

# Quality Manual

**PA3-01-001**

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## 1. Purpose and scope:

### 1.1. Purpose:

- 1.1.1. To assure our firm can provide products that meet the requirements of customers and legislation effectively and steadily.
- 1.1.2. To clearly declare the operating scope of quality management system, quality policies, and organization authorities and responsibilities as the basis of quality management system's operating principles.

### 1.2. Scope:

Applicable to all business events are associated after receiving client's order, no product design is involved.

## 2. Introduction and organization chart:

### 2.1. Introduction:

We hereby specify items for quality assurance requirements with regards to the products and services sold to all customers.

### 2.2. Organization chart:

- 2.2.1. Organization chart refer to "Organization Chart" PA2-02-001.

## 3. Quality manual establishment and maintenance:

- 3.1. This quality manual is established by management representative with the approval of top management; through the use of "document and information control procedure" as basis.

#### **4. Quality management system:**

##### 4.1. General requirements:

###### 4.1.1. Term definitions:

(1) Quality manual (QM):

- (a) Elementary document that illustrates our quality policies, organization, authorities and responsibilities, and quality assurance system operating principles.
- (b) Approved by general manager.

(2) Quality Procedure (QP):

- (a) Documents such as working procedures and processes established according to system operating principles of quality manual by department or inter-departments to achieve quality-related objectives.
- (b) Quality procedure is approved by the highest authority of all the related departments or divisions.

(3) Working instruction (WI):

- (a) Directing documents detailing the operations and technologies regulated on quality manual or quality procedure. For example, working instruction, quality standard, operating illustration, etc.
- (b) Working instruction is approved by highest executive of relative department.

(4) Quality record:

- (a) Document showing actual operating conditions of all quality related events.
- (b) Approved by department in charge.

###### 4.1.2. Regulations of authority and responsibility:

- (1) Establish quality management operation system according to the 2000 edition of ISO9001. Items of quality manual that do not apply to requirements of ISO 9001 are stated as "not applicable".
- (2) Establish quality document system:  
Precisely implement all quality events according to regulations of quality manual, quality procedure, and working instruction. Assure quality system is continuously effective through internal quality audits and management investigations; for example, if working instructions conflict with customer requests, then customer requests take precedence.
- (3) Keep all records of results of quality system operations to demonstrate effectiveness of performance.
- (4) Define, measure, monitor, audit, investigate, analyze, review and revise, determine the suitability, accuracy and effectiveness of quality management system operations to assure practical implementation, continuous improvement, and the integrity of quality management system.
- (5) Determine and plan resources of quality management system in order to meet customer needs and to improve system's effectiveness.
- (6) Reference: QMS Chart (Appendix 1)

4.2. Documentation requirements:

4.2.1 General requirements:

- (1) Top management:  
Responsible for approving quality manual
- (2) Managers of departments affected by the document:  
Responsible for approving quality procedure and working instruction
- (3) Quality system management representative:  
Responsible for supervising the establishment and revision of the quality manual
- (4) Quality assurance department (Document Control Center):  
Responsible for coordinating the establishment and revision of departments' quality procedure, working instruction and quality record, and the audit of working instruction and quality record
- (5) Documents of quality management system include written statements of quality policies and quality objectives.
- (6) Documents required by the written form procedure and control according to ISO 9001:2000.
- (7) All quality records required according to ISO 9001:2000.

4.2.2 Document control:

- (1) All documents required by quality management system should be approved by relative authorities before issue.
- (2) All outside documents request to be reviewed by PhaseLink must be recorded upon receiving for tracking purpose.
- (3) All originals of outside documents must be marked and restricted of issue.
- (4) Quality documents required by all work sites should have the latest revision in use.
- (5) Changing and revising documents:
  - (a) Changing and revising documents should be approved by the originating and relating departments, unless assigned by higher management.
  - (b) Changing and revising documents should note the revised contents and major points.
  - (c) After documents are changed and revised, they should be re-issued with the new revision level.
  - (d) Obsolete documents should be removed from all sites of issue or use to prevent from misuse or unintended use of the old data. If old data is required to be archived, it should be distinctively marked.
- (6) Reference:
  - (a) Document and information control procedure (PA1-01-001).
  - (b) ISO 9001 quality system related document structure (Appendix 2).
  - (c) ISO 9001 quality system related document levels chart (Appendix 3).

#### 4.2.3 Quality record control:

- (1) Each output unit of quality record is considered as the owner, and therefore must be responsible for the accuracy of record and the management of filing, classifying, and preserving.
- (2) Quality contents required by ISO-9001, and should be referenced in quality system related document levels chart (Appendix 3).
- (3) Quality record can be filed separately or merged into other quality records for the convenience of future traceability.
- (4) All records related to quality system operations must be legible, easy to identify and index, to prevent from deterioration, loss, or damage.
- (5) Unless otherwise specified, all quality records should be preserved for a minimum of 1 year.
- (6) When the record retention period expires, it should be destroyed according to quality document regulation.
- (7) Reference:
  - (a) Management record process procedure (PA1-01-002).
  - (b) Quality system related document levels chart (Appendix 3).

## **5 Management responsibility:**

### 5.1. Management commitment:

- 5.1.1 Gather relative internal and external data according to customer needs, legislature requirements, company expectations and policies to define quality policies and objectives.
- 5.1.2 Management review meeting should be held annually to ensure the suitability, accuracy and effectiveness of quality system.
- 5.1.3 Customer focus:  
Top management must understand customers' needs and expectations, and be sure the firm has resources and capability to meet the objective of customer satisfaction. Example of execution methods are as follows:
  - (1) Require salespersons to visit customers directly and understand their needs and expectations.
  - (2) Require sales department to survey customer satisfaction at the end of each year to enhance organization system processes.

### 5.2. Quality policy:

- 5.2.1 Our policy is to excel and meet or exceed customer expectation through:
  - (1) Be Customer Orientated.
  - (2) Continuous Quality Improvement.
  - (3) Quality Comes First

### 5.3. Planning:

- 5.3.1 Quality objectives should be derived from quality policy. They should be quantitative, measurable, and applicable to all departments.
- 5.3.2 Each department should set its quality objectives and gage their progress.
- 5.3.3 Top management will review department quality objectives periodically, make recommendation, and provide feedback to ensure quality management system is well-planned in its execution with sufficient resources.
- 5.3.4 Reference: Quality management system planning procedure (PA3-01-003)

### 5.4. Responsibility, authority and communication:

- 5.4.1 Authority:
  - (1) Top management:  
To define the responsibilities of departments, and to assign management representatives.
  - (2) Human resources and general administration:  
To plan, establish, and promote regulated items related to responsibilities of departments.

- (3) Department managers:  
To implement and perform each department's quality related activities.

5.4.2 All employees should understand the quality system operations and follow the related department regulations in carrying out daily work related activities.

5.4.3 Top management should assign a member from the management staff as the quality system management representative; the representative should not be influenced by other posts.

5.4.4 Authority and responsibility of management representative:

- (1) Make sure quality management system is established, implemented and maintained according to ISO 9001 standards.
- (2) Report to top management on performance and improvements to be made.
- (3) Make sure all staff understands customer needs and expectations.
- (4) Act as liaison of quality management system.
- (5) Host management review meetings.

5.4.5 Internal communication:

- (1) To convey quality system's performance and objectives successfully, by establishing appropriate communicating forums and meetings.
- (2) To promote quality policy, objective or quality management performance through the use of educational training, management signboard, bulletin or paperwork.

5.4.6 Reference:

- (1) Organization chart (PA2-02-001).
- (2) Regulations of department duty (PA2-02-002).
- (3) Management representative authority and responsibility standards (PA2-02-003).
- (4) Regulations of granted authority (PA3-02-003).
- (5) Management communications implement procedure (PA3-01-005).

5.5. Management review:

5.5.1 Authority and responsibility:

- (1) Top management:  
Chairperson of management review meetings.
- (2) Quality system management representative:  
Responsible for overall planning of management review meeting
- (3) Department managers:  
Participate in management review meetings.

5.5.2 Management review meeting should be held annually. The following information or result should be considered to ensure the suitability, accuracy and effectiveness of quality management system.

- (1) Examine results of internal and external quality audits.
- (2) Study customer comment and feedback.

- (3) Implement corrective and preventive actions.
  - (4) Review action items from previous management review meeting.
  - (5) Peruse varying conditions of internal and external operating environment.
  - (6) Recommend improvement suggestions for continuous improvement.
  - (7) Evaluate quality system's effectiveness in achieving quality policy and objectives.
- 5.5.3 Records must be kept after management review. These records should include the following:
- (1) Quality management system and their processes' objectives including objective evidences of continuous improvement.
  - (2) Product quality objectives and objective evidences of continuous improvement to meet customers' needs.
  - (3) Resource improvement needed to achieve quality objectives, including human resource facilities and equipment.
- 5.5.4 Besides routine management review meetings, management representative should hold ad hoc meeting when necessary.
- 5.5.5 Reference: Management review procedure (PA3-01-006).

## **6 Resource management:**

### 6.1. Provision of resource

- 6.1.1 Improve production facilities and equipment purchase.
- 6.1.2 Organizational infrastructure and management development plans.
- 6.1.3 Computer data management and logistics.
- 6.1.4 Employee training and development.

### 6.2. Human resources:

#### 6.2.1 Authority and responsibility:

- (1) Responsible for selecting, hiring employees, developing training programs, and verifying personnel qualifications.
- (2) Department managers are responsible for defining personnel training requirements and implementing training.

#### 6.2.2 Organization should specify employment qualifications of all posts and maintain appropriate training records.

#### 6.2.3 Planning and implementing training program:

- (1) Newly hired employees should meet job qualification requirements. Professional training is carried out by each department, and common courses are arranged and implemented by human resources.
- (2) On job training should be performed according to annual training plan developed by department manager in conjunction with human resource. Departments can arrange instructors to give courses or apply for dispatch training, depending on job requirements.
- (3) Employees attending outside training courses have to turn in seminar reports or certificate of completion as evaluation of training.
- (4) Training record should be retained appropriately and logged in personal training record.
- (5) Review training effectiveness.

#### 6.2.4 Related records of qualification identification and training of all personnel should be retained according to record retention schedule.

#### 6.2.5 Reference:

- (1) Training administration procedure (PA3-02-002)
- (2) Training procedure of newly hired employee (PA3-02-001)
- (3) Quality records maintenance (PA1-01-002)

6.3. Infrastructure:

6.3.1 Authority and responsibility:

- (1) To make sure product conforms to specification, orchestrated efforts from departments such as human resource and facilities, along with the use of software and hardware (including architecture) and all other necessary resources should be included in overall plan to achieve the best return on investment.
- (2) All facilities, equipment, software and hardware should be properly maintained.
- (3) All service supports, such as spare parts, transportation, communication and facilities, should be planned with extra attention to reduce loss of productivity and quality.
- (4) Reference: Facilities' maintenance procedure (PA3-09-003)

6.4. Work environment:

- 6.4.1 To meet product quality requirements, on-site staff should be reminded to keep working environment clean and orderly.
- 6.4.2 Surrounding items such as lighting, noise, temperature, humidity, pollution, and static protection are controlled to allow employees to work long term.
- 6.4.3 All work site environment should be kept clean and orderly to reduce loss of quality and productivity.

## **7 Product realization:**

### 7.1. Planning of product realization:

#### 7.1.1 Authority and responsibility:

(1) Sales department:

Responsible for overall planning of process needed for product realization.

(2) Quality assurance department:

Responsible for planning product's quality plan, including verification, confirmation, monitor, examination and testing, and acceptable quality levels

7.1.2 Quality assurance department plans product quality plan and quality objective according to specification of product or contract.

7.1.3 Operations management establishes requirements for processes and documentation, and provides resources and facilities needed by product realization.

7.1.4 Quality assurance department defines acceptable quality level, verification and confirmation required by product realization.

7.1.5 Records from the above activities are required to provide confidence and qualification proof for all processes and product outcomes. Records should be retained according to "Quality records maintenance" (PA1-01-002).

### 7.2. Customer related processes:

#### 7.2.1 Authority and responsibility:

(1) Sales:

Responsible for overall planning and implementing contract review system, and act as the contact window between customers and PhaseLink; responsible for reviewing and communicating about orders' specification, quality terms, and shipment to customers.

7.2.2 After receiving order, sales should carry out preliminary examination on its rationality, applicability and legality (including requirements assigned and unassigned by customers, involving shipment and after-sales events, regulations, company strategic needs and commitments).

7.2.3 Sales should notify related departments about all terms and conditions of customer's order to proceed examination to assure customer's requirements are completely reviewed.

7.2.4 Related departments, when reviewing every contract and order, should make sure of the following items:

(1) All requirements are clearly written.

(2) Any requirements that conflict with customer's order are noted and resolved.

(3) The related department has the ability to meet the customer's requirements on contract or order.

7.2.5 If contract or order content is changed, whether brought up by customer or by Phaselink, customer, operations, and outsourcing manufacturers should be notified to make sure that the change can be met.

7.2.6 Contract review records, including mails and fax relating to contract, should be retained according to "Quality records maintenance" (PA1-01-002).

7.2.7 Customer communication:  
Arrangements for customer communication include: providing product information, price inquiries, contract / order processes and changes, and customer complaint processes.

7.2.8 Reference: Contract review implementation procedure (PA3-05-001)

### 7.3. Design and development:

7.3.1 Statement elimination:  
Because our business is production operations after receiving customers' designs, no product designing is involved, therefore, it is eliminated.

### 7.4. Purchasing:

7.4.1 Authority and responsibility:

(1) Operations:

Responsible for overall planning of management events of choosing and evaluating outside purchases and suppliers

(2) Quality assurance:

Responsible for overall planning of management events of purchases and suppliers, coordinated with productions in conducting suppliers evaluations.

(3) Document control center of quality assurance department:

Responsible for the preservation of all data regarding supplier evaluations and approval processes.

7.4.2 Choosing suppliers:

(1) Suppliers and outsourcing of direct materials and subcontractors must undergo review or evaluation qualification, and be logged into approved suppliers list before purchasing or sub-contracting; as for indirect material, suppliers are chosen properly according to commander's requirement standards.

(2) Purchase department should establish and maintain approved suppliers information files.

7.4.3 Assessing suppliers:

Approved suppliers should be assessed periodically, assess issues include: supplier's abilities to meet quality requirements, delivery dates, price, and service.

7.4.4 Information of purchase documents:

Purchase documents should clearly state the product name, quantity, delivery date or other specific requirements of the order or subcontractor.

7.4.5 Issue of purchase order:

(1) Purchase order or subcontractor order is issued after review and approval according to regulation.

- (2) Purchase department should notify and make sure suppliers and outsourcing manufacturers understand the requirements of the purchase order.

7.4.6 Confirmation and verification of purchasing materials and supplies:

- (1) Purchase department should acquire related quality approval documents from suppliers when necessary.
- (2) All incoming direct materials are to be verified of quality requirements according to incoming inspection procedures before release to production for use; any direct materials rejected will require timely response from suppliers to provide corrective actions.
- (3) If contract specifies, customers are allowed to visit suppliers' work sites during all stages of production for quality confirmation.
- (4) Verification results of samples provided by PhaseLink for suppliers are not to be considered as proof of suppliers' quality control.

7.4.7 References:

- (1) Purchasing management procedure (PA3-04-001)
- (2) Supplier evaluation and management procedure (PA3-04-002)

7.5. Production and service provision:

7.5.1 Authority and responsibility:

- (1) Production and engineering:  
Responsible for establishing working instruction, implementing all manufacturing production processes and overall planning for production control
- (2) Quality assurance:  
Responsible for overall planning of related departments establishing Quality control plan, inspection standards, and implementing manufacturing and production examination

7.5.2 Control of production and service provision:

- (1) Production management should prepare materials to meet the production plan according to order.
- (2) Production department must ensure documents related to product specifications are finalized before production.
- (3) All important operating and production control stations should have working instructions with the latest revision.
- (4) Production is implemented according to Quality control plan and operating methods, equipment, facilities and work environment defined by working instruction.
- (5) Related departments should be notified when abnormality occurs during production. Countermeasures shall be established to identify the root cause and to rectify the condition.
- (6) If change is required, it has to be done after getting approval from all related departments.
- (7) All test and measurement equipments used by quality assurance personnel shall be operated according to quality inspection procedure.
- (8) All production facility and equipment shall be regularly maintained and recorded. The records should be retained according to "Quality records maintenance" (PA1-01-002).

- (9) All finished goods are to be released after they are inspected and marked accepted.
- (10) If customer has special request about shipment, we will comply. Otherwise, we will follow our standard procedures.
- (11) When customer request service, sales should notify related department to handle the situation within timely manner.
- (12) If there is a need for subcontractor, production management is responsible for sourcing.
- (13) All incoming materials from our subcontractors shall be inspected.
- (14) Reference:
  - (a) Subcontractor management procedure (PA3-07-001)
  - (b) Production management procedure (PA3-07-002)
  - (c) Facilities maintenance management procedure (PA3-09-003)

7.5.3 Validation of processes of production and service provision:

- (1) Requirements of validation of processes of production and service provision:  
If output of production and service cannot be verified by follow-up measurements or monitoring, PhaseLink must confirm these processes, including situations of failures occurring after product has been used or service has been completed, by bench testing, product re-characterization, and equipment upgrading.
- (2) If process needs to be confirmed of its time, do as follows:
  - (a) Establish authority and responsibility of examination and process approval.
  - (b) Facilities' approval and personnel limitation.
  - (c) Application of certain measurements, requirements and procedures.
  - (d) Must preserve related records of process validation.
  - (e) All of the above should be re-confirmed regularly to be sure of the planned results of process realization.
- (3) All current processes can be measured after monitoring, and determine quality qualification, therefore, there is no need for confirming processes at the time; if similar process occurs in the future, act according to the above regulations.

7.5.4 Identification and traceability:

- (1) Identification
  - (a) Purchased materials are inspected according to incoming quality procedure and are labeled after inspection.
  - (b) Finished and semi-finished products are labeled to show name, quantity, material number, lot number and production date. If unqualified, then mark so with a label.
- (2) Traceability:
  - (a) If traceability is required, PhaseLink will conduct traceability control.
  - (b) If customer requires PhaseLink to perform traceability according to their requirements, then PhaseLink will act accordingly. Otherwise, PhaseLink will act according to internal standards.
- (3) Reference:
  - (a) Product traceability management procedure(PA3-09-002)
  - (b) Product identification management procedure(PA3-09-001)

## 7.5.5 Customer property:

- (1) Customer properties should be received, inspected, identified, stocked and preserved according to PhaseLink's general procedures. If customer has special requirements, act accordingly.
- (2) If customer properties are lost, damaged or inapplicable, the situation should be recorded in written form and customer be notified.
- (3) Customer's intellectual property should be protected, no violation allowed.
- (4) Our organization currently does not preserve any customer properties, if we do in the future, relative methods will be established to manage and control.

## 7.5.6 Preservation of Product:

- (1) Warehouse management:  
Responsible for overall planning of implementing management of transporting, stocking, packaging and shipping materials and products
- (2) Sales:  
Responsible for confirming requests such as packaging and shipment with customers
- (3) Warehouse management should apply correct safety measures to prevent materials, semi-finished goods, finished products and goods returned for repair being crashed, squashed and damaged during transport.
- (4) Warehouse management shall ensure that all materials' storage labels are detailed for the convenience of saving, picking and their storage time should be checked to assure quality.
- (5) Warehouse management shall clearly set management procedures for receiving, distributing, nullifying or disbursing materials to assure correctness of receiving and storing materials, adopt method of first-in-first-out (FIFO).
- (6) If customer has special packaging requirements, packaging should be done accordingly; otherwise, it should be done according to internal standards.
- (7) Material and product packaging should use standard packaging and clearly labeled details for traceability.
- (8) Designs of material and product packaging should consider maintenance of quality during transport to storage and shipment.
- (9) Product and material should be preserved according to characteristic to assure preserving means of all stages from receipt to shipment can maintain quality stability.

## 7.5.7 Reference:

- (1) Transporting operation management procedure (PA3-08-003)
- (2) Warehouse management procedure (PA3-08-001)
- (3) Packaging management procedure (PA3-08-004)
- (4) Shipment management procedure (PA3-08-005)
- (5) Product preservation management procedure (PA3-08-002)

## 7.6. Control of measuring and monitoring devices:

### 7.6.1 Authority and responsibility:

- (1) Production and engineering department:  
Responsible for managing, checking calibration and maintaining all testing and measurement equipment.

- 7.6.2 Choose proper inspection, measurement and testing equipment according to requirement for product measurement accuracy.
- 7.6.3 The calibration system of test and measurement equipment should be traceable to international or national standards. Otherwise, method for calibrating should be documented in written form as traceable evidence.
- 7.6.4 Equipment that requires calibration should be identified and labeled with calibration status. Record should be retained according to "Quality records maintenance" (PA1-01-002).
- 7.6.5 Before equipment use, user should confirm that the equipment is calibrated and within expiration date, to prevent from misuse that lead to failure in measuring.
- 7.6.6 Measuring equipments should keep its accuracy and suitability during transportation, maintenance and storage.
- 7.6.7 If aberrance occurs, inspection facilities should put on "Do Not Use" sign, and its influence extent on product quality should be reviewed, adopt essential measurements if necessary.
- 7.6.8 Reference: Inspection, measurement and facilities management procedure (PA3-06-004)

## **8 Measurement, analysis and improvement:**

### 8.1. General:

Our organization plan and implement monitoring, measurement analyzing and improvement processes required regularly at management review meetings:

- 8.1.1 Evidence of product's conformability: such as inspection record, run card, and test summary, etc.
- 8.1.2 Assure quality management system's conformability: such as internal quality audit.
- 8.1.3 Effectiveness of continuous improvement of quality management system: such as quality system management review and corrective actions.

### 8.2. Monitoring and measurement:

#### 8.2.1 Customer satisfaction:

- (1) Sales are responsible for conducting matters regarding customer satisfaction survey.
- (2) Survey satisfaction of major customers at the end of every year to timely know the conditions of customer satisfaction well.
- (3) Unsatisfied index should be made into histogram after survey; unsatisfied items should be analyzed of reason and improvement strategies should be set, progress traced.
- (4) Data related to customer satisfaction survey should be statistically analyzed and then reviewed at quality system management review meetings.
- (5) Customer satisfaction data can be gathered from:
  - (a) Customer complaint cases.
  - (b) Communicate with customers face-to-face, by phone or by e-mail.
  - (c) Feedback of customer satisfaction survey.
- (6) Reference: Customer satisfaction survey procedure (PA3-05-003)

#### 8.2.2 Internal audit:

- (1) Internal audit team leader:  
Team leader is fully in charge of planning internal quality audit, conducting audits, reporting results and maintaining records.
- (2) Internal quality audit members:  
Implement audit according to audit schedule; should be individuals who are independent from the department being audited.
- (3) Internal quality audit is for the purpose of reviewing the compliance of the department to the company's policies and procedures.
- (4) Internal quality audit schedule is arranged according to operating conditions and importance; set next year's "annual internal quality audit plan" at the end of every year, and assign unannounced audits if necessary.
- (5) Auditors should receive proper training for internal audit and be certified.
- (6) Audit team leader should organize pre-audit meeting for discussion of audit plan and schedule, audit assignments, audit scope and also report the previous audit (internal and external audits) results and actions.

- (7) Auditor should review department procedures and previous audit reports, check the compliance to the procedures and identify discrepancies. Issue audit report with corrective action request. And ensure the closure of the corrective action request.
- (8) Audit reports and conditions of implementing corrective actions should be reported for management reviews.
- (9) Reference: Internal audit management procedure (PA3-01-004)

8.2.3. Measuring and monitoring of processes:

- (1) Our organization has established "Quality Control Plan" along with our internal audit procedure to achieve the improvement objectives
- (2) We will review the quality control plan and procedures periodically to ensure continuous improvement.

8.2.4. Monitoring and measurement of products:

- (1) Quality assurance department is responsible for overall planning of product inspections, including incoming inspection, in-process inspection and final inspection.
- (2) Quality assurance department conducts measurement and monitor of product realization process according to "quality control plan".
- (3) Incoming materials and all subcontracted products must undergo incoming inspection according to incoming material inspection procedure for product acceptance. Otherwise, they will not be released for production use.
- (4) For emergency needs, priority inspection will be given to inspect the needed materials. However, labels and records are necessary for traceability.
- (5) Records of inspection results are used as part of suppliers' performance evaluation.
- (6) Inspections are performed according to quality control plan.
- (7) During production, operators can conduct independent inspections, and quality control inspector conduct roving inspections.
- (8) Semi-finished materials shall not proceed to next production stage without inspection acceptance.
- (9) Final inspection is performed based on inspection procedures, standards and sampling plans.
- (10) Products accepted after final inspections will be released for inventory.
- (11) Inspections and testing records of all stages should be approved and retained so that they can be used in the future as evidence of product acceptance.
- (12) Reference:
  - (a) Incoming (receiving) material inspection procedure (PA3-06-001)
  - (b) Final products inspection procedure (PA3-06-002)
  - (c) QC flow chart

### 8.3. Control of nonconforming product:

#### 8.3.1. Authority and responsibility:

- (1) All departments should be responsible for identifying and controlling nonconforming products and notify related departments to conduct review for disposition of the product.
- (2) Quality assurance department is responsible for coordinating with related departments to review the cause of nonconforming and disposition of the product.

8.3.2. In order to prevent from unintended release of the nonconforming product, they shall be identified, recorded, and quarantined until disposition.

8.3.3. Disposition of nonconforming products include: rework, return, and scrap.

8.3.4. Reworked products have to be re-inspected before releasing to the next production stage.

8.3.5. If required under customer contract, the disposition of nonconforming products must be recorded and reported to customer or its representative.

8.3.6. Reference: Nonconforming product control procedure (PA3-06-003)

### 8.4. Analysis of data:

#### 8.4.1. Authority and responsibility:

- (1) Management of all departments:  
Based on customer request or management needs, select the statistical tools to use for the verification of the quality performance objectives establish and maintain related records.

8.4.2. As part of quality management system, all departments should identify and select appropriate data analysis and statistic tools to measure the system's suitability and effectiveness.

8.4.3. Data analysis should include the following information:

- (1) Customer satisfaction conditions.
- (2) Product conformability conditions.
- (3) Characteristics and trends of product and quality control process, including opportunities of adopting prevention measures.
- (4) Conditions of supplier evaluation, assess, and appraisal.
- (5) Reference: Data analysis and process procedure (PA1-01-003)

### 8.5. Improvement:

#### 8.5.1. Continuous improvement:

The following measures are used as part of our continuous improvement programs to ensure the effectiveness of our quality management system:

- (1) Analyzing and applying data related to quality management system.
- (2) Implementing corrective and prevention actions.
- (3) Reviewing results of internal audit and management review.
- (4) Establishing and revising quality policies and proposes.

8.5.2. Corrective actions:

Corrective actions include the following procedures:

- (1) Identify and analyze potential events and causes of nonconforming products.
- (2) Evaluate and implement corrective measures to avoid nonconforming events and their occurrence.
- (3) Determine and adopt corrective measures to make sure processes are under statistical control.
- (4) Record results of corrective actions and review their effectiveness.
- (5) Verify data related to corrective actions for management review.

8.5.3. Preventive actions:

Preventive actions include the following procedures:

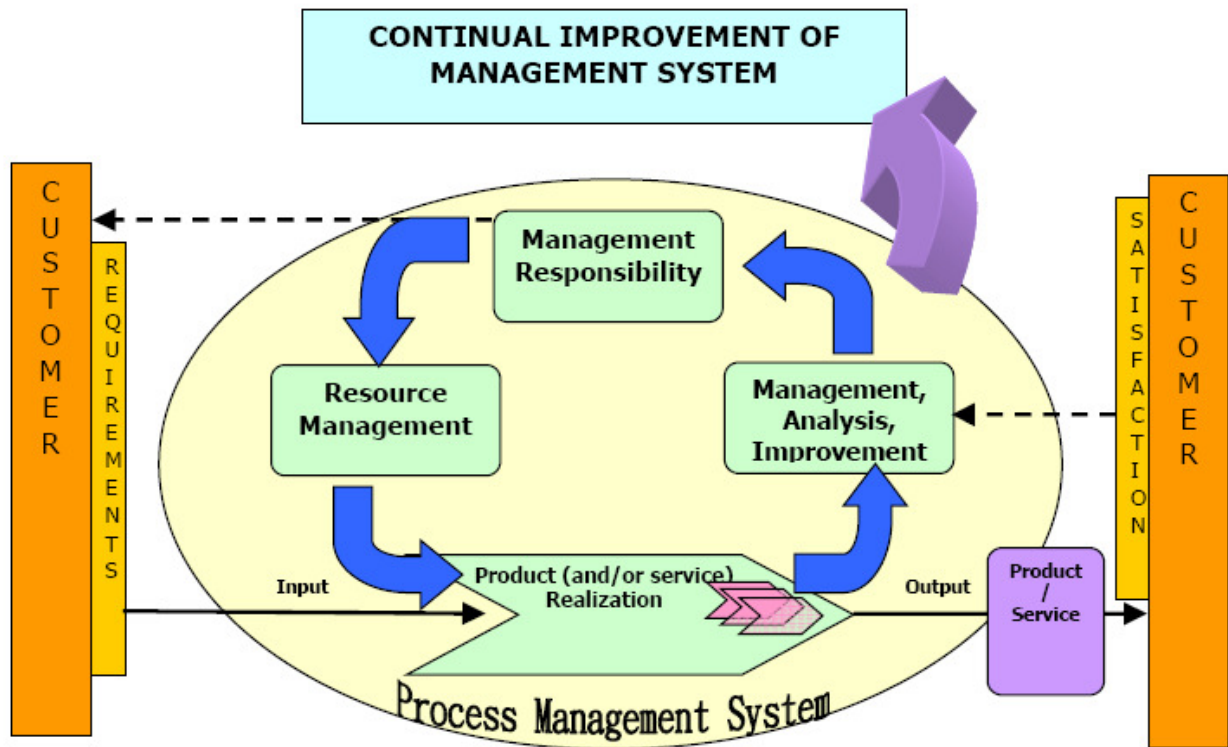
- (1) Identify and analyze potential events and causes of nonconforming products.
- (2) Evaluate and implement preventive measures to avoid nonconforming events and their occurrence.
- (3) Determine and adopt preventive measures to make sure processes are under statistical control.
- (4) Record results of preventive actions and review their effectiveness.
- (5) Verify data related to preventive actions for management review.

8.5.4. Operational procedures revised as a result of corrective or preventive actions should be documented and forced firmly.

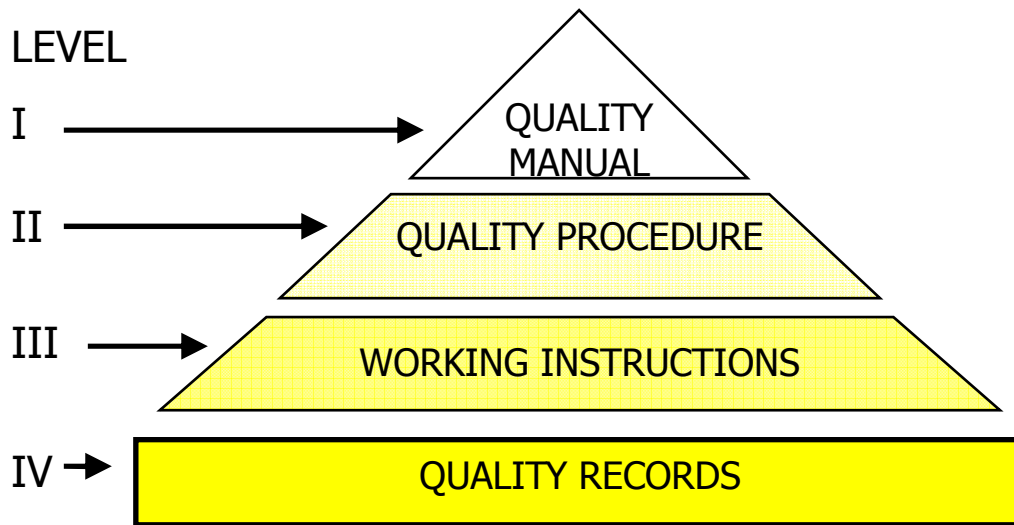
8.5.5. Reference:

- (1) Operation aberrance rectification process procedure (PA3-06-005)
- (2) Operation problems prevention process procedure (PA3-06-006)
- (3) Customer complaint process procedure (PA3-05-002)

Appendix 1 : QMS Chart



**Appendix 2 : ISO 9001 quality system related document structure**



**LEVEL 1 : Quality Manual**

It is used to elaborate the basic documents of policies, organization, responsibilities and the fundamentals of quality system.

**LEVEL 2 : Quality Procedures**

The documents for effective operation and control of the processes. Procedures include flow charts and reference quality system records.

**LEVEL 3 : Working instructions**

Used to provide evidence of conformance to requirements and of the effective operation of the system.

**LEVEL 4 : Quality Records**

The records used to reveal the actual quality operation status.

**Appendix 3 : ISO 9001 quality system related document levels chart**

	Clause	Standards/ Procedures	Doc. No.	Quality records/forms
4. Quality management System	4.1.General requirements	Quality manual 4.1	PA3-01-001	N/A
	4.2. Documentation requirements	Quality manual 4.2	PA3-01-001	N/A
		Document and information control procedure	PA1-01-001	-Standard format of procedures & specifications -Distribution chart of procedures & specifications -Detailed list of document transfer -Exterior documents control chart
		Quality records maintenance	PA1-01-002	Controlled packing list of management records
5. Management responsibility	5.1. Management commitment	Quality manual 5.1.	PA3-01-001	N/A
	5.2. Customer focus	Quality manual 5.2.	PA3-01-001	N/A
	5.4. Planning	QMS planning procedure	PA3-01-003	QC flow chart
	5.5.Responsibility, authority and communication	-Organization chart -Regulations of department duty -Regulation of granted authority	PA2-02-001 PA2-02-002 PA3-02-003	Information list of exterior facilities related to environment control
		-Management representative authority and responsibility standards -management communications implement procedure	PA2-02-003 PA3-01-005	
6.1. Resource management	Quality manual 6.1.	PA3-01-001	N/A	
6. Resource Management	6.2. Human resources	-Training procedure of newly hired employee -Training administration procedure	PA3-02-001 PA3-02-002	-Training records -Annual training programs schedule chart -Application form of training programs -Sign in form of training programs
		6.3. Infrastructure	Quality manual 6.3.	PA3-01-001
	6.4. Work environment	Quality manual 6.4.	PA3-01-001	N/A

Clause	Standards/ Procedures	Doc. No.	Quality records/forms	
7. Product realization	7.1. Planning of product realization	Quality manual	PA3-01-001	
	7.2. Customer related processes	Contract investigation implement procedure	PA3-05-001	-Sample shipping list -Types of sub-manufacturing work orders
	7.3. Design and development	NA	NA	NA
	7.4. Purchasing	Purchase management procedure	PA3-04-001	-List of qualified suppliers -Purchase order application form -Purchase order -Supplier's basic information form -Substrate Purchase Order -Mask Work Order -Wafer Purchase Order
		Supplier evaluation and management procedure	PA3-04-002	-Supplier's basic information form -Evaluation sheet of new supplier (for manufacturing) -Evaluation sheet of new supplier (for service) -Evaluation sheet of new sub-contractors (waste process subcontractors) -List of qualified suppliers -Supplier evaluation sheet
7.5. Production and service Provision	Sub-manufacturing management procedure	PA3-07-001	-Subcontractor material requisite form -Outsourcing incoming examination & receipt -Assembly & FT & Tape reel work order -Wafer test work order -Wafer die saw & packing work order -Assembly ~ work order	

Clause	Standards/ Procedures	Doc. No.	Quality records/forms	
7. Product realization		Production management procedure	PA3-07-002	-Sample shipping list -Run Card -Shipping list -QC flow chart -Production/Engineer material requisite form -PLL FT abnormal yield rate form -FQC inspection record -Production daily report -Rectification and prevention processing form -Outsourcing incoming examination & receipt
	7.6. Control of measuring and monitoring device	Facilities maintenance procedure	PA3-09-003	-Facilities inspection record -Facilities maintenance record -Facilities repair record
		Product identification management procedure	PA3-09-001	-IQC inspection record -Outsourcing incoming examination and receipt -Incoming material examination and receipt -Shipping list
		Product traceability management procedure	PA3-09-002	
		Transporting operation management procedure	PA3-08-003	Rectification and prevention processing form
		Shipment procedures procedure	PA3-08-005	-OQC inspection record -Shipping list -Sample shipping list
	7.6. Control of measuring and monitoring device	Inspection, measurement and facilities management procedure	PA3-06-004	-Measurement equipments control form -Summary list of measurement equipment -Rectification standards -Schedule of equipment rectification -Equipment rectification report

Clause	Standards/ Procedures	Doc. No.	Quality records/forms	
8. Measurement analysis and improvement	8.1.General	N/A	N/A	
	8.2. Monitoring and measurement	Customer satisfaction survey procedure	PA3-05-003	-Satisfaction survey -Summary list of satisfaction survey
		Internal audit management procedure	PA3-01-004	-Rectification and prevention processing form -Annual internal audit schedule chart -Internal audit detailed list -Statistic control form of internal audit's rectification and prevention process
		Incoming (receiving) material inspection procedure	PA3-06-001	-IQC inspection record -List of manufacturers free of inspection -Outsourcing incoming examination and receipt -Incoming material examination and receipt
		Production process inspection and control procedure	PA3-06-007	-Rectification and prevention process form -Run Card
		Final products inspection procedure	PA3-06-002	-Rectification and prevention process form -Abnormal notice form -FQC inspection record
	8.3. Control of nonconforming product	Nonconforming product control procedure	PA3-06-003	-Rectification and prevention process form -Abnormal notice form -IQC inspection record
	8.4. Analysis of data	Data analysis and process procedure	PA1-01-003	-Rectification and prevention process form -Supplier evaluation sheet -Satisfaction survey -IQC inspection record
	8.5. Improvement	Operation aberrance rectification process procedure	PA3-06-005	-Abnormal notice form -Rectification and prevention process form -Statistic control form of operation aberrance's rectification and prevention process
		Customer complaint management procedure	PA3-05-002	-Rectification and prevention process form -Sales returned/discounts/allowances warehousing form
		Operation problems prevention process procedure	PA3-06-006	-Rectification and prevention process form

**Appendix 4 : Quality Control Plan**

Flow	Controlled tem	Frequency	Form/Department	Reference
	<p>1.Customer drawing 2.Customer fax or EMAIL information</p> <p>1.Raw material process information 2.Customer quotation goods</p> <p>1.Finished goods weight, yield rate, packing, transportation</p>	<p>Before sampling</p>	<p>Quotation/Sales</p> <p>Quotation/Sales</p> <p>Manufacture notice/Sales</p> <p>Manufacture notice/Sales</p>	<p>Contract review implementation procedure</p> <p>Contract review implementation procedure</p> <p>Contract review implementation procedure</p> <p>Contract review implementation procedure</p>
	<p>1. Confirmation of device number, name and specifications</p>	<p>Daily</p>	<p>Manufacture notice/Sales</p>	<p>Contract review implementation procedure</p>
	<p>1. Confirmation of quality, price and delivery date</p>	<p>Daily</p>	<p>Manufacture notice/Sales</p>	<p>Contract review implementation procedure</p>
	<p>1.Finished products signed for sample</p>	<p>Daily</p>	<p>Sample confirmation records/Customer ERP/Warehouse</p>	<p>Production management procedure</p>
	<p>1. Stock quantity of semi-finished products</p>	<p>AQL 1..0II</p>	<p>ERP/Warehouse</p>	<p>Production management procedure</p>
	<p>1. Stock quantity of finished products</p>		<p>ERP/Warehouse</p>	<p>Production management procedure</p>
	<p>1. Stock quantity of raw material</p>		<p>ERP/warehouse Purchase order/Sales</p>	<p>Production management procedure</p>
	<p>1. Raw material specification, price and delivery date of production</p>	<p>Every 2 hrs</p>	<p>Domestic PO/HR Delivery invoices</p>	<p>Purchasing management procedure</p>
	<p>1. Check quantity and specification of raw materials</p>	<p>Every batch</p>	<p>ERP/warehouse Purchase order/Sales</p>	<p>Incoming (receiving) material inspection procedure</p>
	<p>1. Inspection and testing of raw material</p>	<p>Every 2 hrs</p>	<p>IQC inspection records/Quality control</p>	<p>Incoming (receiving) material inspection procedure</p>
	<p>1. Product label (Acceptance seal of quality inspection)/Quality control</p>	<p>Every 2 hrs</p>	<p>Product label (Acceptance seal of quality inspection)/Quality control</p>	<p>Warehouse management procedure</p>
	<p>1. Production notice/sales</p>	<p>Every 2 hrs</p>	<p>Production notice/sales</p>	<p>Warehouse management procedure</p>

<pre> graph TD     Manufacture --&gt; PPI[Production process inspection]     PPI -- OK --&gt; FPS[Finished products storage]     PPI -- NG --&gt; NPP[Nonconforming products process]     FPS --&gt; SN[Shipping notification]     SN --&gt; FI[Final inspection]     FI --&gt; Delivery     Delivery --&gt; CC[Customer complaint]     CC --&gt; NPP     Manufacture --&gt; NPP     </pre>	<ul style="list-style-type: none"> <li>1.Failure root cause by inspection</li> <li>1.Preservation and indication of raw material</li> <li>1.Work order confirmation</li> <li>1.Inspection data of production process</li> <li>1.Preservation of semi-products</li> <li>1.Specifications/procedures</li> <li>1.Confirmation</li> <li>1.Inspection data of production process</li> <li>1.Isolation,indication, re-work</li> <li>1.Preservation of finished products</li> <li>1.Customer information</li> <li>1.Inspections of final products</li> <li>1.Assurance of delivery quality</li> <li>1.Improvement review of customer complaints</li> </ul>		<ul style="list-style-type: none"> <li>Run card/Operation Div.</li> <li>ERP/Warehouse</li> <li>IQC inspection record/QC</li> <li>IQC inspection record/QC</li> <li>Storage change record/Production control</li> <li>ERP/Warehouse</li> <li>Shipping list/Sales</li> <li>OQC inspection record/QC</li> <li>Returned/discounts/all owances warehousing form</li> <li>Rectification and prevention process for/all related department.</li> </ul>	<ul style="list-style-type: none"> <li>Production process inspection and control procedure</li> <li>Production process inspection and control procedure</li> <li>Unqualified product control process procedure</li> <li>Final products inspection procedure</li> <li>Shipment procedures procedure</li> <li>Shipment procedures procedure</li> <li>Shipment procedures procedure</li> <li>Final products inspection procedure</li> <li>Shipment procedures procedure</li> <li>Customer complaint process procedure</li> </ul>
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