Quality Manual

Per ISO 17025

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APPENDIX

I. SCOPE

1.1 Usage

Presented in this document is the Quality Manual for GiaLoi Joint Stock Company (GiaLoi). This Manuel specifies and describes the Quality Management System of our company's laboratory: the responsibilities and authorities of managers and staffs to our quality control, meeting ISO 17025:2017 standard requirements.

This Manuel is controlled according to our document control procedures (DCP).

1.2. Exceptions

At the present, the company doesn't consider requests, suggestion and trial contract to outside customers, so the company doesn't consider the relevant issues to 4.4 article of ISO 17025:2017.

2. REFERENCE STANDARDS

This quality manual contains reference to the following standards and test methods.

- ISO/IEC Guide 17025: 2015 "General Requirement for the Competence of Testing and Calibration Laboratories"

-American Society for Testing and Materials (ASTM) Test Methods and Standards of Practice

3.TERM& DEFINITION

3.1 ASTM: n – American Society of Testing Materials. A not-for-profit organization which provides standard test methods or specifications that have been developed within the consensus principles and that meets the approval requirements for the organization.

3.2 Geosynthetic: n – a planar product manufactured from polymeric material used with soil, rock, earth, or other geotechnical engineering related material as an integral part of a man-made project, structure or system.

3.3 ISO: n – International Standards Organization for Standardization (ISO) which specify the quality systems requirements.

3.4 IRM: n – Internal Reference Materials are standard materials of known quality or whose quality has previously been established by the laboratory and are used to validate test methods, equipment performance and to qualify technicians.

3.5 Test report: n – The final report submitted to the client describing the test results and test data.

3.6 Quality Assurance: n – The system of testing, inspection, review, documentation, etc. to verify the existence, implementation, and maintenance of the Quality System.

3.7 Quality Control: n – The system of testing, inspection, review and documentation which are designed to verify that the data generated in the laboratory are produced within known limits of accuracy and precision.

3.8 Quality Policy: n – The documented quality commitment and objectives of the supplier.

3.9 Quality System: n – The entire quality program consisting of quality control, quality assurance, and management programs to verify that the company's Quality Policy and requirements of the client are achieved.

3.10 Sample: n – The material delivered to the laboratory as a source of test specimens.

3.11 Specimen: n – A specific portion of a sample upon which a test is performed. Typically, specimens must be specified dimensions, volume or weight.

4. GENERAL REQUIREMENTS

4.1 Impartiality

GiaLoi's quality policy is to "do it right from the start" - minimize quality control resources. GiaLoi will relentlessly improve our QC procedures through training, evaluating and improve efficiency. We are to provide the most reliable testing results by upgrading testing equipment and training lab personnel to be creditable to our customers.

4.2 Confidentiality

Gia Loi has established, documented, implemented and shall maintain a quality management system and continually improve its effectiveness.

We shall:

a. Acknowledge, build the necessary processes into the system &apply them for the whole company.
b. Define the standards & necessary methods to ensure demonstration and control of these processes effectively.
c. Ensure the availability of resources & necessary information to support demonstration &follow up these processes.
d. Measure, follow up and analyze these processes.
e. Carry out the necessary actions to get the intended result and improve constantly these processes.

5. STRUCTUARAL REQUIREMENTS

GiaLoi's laboratory is located inside the factory at Phuoc Thai hamlet, Thai Hoa Town, Tan Uyen District, Binh Duong Province.

Diagram 1: Company Organization chart

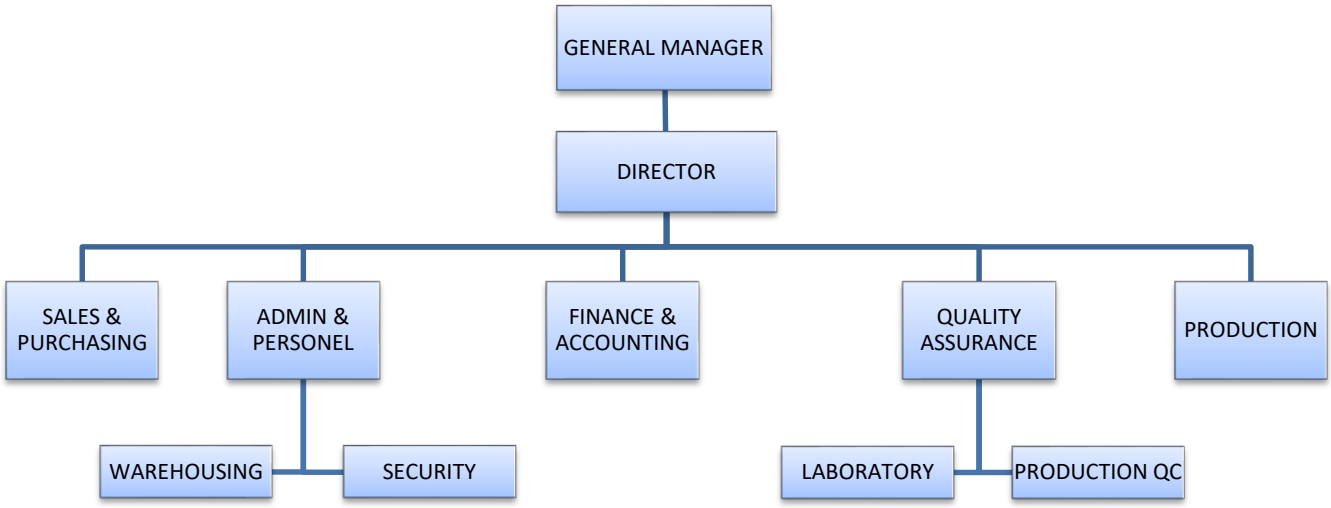
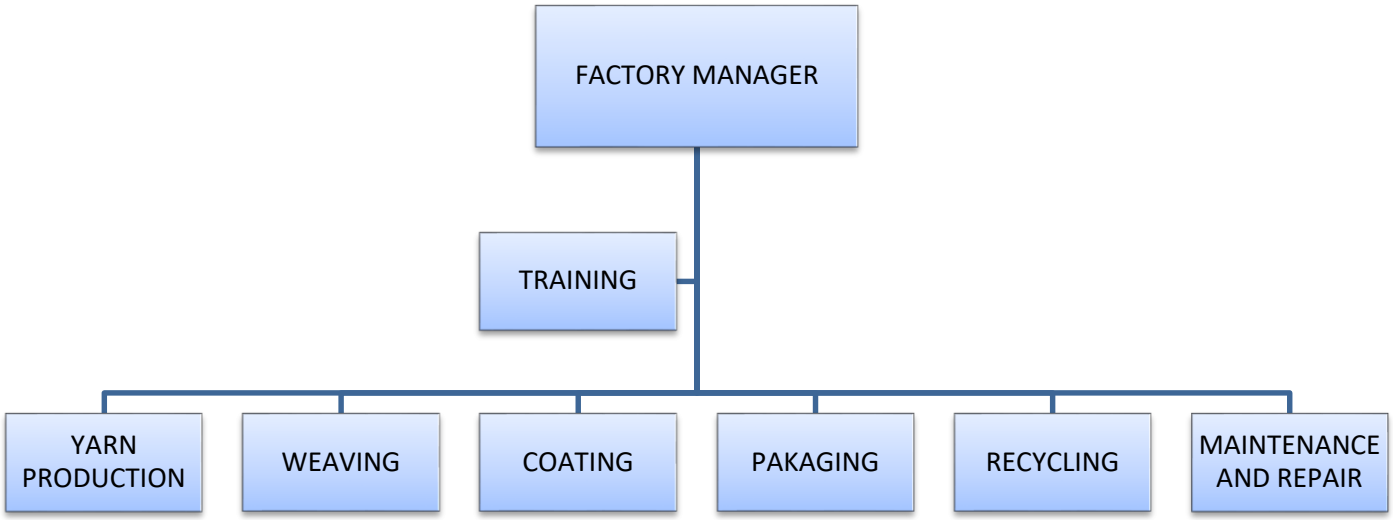


Diagram2: Factory Organization chart



GENERAL MANAGER RESPONSIBILITIES AND AUTHORITY

-Be responsible for activities of the company following the Board of Director and current law.

- Be the person to decide about guidelines, policies, objectives and business strategy of the company.
- Approves all rules applied within the company.
- Supervises and check all production, business & investment activities of the company.
- Proposes business, investment strategies, to the Board of Directors.
- Signing of all legal documents including contracts.
- Decide the operating budget for the specific unit and other departments in the company according to the development plan approved by the management board.
- Decide the financial targets.

DIRECTOR RESPONSIBILITIES AND AUTHORITY

a. Function:

- Advising and assisting the General Manager with the operations of the company.

b. Task:

- Advising and assisting the General Director to maintain the operation of all aspects of the Company's activities.
- Synthesize and evaluate the operation of the Company of the Departments through the reports of the departments.
- Assist the General Director in developing the company's development strategy.

- Support departments in the work of planning objectives, plans and policies according to functions when assigned by the General Director.
- Monitor compliance with the regulations of the management system.
- Assist the Director General in domestic and foreign relations.
- Check the documents of other departments transferred before submitting them to the General Director for approval.
- Prepare to participate in meetings of the departments at the request of the General Director.
- Analyze the company's financial statements.
- Maintain confidentiality of company.

-Perform other duties as assigned by General Manager.

FACTORY MANAGER RESPONSIBILITIES & AUTHORITY

a. Function

- Advise and assist General Manager in production.
- Manage and conduct the subordinate divisions such as yarn making, weaving, coating, packaging, recycling, maintenance and repair departments.

b. Tasks:

* About production:

- Be responsible for the company's production activities
- Follows company's production plan targets
- Manage the operation & manufacturing to complete the assigned plan or associate with outsourcing companies to ensure the manufacturing plan.
- Manage, conduct &train workers and build production management systems including product quality.
- Implement rules and regulations of labor management, materials and equipment management, &asset management
- Build business& manufacturing plan objectives quarterly, yearly, and ensure the lowest consumption norm of raw materials and regularly check the implementation of the norms.
- Have the right to sign the proposal on the appointment, removal, transfer of personnel within the production division.
- Report the results of the company's production activities to the General Manager.
- Coordinate with other functional divisions about materials & spare parts using plans for production and consumption plans monthly, quarterly and annually.

* About technique

- Plan for materials, equipment, tool according to monthly, quarterly and annually plan to actively respond fully and promptly to the Company's manufacturing operations.
- Plan for maintenance, monitoring, inspection of equipment monthly, quarterly, annually and suddenly according to leader’s requirement.
- carry out the spare parts management in accordance with the regulations, to ensure economical and efficient.

FINANCE AND ACCOUNTING MANAGER RESPONSIBLITIES AND DUTIES

a. Functions:

- Advise and assist General Manager in the company organization & in the activities of economy, finance, accounting and statistics.
- Manage, monitor & supervise the work of accounting division.

b. Tasks:

- Implement the accounting &statistics activities according to accounting law, other relevant laws and the company regulations.
- Manage assets, capital and economic resources of the company according to laws of the State and the regulations of the company.
- Build financial plans in consistent with business production plans as well as investment plans.
- Build a periodical plan about product price
- Implement financial reporting & statistics according to laws of the State and regulations of the company.
- Identify and reflect accurately and promptly the periodical asset inventory results and the capital resource.
- Store and preserve the financial documents, records as well as financial accounting data security in accordance with the law and the company regulations.
- Work with the authorities on matters related to accounting.
- Maintain confidentiality of company.

-Perform other duties as assigned by General Manager.

ADMINISTRATION AND PERSONNEL MANAGER RESPONSIBILITIES AND DUTIES

a. Functions:

- Advise and assist General Manager on the work of administrative organization of the company
- Manage, operate and supervise the work of organization and administration.

b. Tasks:

- Based on the development strategy of the Company to advise General Manager in building plans to recruit and train personnel.
- Based on the actual needs of the job to schedule, arrange staffs and prepare a proposal for General Manager to approve personnel of the company.
-Build, adjust and supervise on regulations of wages, social insurance, reward, punishment, labor rules and welfare of workers.
- Monthly make payroll, social insurance for employees throughout the company.
- Build internal document system such as company rules and other documents.
- Manage personnel & personnel's records.
- Manage and deliver stationery.
- Manage and maintain office equipment such as computers, photocopiers, air conditioner, telephone and other office machines.
- Receive guests & guide them when they come to the company.
- Manage and coordinate with other divisions about company's hygiene
- Manage the received & delivery official correspondence.
- Work with other functional agencies on issues related to the administrative organization.

SALES AND PURCHASING MANAGER RESPONSIBLITIES AND DUTIES

a. Function:

-Advise General Manager and implement in the areas of: product consumption, raw materials & spare parts supplying to meet the requirements of the short-term and long-term manufacturing plan of company.

b. Tasks:

-Be responsible for surveying, searching and expanding domestic market and export market. Build plans for consumption and sales agency network for General Manager to approve.
- Implement product consumption and make customer care effective.
- Based on monthly production plan of the company & needs of the market, set up weekly production orders to meet the demand of the market and to achieve sales plan.
-Based on monthly, quarterly and annually production plan of the company, build fully & promptly purchasing & supplying plan of materials& spare parts for production & storage requirements at the fixed levels.

- Draft the consumption contracts as well as materials& spare parts purchasing contracts to ensure the legal rights of the company and comply the provisions of law on economic contract. Liquidate the economic contracts according to regulations:
- Follow up the progress of sales and purchasing according to signed contract, implement regulations of the dispatch &delivery of goods issued by General Manager.
-Be responsible for surveying market price, propose selling price of products, purchasing price of materials to General Manager. Build & propose sales& purchasing policies, then submit to General Manager to decide.
- Organize customer conference, annual supplier conference.

QUALITY ASSURANCE MANAGER RESPONSIBILITIES AND DUTIES

a. Function:

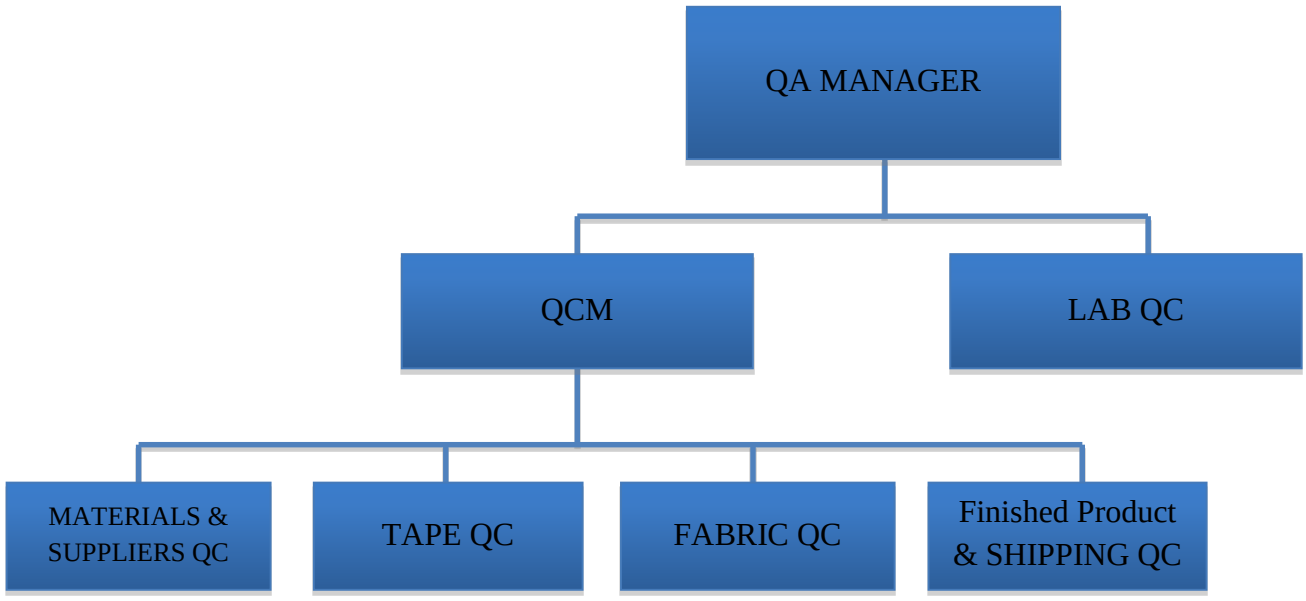
- Advise and assist director about the activities of product quality inspection.
- Manage, administer and supervise the work of QA division

b. Tasks:

- Often associated with production division to check product quality of each production stage like: tape, woven geotextile and finished products in accordance with the quality specification of each batch.
- Receive information from Sales division about sales contract to get the information about product quality then have plan to check product quality.
- Preserve and use the equipment for the inspection and supervision of the company's quality effectively.
- Update daily test results at each stage of production.
- Promptly report to Director about the lots which have problems with the quality, then find out the cause to remedy.

6. RESOURCE REQUIREMENTS

Diagram 3: Quality Assurance Organization chart



Quality Control Manager (QCM)

- Drafts procedures and standards for all QC tests.
- Revises said procedures in the event of upgrades to existing or acquisitions of new factory equipment.
- Revises said standards and procedures in the event that changes are made to the manufacturing process.
- Ensures that all products meet specifications by conducting daily reviews of QC tests and procedures.
- Announces shipment delays if products are determined to be of low quality.
- In the absence of the QCM, departmental QC staff can halt production and report product defects directly to General Manager or BOD representative.
- Oversees training of new QC staff; evaluates senior staff and maintains records on those results.
- Monitors the filing of all QC samples and test results.

Material and Supplies QC

- Examines all Certificates of Analysis (COAs) for purchased materials.
- Ensures materials and finished goods meet company specifications.

Tape QC

- Ensure quality control protocol is properly followed when materials are taken off machines.
- Ensure nonconformance resolution protocol is properly followed in the event that defects are detected.

- Ensures that all testing equipment is properly calibrated

Fabric QC

- Ensures quality control protocol is properly followed during manufacturing process.
- Ensure nonconformance resolution protocol is properly followed in the event that defects are detected.
- Ensures that all testing equipment is properly calibrated.

Finished Product and Shipping QC

- Ensures quality control protocol is followed while testing finished products.
- Ensure nonconformance resolution protocol is properly followed in the event that defects are detected.
- Ensures that all testing equipment is properly calibrated.

Lab QC

- Ensure quality control protocol is properly followed during weaving process.
- Ensure nonconformance resolution protocol is properly followed in the event that defects are detected during the weaving process.
- Ensures that all testing equipment is properly calibrated.
- Ensure that all QC documents, forms, checklists are maintained in accordance with Record Retention and Destruction Protocol.

6.1 General requirements

There are many factors affecting to the accuracy& reliability of testing method or calibration carried out by lab room. Those factors include:

-Human factor

- Environmental condition
- Testing methods, calibration and effect of methods
- Equipment
- Measurement

-Taking samples

- Management of testing samples &calibration

-The different testing types &the different calibration types contribute to the level that those above factors create uncertainty. The company also thinks of these factors, so lab room use IRM to define the appropriateness of equipment before testing. Besides, lab room constructs methods of testing, methods to

take samples and also methods to prepare samples based on ASTM as well as personnel training to meet requirements of lab room.

6.2 Personnel

-QA manager is responsible for training lab staffs. Training is divided into 2 parts: theory & practice for each testing method. After training, lab staffs are evaluated to identify capacity as well as identify training demand later on.

-CV about responsibilities, ability, education, qualifications, skills & experience of lab staffs are kept & updated by QA manager.

6.3 facilities & environmental condition

-Lab room remains temperature of 21± 2^{o}C& moisture of 60-70% during testing process based on air conditioner. These data are recorded by lab staffs every day.

-When the environmental condition cannot meet the above requirements, pause testing process immediately & ask technicians to repair air conditioner promptly.

6.4 Equipment

-Lab room always remains list of equipment, in which mentions enough information such as: manufacturer, series #, country of origin, date of manufacturing, date of calibration, date of next calibration, place of calibration, position of equipment, & testing methods for equipment.

-The calibrated equipment is easily identified by calibration label on equipment. Calibration label mentions clearly equipment code, date of calibration, date of next calibration & calibration #.

-The equipment which do not meet the testing requirements are labeled “no use” to avoid using by mistake. Quality manager plans to calibrate lab room equipment & keep calibration records.

6.5. Metrological traceability

-All equipment used for testing or calibration may affect to the accuracy& certainty of calibration results. Testing or taking samples are all calibrated before using.

-The equipment used to calibrate internally within company are sent to appropriate authorities to calibrate annually.

6.6. Externally provided products and services

- *Sub-contracts on testing and calibration*

For any special customer request, GiaLoi sub-contracts on testing to TRI Lab in Austin, Texas, USA.

- *Purchasing service and supplying services*

-GiaLoi has established & maintained purchasing procedure and supplier evaluation procedures: raw material, additives, machinery testing equipment, support services which are assessed basing on meets of the requirements of products quality, prices & purchasing service to ensure that the products &services are consistent with the requirements of manufacture. From which, establish a list of suppliers to be considered & decided by General Manager.

- *Customer service*

-GiaLoi's lab room is always ready to cooperate with internal customers as well as customers who buy products to clarify customers' requirements. The information reflected from customers are analyzed to improve the management system & testing activities.

7. PROCESS REQUIREMENTS

7.1. Review the requirements, suggestion and contracts: N/A

7.2. Testing methods, calibration methods & approval of methods

-Lab room has built Standard Operating Procedures according to ASTM, operating instructions, IRM instruction accordingly. These documents are built by lab room & are approved by General Manager before implementation.

-Each lab room staff is responsible for preserving the equipment that she/he in charge. Ensure that all equipment are calibrated before using.

-List of lab room equipment, list of out-sourcing calibrated equipment & list of internal calibrated equipment are always available at lab room.

7.3. Taking samples

-Lab room takes samples according to ASTM D4354 frequency as regulation. Mentions the information on the samples such as: product type, specification, date of manufacturing, roll tracking number. At lab room, it depends on each testing method that the quantity of specimen is different. Cut specimens through sample width & take specimen at least 150mm (6 inches) to the selvage edge.

-Samples should be kept in the lab conditions at least 24 hours before the specimens are tested

7.4. Handling of test or calibration items

-Each testing sample is labeled for identification. After testing, samples are kept on shelf within 5 years & are arranged according to product type, tracking #.

-Evaluate the appropriateness of testing results with standards. If the result is not passed, solve immediately according to non-conformance control process.

-Testing sample records are stored at lab room.

7.5. Technical records

a. Quality meeting minutes

b. Assessment result records

c. Corrective action records

d. Customers' complaint records

7.6. Evaluation of measurements uncertainty

GiaLoi's laboratory performing calibration, including of its own equipment, evaluate the measurement uncertainty for all calibrations.

7.7. Ensuring the validity of results

Testing staffs always comply with testing regulations & conditions such as:

- Procedures, instructions, standards
- Appropriate equipment: correct equipment or equipment were calibrated before using
- Follow up & record the environmental conditions such as temperature, humidity
- Consider and evaluate testing results
- Testing results are collected &analyzed monthly

7.8. Reporting of results

-Each testing minute includes the following information:

- Name of product samples
- Sample tracking #
- Testing #
- Testing methods
- Date of testing
- Times of testing
- Testing staff
- Date of manufacturing (sample)
- Name of testing equipment, date of calibration, place of calibration
- Evaluation of testing results

7.9. Complaints

Complaint of customers is considered as a non-conformance, so it is recognized and solved according to non-conformance control process.

7.10. Nonconforming works

- GiaLoi has established and applied non-conformance control process for handling the non-conformance findings of any aspects or any results of testing and / or calibration, or the results of the work which is not consistent with the procedures of the system.

-When finding non-conformance, at first we stick the label for identification avoid being transferred to the next steps or being used unintentionally. Then QA manager will consider & evaluate level of non-conformance, & coordinate with the related divisions to find out the cause & find out the solution. General Manager is the final person who reviews and approves for the non-conforming report.

7.11. Control of data- information management

The laboratory information management system is protected from unauthorized access

8. MANAGEMENT SYSTEM REQUIREMENTS

8.1. General

Company establishes and maintains documents control procedures to control every documents in the system according to the requirements of ISO17025: 2017 and implement a management system in accordance with option A.

8.2. Management system documentation

-The documents of system used to describe, identify Standards & necessary methods to ensure identification, implementation, control, and administration of the processes effective.

-Documents of the System include:

a) The published documents about the quality policy and quality objectives;

b) Quality Manuel

c) The procedures in written documents according to the requirements of ISO 17025: 2017;

d) The necessary documents of the company to ensure make plan, demonstrate and control the processes of the company effectively.

e) The records requested by ISO 17025: 2017.

-These documents are compiled with the simple form, easy to understand, convenient for using and correct with the reality of the company.

-Always having effective date & revision on quality Manuel & documents of system to identify easily the outdated documents. These documents are updated or replaced to be consistent and comply with the requirements applied.

-The document structure of system is described as follow:

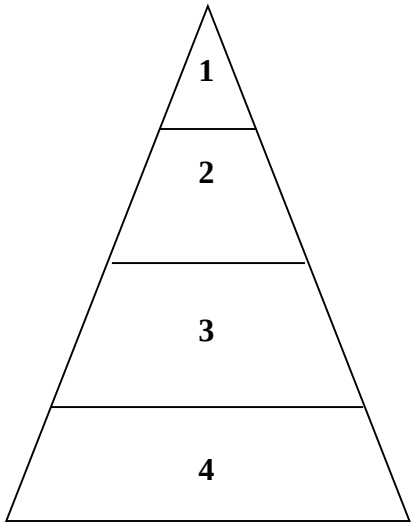
Quality policies

Quality Manuel

Procedures

Guidance, regulations, plans, objectives, standards, drawings, diagrams

Types of Records, forms



8.3. Control documents:

-The documents of the system are considered & approved person with authority before using. They are also considered periodically to ensure that they are still consistent and comply with the requirements applied.

-GiaLoi always maintains a list of controlled documents, define the current status of documents to prevent using documents which are invalid or outdated.

-The invalid & outdated documents are collected if kept for legal requirements or for the purpose of storing information will be sealed "expires effect" to ensure not to use again.

-A review and approval any changes of the documents are carried out by the divisions which prepared documents, unless with special instruction.

8.4. Control of records:

-Company establishes and maintains records control procedure to determine the manner the collection, storage, conservation, arrangement, accessing, using, and destroying quality records.

-Records include the following types:

1. General records
    a. Checking & testing minutes
    b. Production operating tracking forms

2. Personnel records

    a. Training records

    b. Personnel CV

3. Equipment records

    a. Maintenance records

    b. Calibration records

    c. IRM records

-GiaLoi establishes these records and keep them in labeled hard cover for easy identification. All of these record covers are kept in the numbered cabinet for easy tracking when necessary.

8.5. Actions to address risks and opportunities

-Company establishes procedures to identify and implement the preventive actions in order to eliminate the cause of hidden non-conformance and prevent them.

-Implementation of IRM before implementation of testing is also an effective way to ensure reliability of test results.

Preventive actions include:

- Identify the hidden non-conformance and the causes
- Evaluate necessity of non-conforming prevention
- Begin to implement preventive actions
- Follow up the results of this action
- Review preventive actions continuously

8.6. Improvements

-Through the results of the system evaluation, test results, feedback from customer & inappropriate forms, GiaLoi company, will improve frequently the effectiveness of management system.

8.7. Corrective actions

-Corrective actions are applied as soon as the evaluation points out that non-conformance may occur or company has doubt about appropriateness of activities in comparison with policies & procedures of system (non-conformance control procedure, internal audit, external audit, feedback of customers, staffs' supervision.)

-Corrective actions are started by investigating & finding out the main causes of problems to eliminate and prevent them.

-These corrective actions are tracked to ensure that they are carried out & are effective.

8.8. Internal audits

-Evaluate internal quality to confirm the consistency of quality activities and the results related to everything planned and to determine the effectiveness of the quality system.

-Internal audit is conducted by a person who is independent with the person who is directly responsible for audited activities. Head of division implements to remedy the defects which were found out during evaluation process.

8.9. Management reviews

-General Manager holds the consideration meetings of leaders to evaluate the entire Quality Management System and to improve effectiveness &effect of Quality Management System. The review include the following content:

- The appropriateness of policies and procedures
- Reports of managers and supervisor
- Last internal & external audit results
- Precautionary & remedial actions
- Customers' feedback
- Recommendations on improving
- Other related factors such as: quality control activities, resources and staff training

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