedural flow is established that ensures these standards are issued efficiently and without fail.

In addition, rules for as-needed revision and abolishment have been set so that the standards prepared are effectively utilized at all times.

Figure 3-2-1 shows how the Company standards are organized.

2-2. Document Control System

Documents and data are controlled as follows:

Performance, quality and reliability standards required by the customer and items related to quality assurance that appear in customer specifications are integrated into the standardization system as custom specifications and made known to the departments concerned to ensure appropriate utilization and proper reflection in manufacturing. (See Figure 3-2-1.)

In addition, this information is strictly controlled to ensure confidentiality.

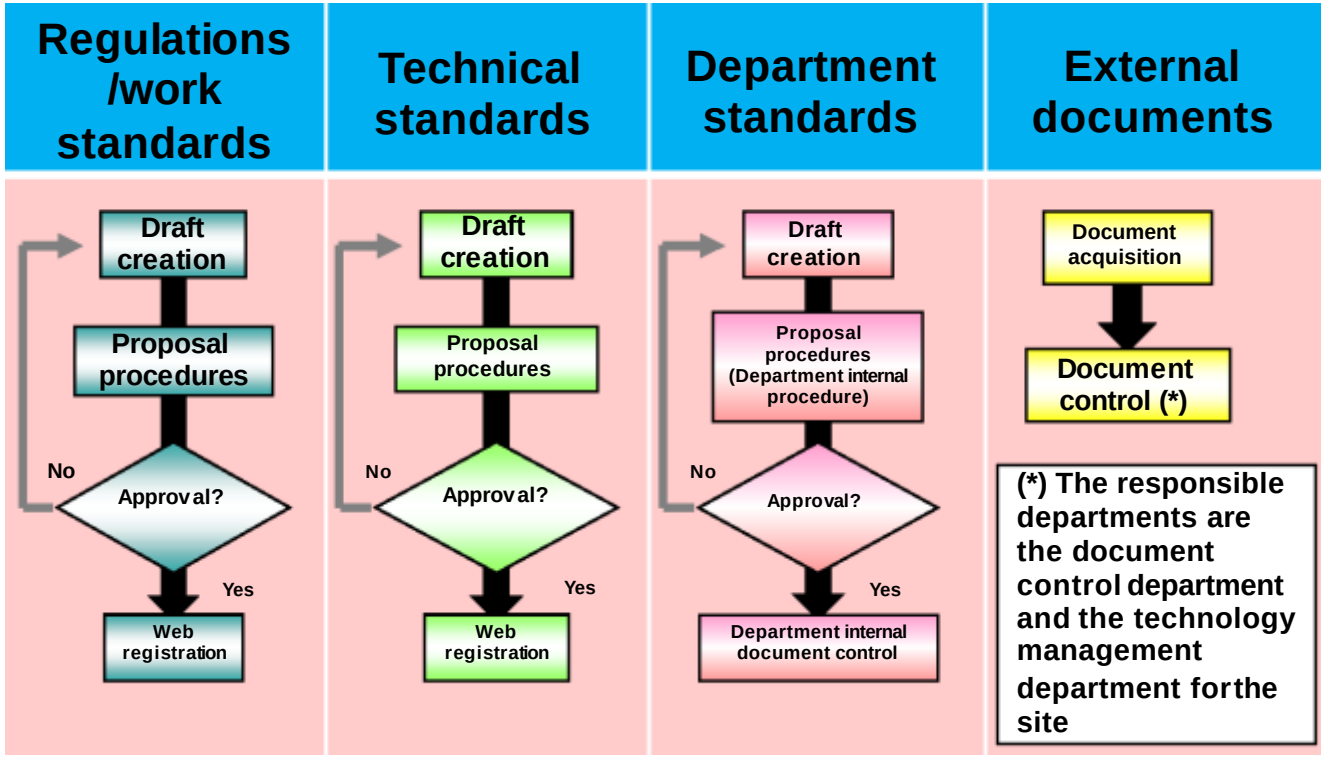

Figure 3-2-1. Standards Organization

The controlling department for quality-related documents and data is clearly identified so that the information can be effectively utilized with applicable standards. Such information includes internal approval documents and data, reliability test data and process audit records.

The retention period for these documents and data is prioritized according to the criticality of the contents and controlled in such a manner that ensures storage for the appropriate period of time.

3. Measurement Control

Measurement control regulations have been established to guide the control and use of measuring instruments.

The Company uses calibration instruments regulated by law that have been inspected and approved by authorized agencies. These instruments are periodically inspected and the results are filed and maintained. The Measurement Administrator has the responsibility and authority over management of this process.

Semiconductor manufacturing is a field that involves very small dimensions for which there are no national standards. Therefore, Company standards are formulated in cooperation with measurement device manufacturers and overseas agencies to enable tracing to the standard calibration instrument of each process. Figure 3-3-1 shows the instrumentation accuracy traceability system.

Procurement calibrations and inspections, periodic calibrations and inspections and spot calibrations and inspections are performed on instrumentation. The related log books and slips are managed by the Measurement Administrator. Approved instruments are identified by a seal that indicates the effective period and the next inspection date. Approved instruments are identified by a seal that indicates the effective period and the next inspection date.

In addition, the department that owns an instrument is responsible for daily management based on control standards.

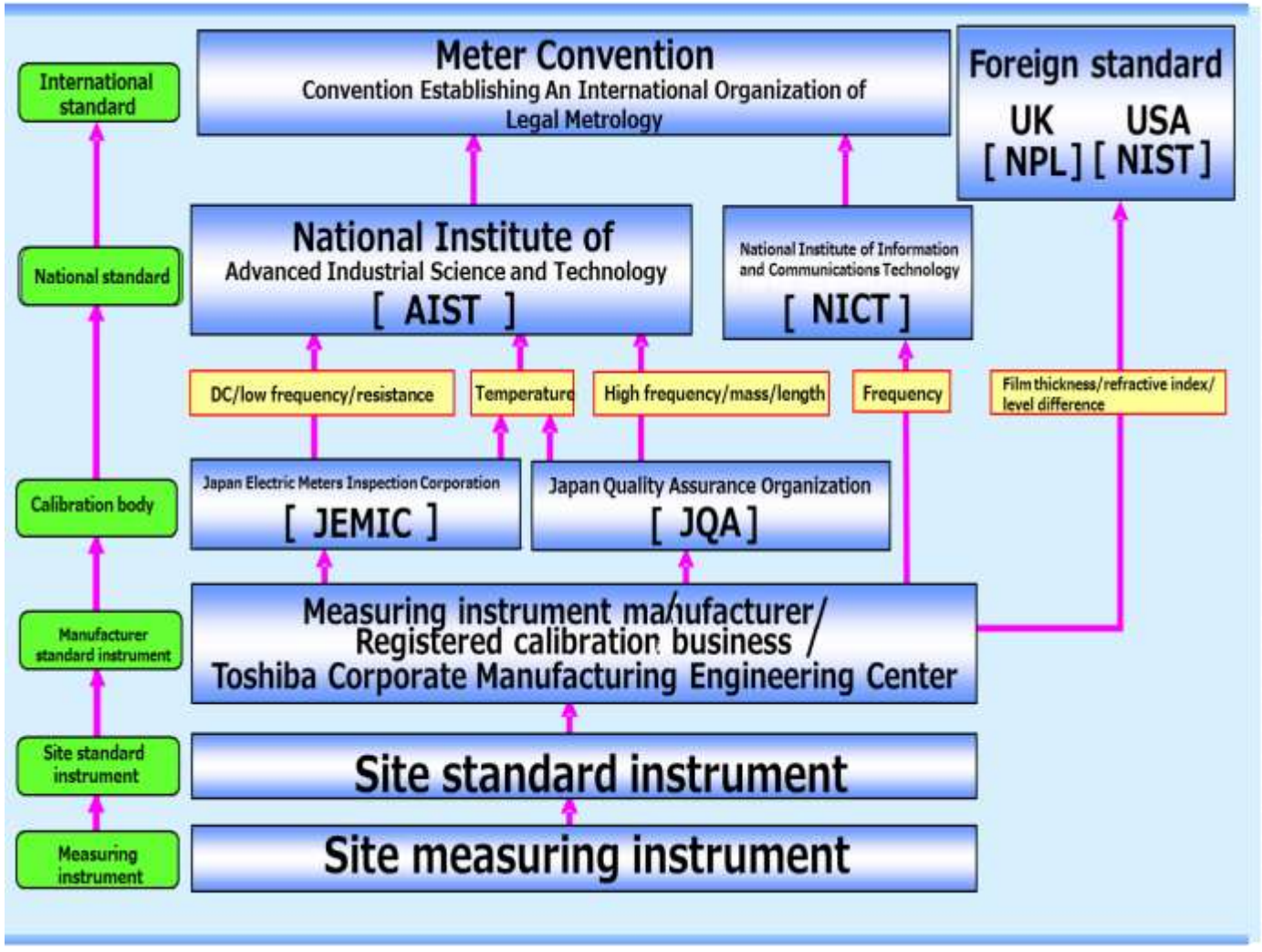

Figure 3-3-1. Traceability System Diagram for Measuring Instruments

4. Internal Quality Audit

To maintain and improve the overall quality assurance system and activities and maintain and improve product quality and reliability, an audit team conducts periodic audits on each target business process, evaluates the appropriateness, adequacy, and effectiveness of the items checked, and provides advice on, recommends, or requests remediation or improvements. Table 3-4-1 describes the main internal quality audit types and content.

Table 3-4-1. Main Internal Quality Audit Types and Content

Type	Target	Auditor	Frequency	Items Checked
Internal quality audit	Departments within scope of authentication Staff Sales Engineering Dept. Manufacturing Dept. Production Dept. QA Dept. Other	Audit team (Those who have completed the required training)	Once a year	Verification of suitability and effectiveness for ISO9001/IATF16949 requirements ・ISO: systems audit, process audit (optional) ・IATF: systems audit, manufacturing process audit, product audit
QS audit (Quality & Safety)	Division	QA Dept. Manager Technology Executive Legal Affairs Dept. Manager	Once a year	・Overall quality assurance system, document control ・Design approval mechanism, critical process control items ・Identification and audit of contracts with suppliers ・Manufacturing change control/failure control, shipment quality ・Effectiveness of corrective action for quality incidents, etc.

5. Customer Support

5-1. Customer Quality Support

Overview

The Company has established a system whereby the increasingly diverse customer quality requirements and customer satisfaction levels after product shipment are clearly identified and fed back to processes and design departments to ensure we continually response to market quality requirements.

Quality Information Services

The Company prepares the following information and materials to offer support in every phase, including the phases of product approval by customer, incoming inspection and assembly.

This information can be provided promptly upon customer request.

1. Reliability data
2. Quality materials including QC process diagrams
3. Environmental data
   Other

Quality Communication Meetings

Periodic quality communication meetings attended by customers and Quality Assurance Department members are held to maintain a relationship of trust with customers. In the meetings, the customer is provided a high level of support through information exchange and reports on defects, preventive measures and plans for improvement.

To satisfy customer expectations concerning the quality level and to maintain and further improve product quality, The Company has adopted a proactive system of cooperation, ensuring that the detailed information that cannot be checked on a daily basis is checked and that mutual goals are achieved.

Customer Support on Failures

We support customers when a failure arises. We will explain further in the following section.

Collecting Information from Customers and Feedback

The Company utilizes the delivery specifications and quality contracts that state customer requirements, failure information from customers, customer testimonies obtained from various venues such as quality communication meetings as well as the results of customer satisfaction surveys conducted by a third party to further improve customer satisfaction and obtain customer trust.

5. Customer Support

5-1. Customer Support on Failures

Through the in-house electronic system, failure information from customers is quickly conveyed from the Sales Department to the Plant Quality Assurance Department in charge of manufacturing and the Quality and Reliability Engineering Department in the Division. Both departments in cooperation conduct tracing of product information, confirmation of the actual product, failure analysis, etc. They also examine investigations and countermeasures with manufacturing and engineering departments, and submit deliveries of corrected products and failure information, etc.
In addition, failure information is fed back to relevant departments in charge of the manufacturing process, etc. to prevent recurrence and is used to improve quality and reliability.

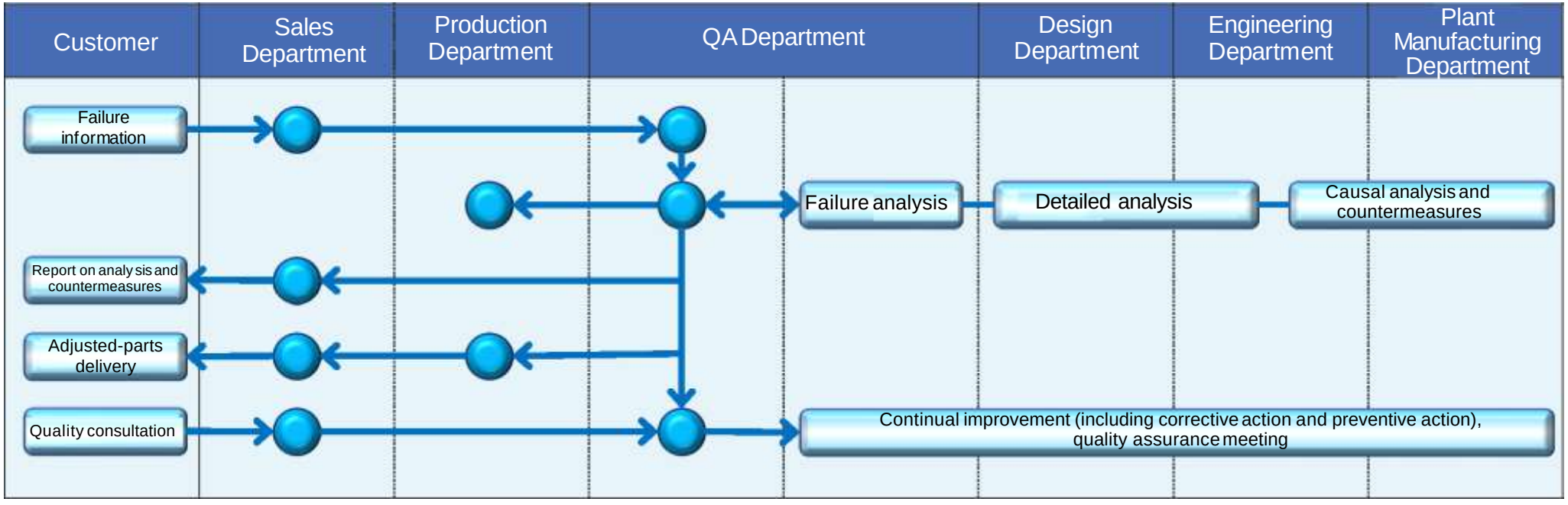

Figure 3-5-1. Customer Support Channel on Failures

5. Customer Support

5-2. Analysis flow

Figure 3-5-2 shows a general failure analysis flow chart for a memory product.
Basically, after acquiring a defective semiconductor product, we perform an appearance inspection and initial electrical characteristic evaluation, and report on the results of the reproducibility check of the failure mode. We perform a more detailed evaluation and present an interim report as necessary.
We then continue to identify the cause of the failure and make the final report, including countermeasure proposals, etc.

Refer to the “Reliability Handbook” for analysis examples.

Figure 3-5-3 shows a general failure analysis flow chart for an SSD product.

After acquiring a defective product, we perform an appearance inspection, initial electrical characteristic evaluation, and internal log investigation to check for the presence of an abnormality. (Primary level defect analysis)

We perform a more detailed evaluation on the SSD level to identify the cause of the defect and present an interim report as necessary. (Secondary level defect analysis)

If a part is defective, we conduct a defect analysis together with the parts supplier and identify the cause of the defect. (Third level defect analysis)

Lastly, we make the final report, including countermeasure proposals, etc.

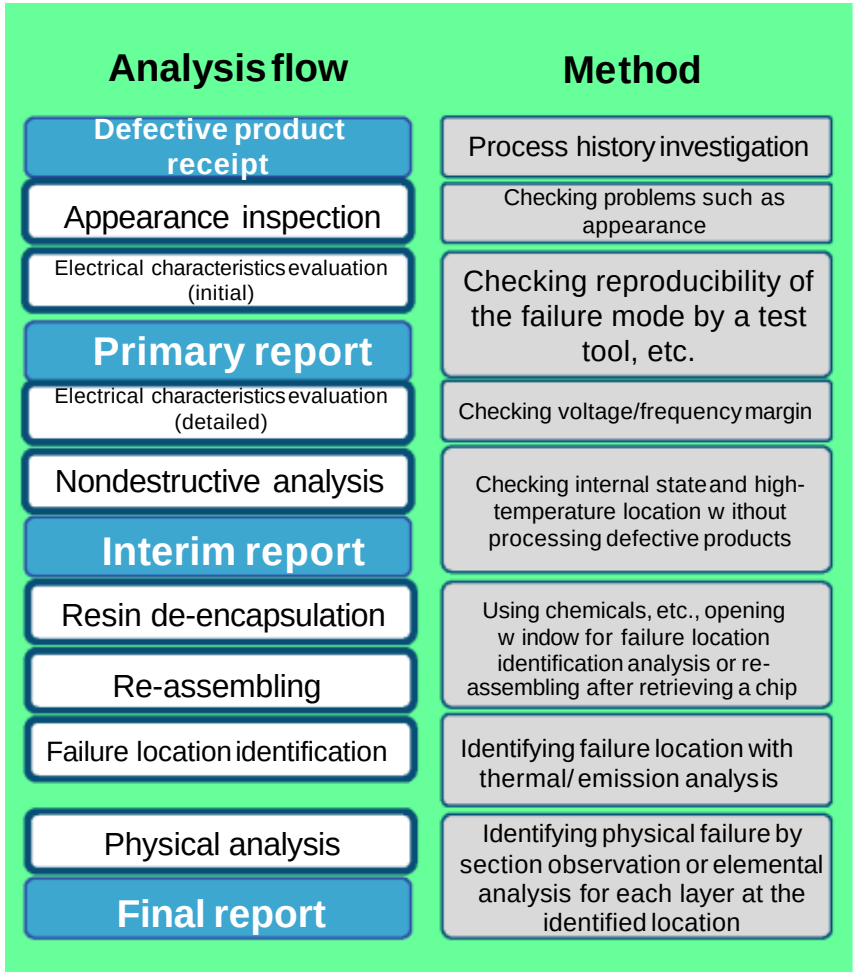

Figure 3-5-2. Memory Product Failure Analysis Flow Chart

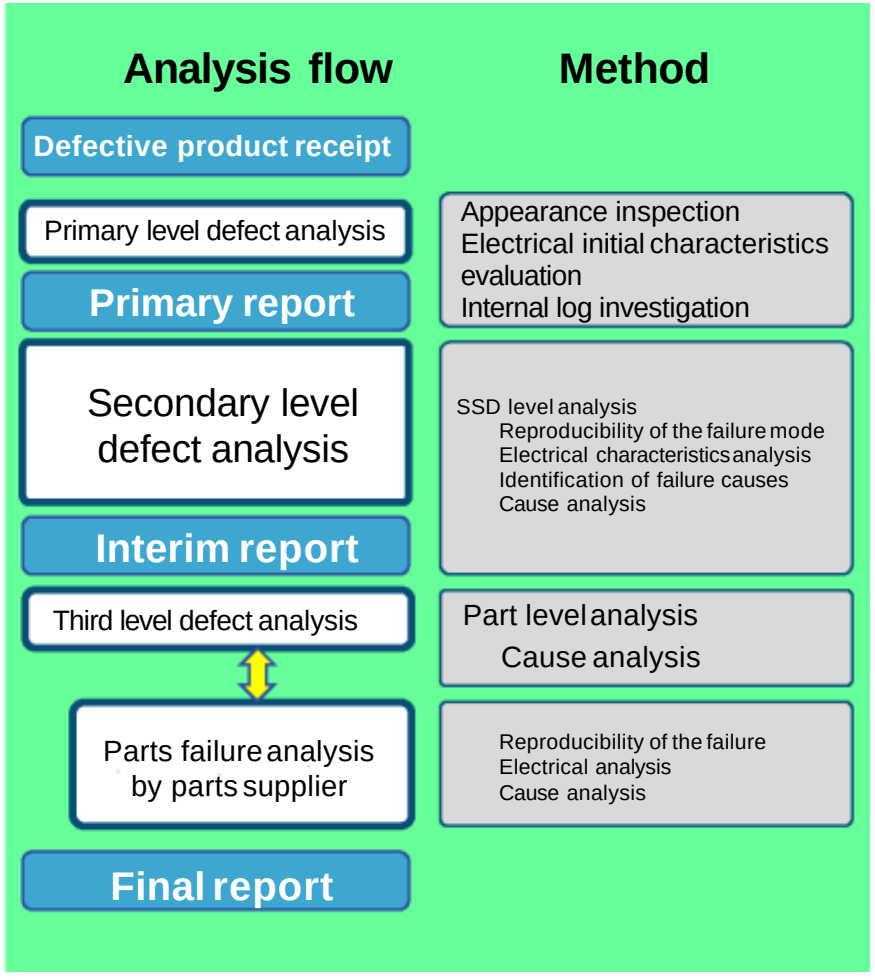

Figure 3-5-3. SSD Product Failure Analysis Flow Chart

6. Specifications and Quality Agreements

Customer requirements for performance, quality and reliability standards and other items related to quality assurance are clearly defined in the delivery specifications or quality contract. In this way, every effort is made to maintain and improve quality assurance matters that ensure customer satisfaction.
A specification issuance control system is employed to ensure that specifications are issued in a streamlined manner and controlled with absolute certainty. Figure 3-6-1 shows the procedural flow for issuing specifications.

If a change occurs in the specifications for a product to be delivered, the procedure outlined in Section 2.5 is followed after advance approval has been obtained from the customer. In this manner, the Company strives to avoid quality problems with the customer and to improve customer service.
Because the quality contract is contingent upon the “Basic Contract,” the contract is concluded as a “Quality Agreement” in accordance with customer requirements. This agreement clearly defines the obligations and scope of responsibility for both the customer and the Company.

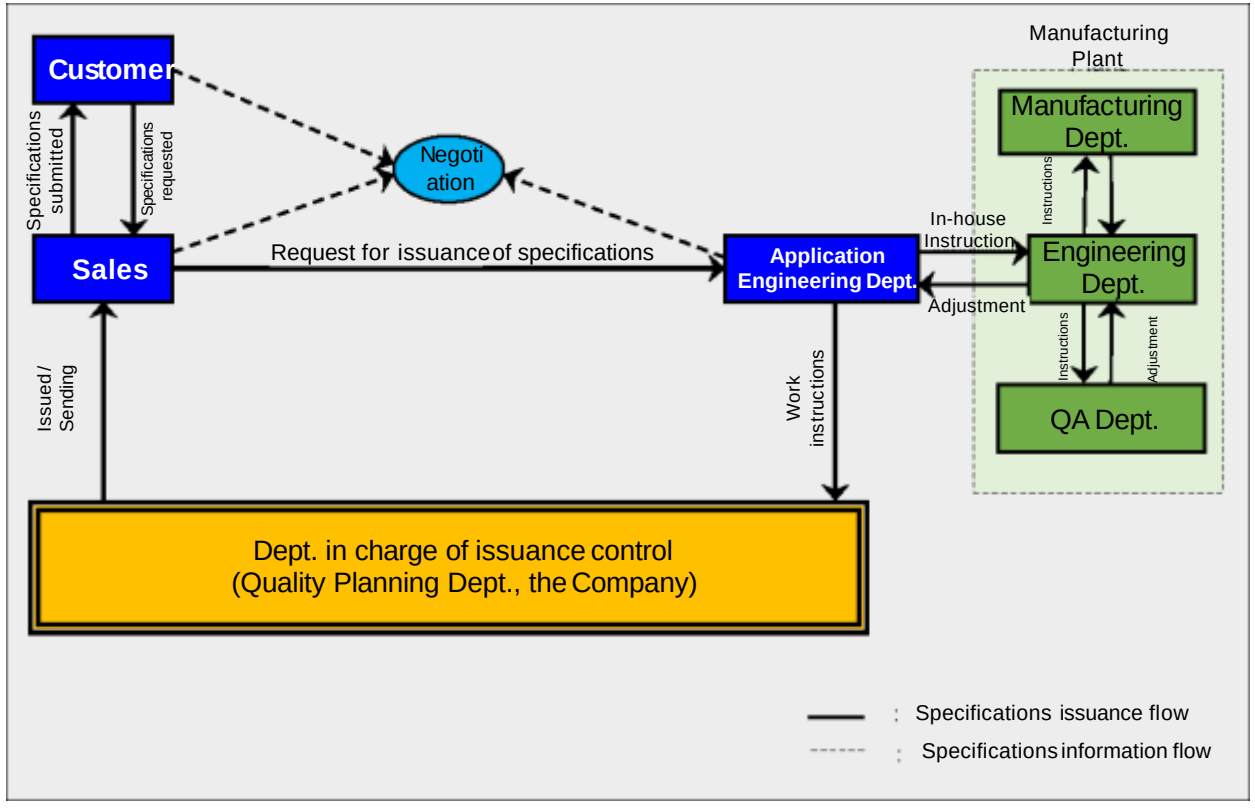

Figure 3-6-1. Procedural Flow for Issuing Specifications

7. ISO/IATF Certification Information

To satisfy the demand for quality of products from customers, we maintain a quality management system based on ISO 9001, which is an international standard, and we also carry out activities complied with IATF16949.

Table 1 ISO 9001 Certification Status

Name of Certified Body	Certification Agency	Expiration Date	Certification registration number
Sites: KIOXIA Corporation Head Office, Yokohama Technology Campus, Yokkaichi Plant, Asahi Test Center KIOXIA Systems Co., Ltd. Head Office, Yokkaichi Office KIOXIA Iwate Corporation KIOXIA Engineering Corporation Yokohama Office, Yokkaichi Office, Kitakami Office KIOXIA Energy Management Corporation	SGS	October 28, 2027	JP24/00000117
Solid State Storage Technology Corporation	DNV	April 14, 2026	347042-2020-AQ-RGC-RvA

7. ISO/IATF Certification Information

Table 2 IATF16949 Certification Status

Name of Certified Body	Certification Agency	Expiration Date	IATF Certification Number	Applicable Products
Site: KIOXIA Corporation Yokkaichi Plant Remote Location: KIOXIA Corporation Head Office, Yokohama Technology Campus, Asahi Test Center, Kansai Branch KIOXIA Energy Management Corporation KIOXIA America, Inc. Head Office, Irvine Office KIOXIA Europe GmbH KIOXIA (China) Co., Ltd. Shanghai Head Office, Shenzhen Branch KIOXIA Asia, Limited KIOXIA Singapore Pte. Ltd. KIOXIA Korea Corporation KIOXIA Taiwan Corporation	SGS	October 27, 2027	0552071	e-MMC/UFS for Automotive information & Entertainment Systems

Chapter 4. Environmental Activities

Chapter 4. EnvironmentalActivities

1. Environmental Qualityof Products
2. Environmental Considerationsfor Design, Development, and Process Changes
3. Green Procurement
4. Verification Systems
5. Product Environmental Information Database Creation

Chapter 4. Environmental Activities

1. Environmental Quality of Products

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive, the End of life Vehicles (ELV) Directive and other regulations in the EU restrict the use of environmentally hazardous substances.
Similarly, China, Taiwan, Thailand, several states in the USA and others are introducing their own regulations to manage such hazardous substances.

The EU REACH regulation stipulates restrictions and controls on the use of chemical substances of high concern that may cause cancers or adverse effects on genetic information. The RoHS directive aims to protect human beings and environment from hazardous chemical substances contained in Electrical and Electronic Equipment (EEE) whereas REACH does similar for non-EEE. For semiconductors that comprise EEE, it is now an important quality requirement that we control the level of such substances and replace them with non-hazardous substitutes as necessary.

Our group companies strive to consider the environment in their business activities such as development, manufacturing, sales, services, and disposal from a life cycle perspective, and aim to contribute to society by supplying products that consider their environmental impact, and by realizing energy saving and reduction of resource usage in equipment in which NAND flash memory and SSDs are installed.

Our quality focus is not only on product functionality and reliability but also on the environmental areas for which we are managing the level of restricted substances contained in our products. Product environmental quality lies across the fields of Quality, Procurement and Environment as shown In Figure 4-1-1. Related section members are working together to achieve our goal.

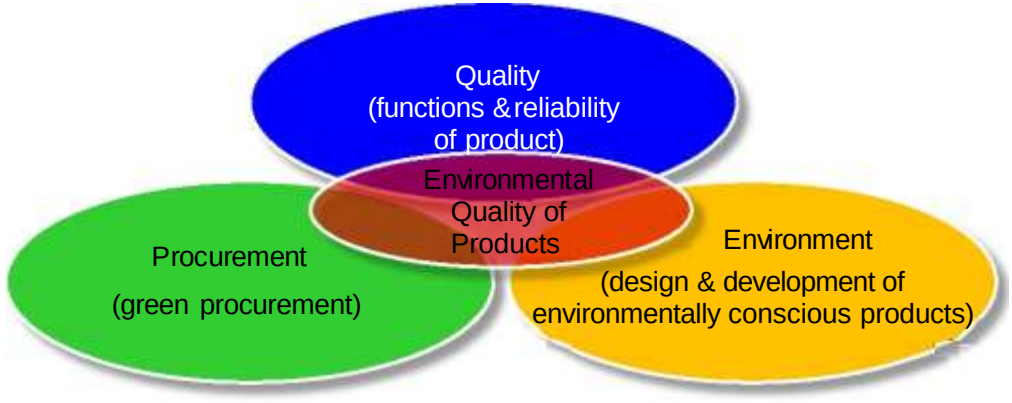

Figure 4-1-1. Environmental Quality of Products

2. Environmental Considerations for Design, Development and Process Changes

In the development and design phases of products, we conduct environmental assessments to achieve our environmental objectives. We do the same when we change a production process or material.

3. Green Procurement

To ensure compliance with environmental legislation such as the EU / RoHS directive and the REACH regulation, the company has created its own list of materials in consideration of customer trends. The Company also has a green procurement guideline to obtain cooperation from each of its suppliers regarding the control of environmentally hazardous substances.

The guideline defines the voluntarily controlled substances and their control level, and the requirements for the environmental quality management system, including banned and reportable substances. The guideline also obliges suppliers to submit evidence to satisfy the Company requirements. For green procurement, the Company endeavors to select environmentally friendly parts and materials in a joint effort with its suppliers.

4. Verification Systems

We are conducting regular testing of products for substances targeted by EU RoHS.

We regularly conducts acceptance inspections of purchased parts and materials as necessary using simple analysis equipment.

We continue to monitor parts and materials to avoid contamination in our production process.

5. Product Environmental Information Databases

We manage environmental assessment data, green procurement reports, product environmental data such as material composition data, etc. by building up materials database for environmental information.

We request suppliers to vigorously engage in environmental preservation. Our group companies prioritize suppliers who perform such proactive activities in our procurement.

Additionally, we ask all suppliers to create a system for managing environmental quality (to reduce the environmental impact of chemical substances contained in supplied items), and strongly recommend suppliers to obtain ISO9001 and ISO14001 accreditations.

This database contributes not only to managing restricted substances in our production but also to the submission of the necessary environmental data to our customers in a timely manner.

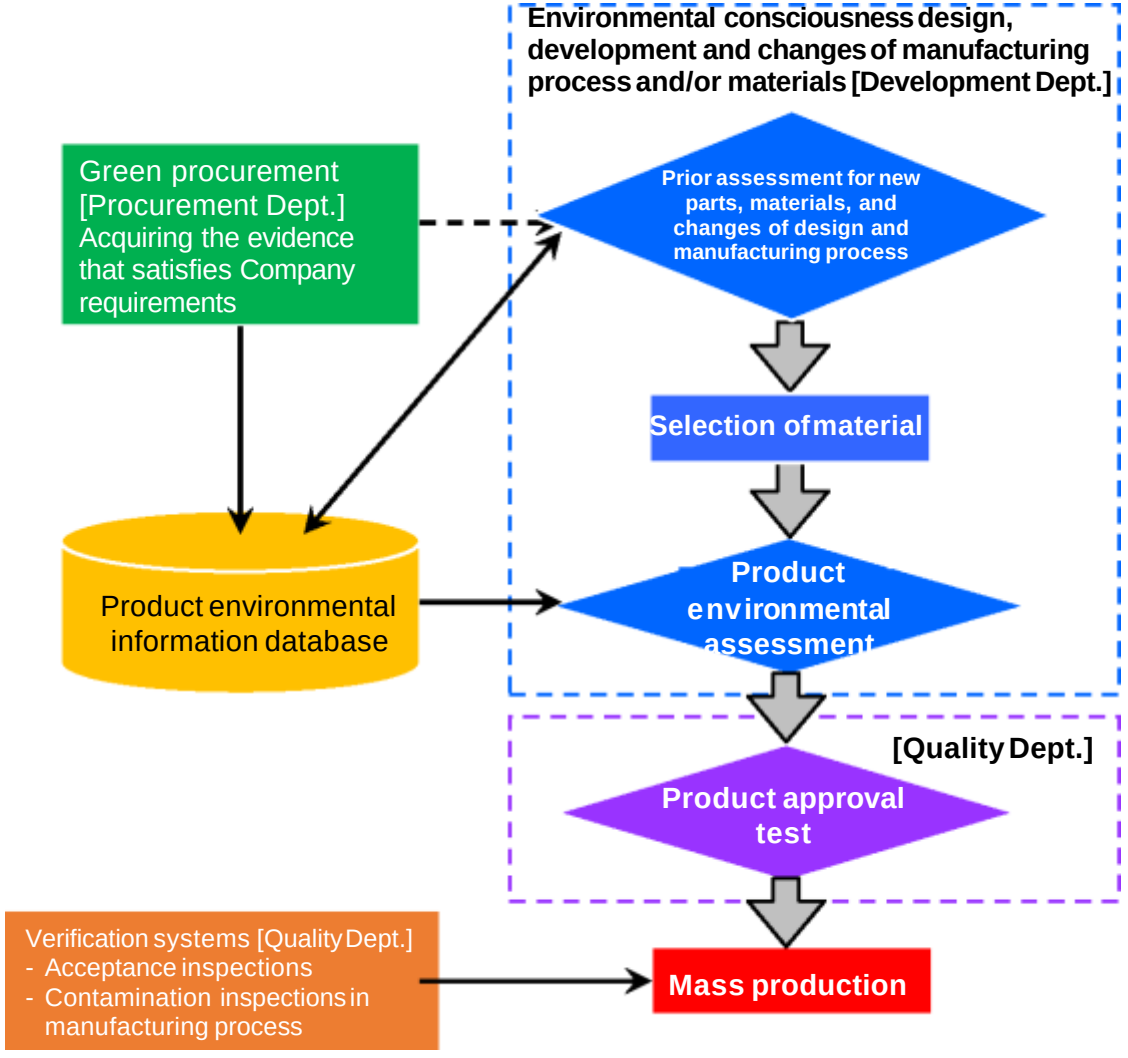

Figure 4-5-1. Product Environmental Quality Management System

RESTRICTIONS ON PRODUCT USE

RESTRICTIONS ON PRODUCTUSE

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Hardw are, softw are and systems described in this document are collectively referred to as “Product”.

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