

# LAPP HOLDING N.A.

## Corporate Quality Manual

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# GERMAN PRECISION ENGINEERING PROUDLY PRODUCED IN THE USA



The Lapp Group North American headquarters located in Florham Park, NJ houses Lapp USA, Lapp Cable Works, and our latest expansion, Lapp Group's Center for Competence and Innovation. This Center is assessed by UL as a Client Test Data Program (CTDP) laboratory for Product Testing, R&D, Quality Validation, and New Product Innovation. Lapp Cable Works is our state of the art cable manufacturing plant for ÖLFLEX® brand quality products and custom designed cables. In addition, this facility houses Lapp Systems, which provides complex harnesses, integrated solutions, and custom cable assemblies.



## 2600 PEOPLE, 21 LANGUAGES, 1 WORLDWIDE FAMILY

In the late 1950's, Oskar Lapp turned his visionary dream into reality with the invention of the first industrially manufactured control cable, ÖLFLEX®. This was the beginning of his family run and oriented company. Lapp Group produces innovative cables, connectors, accessories, and engineered solutions as a worldwide market leader. Oskar Lapp's vision continues today through his wife, Ursula Ida, and his sons, Andreas and Siegbert Lapp.

Within 50 years, the Lapp Group has grown to 2,600 employees operating around the globe developing, manufacturing, and selling more than 40,000 products. With 17 manufacturing sites, 39 company-owned sales operations, more than 100 foreign representations, and worldwide headquarters in Stuttgart, Germany, the Lapp Group people are everywhere you need us to be.



# Corporate Quality Manual

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The worldwide Lapp Holding N.A. consists of Lapp USA (formerly Ölflex Wire & Cable & Contact Electronics), Lapp Systems, Lapp Cable Works, Lapp Canada and Lapp Mexico, and Lapp Tannehill. If you need further information please contact Darlene McBride, Quality Director, N.A.: 1-800-774-3539, extension 6403.

# Lapp Holding N.A. Business Statement

The purpose of this Business Statement is to provide an overview of, and an introduction to the Quality Manual and Quality Processes as operated by Lapp Holding N.A.

It is the intention of all subsidiaries within Lapp Holding N.A. to continually improve the quality of the goods and services they provide, leading progressively to increase customer satisfaction and implement continual improvement plans based on the feedback of their customers. Our customers are the foundation of our business. We continually survey both our internal and external customers to ensure that our continual improvement plans are meeting and exceeding their expectations.

Lapp Holding N.A. is a world wide supplier of flexible cable and accessories and offers a full range of products for the industrial cable market. The Quality Management System is applicable to design, development and manufacture of custom cable, cutting to size of wire and cable and tubing, distribution of wire, cable accessories and tools, value added services which include striping, dyeing, twisting, and printing of wire.

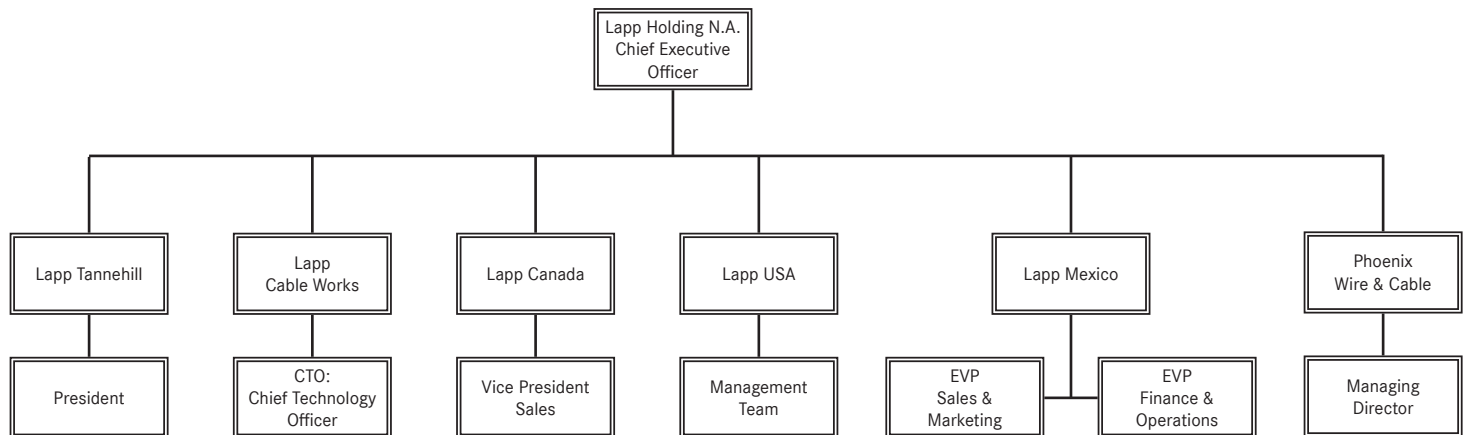
Lapp Holding N.A. consists of Lapp USA, Lapp Cable Works, Lapp Systems, Lapp Canada, Lapp Mexico, Lapp Tannehill, and Phoenix Wire. In the beginning there was Ölflex Wire & Cable and Contact Electronics. The time came for industrial evolution; Ölflex and Contact merged to become Lapp USA, with headquarters in Florham Park, New Jersey. This 130,000 square foot facility also houses a state-of-the-art cable manufacturing plant, Lapp Cable Works. In addition to the manufacturing site, the Florham Park location is also the home of Lapp Systems USA - another Lapp Holding company - which provides complex harnesses, integrated systems solutions, and custom cable assemblies.

As a part of the worldwide Lapp Holding Subsidiaries, Lapp Canada and Lapp Mexico deal in distribution of wire and cable, cable accessories, and tools. They offer a complete one-stop solution for power/signal cable and connector needs throughout automation markets. Lapp Tannehill is a subsidiary of Lapp Holding N.A. located in Savage, Minnesota. They offer value-added services including striping, dyeing, twisting, printing of wire, respooling and cutting of wire to length, and cutting and marking of tubing. Lapp Tannehill offers a full range of products and services for the industrial cable market.

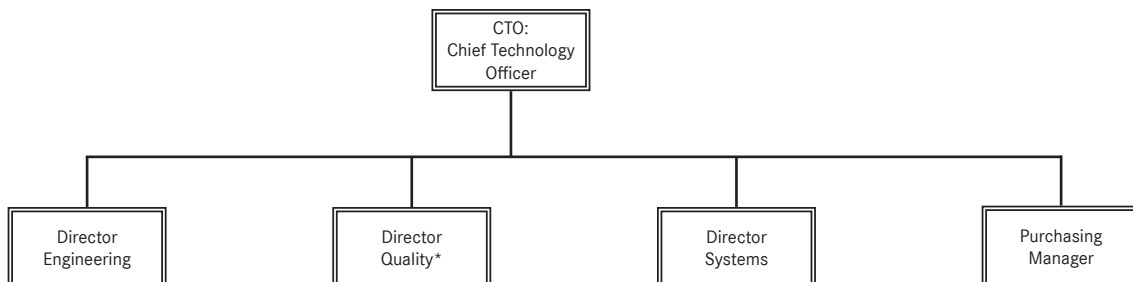
ISO Exclusions include servicing for all N.A. subsidiaries. There is no design at Lapp Tannehill, Lapp Canada, or Lapp Mexico. Warehousing related to Lapp Canada, including shipping/receiving/cutting, order entry, order processing, internal audits, and identification of corrective/preventative actions is performed in Florham Park, New Jersey along with purchasing, engineering, quality, accounting, and human resource activities.

# Lapp Holding N.A. Subsidiaries Chart, Lapp USA Operations & Service Centers Charts

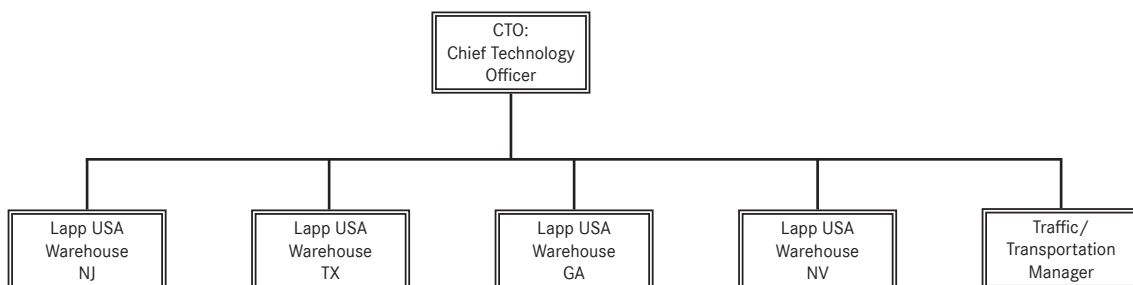
## Lapp Holding N.A. Subsidiaries



## Lapp USA Operations



## Lapp USA Logistics Service Centers



\* Quality Management Representative

# Procedures Associated with Q.M.S.: 4.2.1

## **POLICY:**

Quality is controlled in processes throughout the organization. Procedures are written to describe processes as required. These procedures are electronically stored.

## **PURPOSE:**

Outlines the storage and access of procedures as they relate to policies and processes.

## **RESPONSIBILITIES:**

Managers are responsible for identifying the need to associate a process with a procedure. These processes and procedures are electronically stored and controlled. Flowcharts and process maps referencing standards and procedures will be documented when required.

## **DESCRIPTION:**

Copies of the procedures can be accessed electronically. If the user does not have access to this data, they will be given a controlled hard copy of the procedure.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.



# Document Control & Revisions: 4.2.1

## **POLICY:**

Each subsidiary is committed to establishing and maintaining procedures to control all documents and processes that relates to the requirements of ISO9001 through the use of System 9000 Quality Management System, Visual Software, AS400, Prelude and SAP or any other accepted software. These documents shall be reviewed and approved for adequacy by authorized personnel prior to issue. The latest issue of all documentation will be available at all locations, as appropriate, where operations essential to the effective functioning of the quality system are performed. Online versions of obsolete documents are automatically removed from all points of entry. Changes to documents shall be reviewed and approved prior to release by the same functions/organizations that performed the original review and approval unless specifically designated otherwise. The designated organizations shall have access to pertinent background information upon which to base their review and approval.

Procedures will be established to control documents and records other than those stored in the Document Control Database, such as Catalogs, UL Specifications, CSA Specifications and Cable Purchase Specifications, Inspection Records, or customer-supplied products when required.

## **CORPORATE DOCUMENTS:**

The Lapp Holding N.A. Manual is housed in the Lotus Notes Database. Each subsidiary will have access to this database. Electronic notifications will be sent when a change is made in the Lapp Holding N.A. Manual. The latest issue of all documentation will be available at all locations. Online versions of obsolete documents are automatically removed from all points of entry. The Lapp Holding N.A. Manual is a guideline for all subsidiaries.

Quality Manual - Revision of cover page will be maintained in the Cover Page and Table of Contents. Revisions for specific elements of the standard & organizational charts is maintained in the Lotus Notes Database.

## **PURPOSE:**

To ensure that personnel have up-to-date documentation concerning their product or service, that this documentation is controlled, and changes made to documents are communicated to all affected personnel in a timely manner.

## **RESPONSIBILITIES:**

All personnel who create or maintain any of the above listed documents are responsible for ensuring that the documents are controlled.

## **DESCRIPTION:**

Each N.A. subsidiary document control systems, using the System 9000 Quality Management System, Visual Quality, Prelude, SAP or any other accepted software, provide for the issue, distribution, recall, revision, and change of documents which relate to the quality of products and services.

## **DOCUMENT CHANGES/MODIFICATIONS CUSTOMER-SUPPLIED PRODUCT (EXTERNAL ORIGIN)**

The Control of Customer Supplied Product Procedure outlines the control of external origin documents (customer supplied specification).

The following responsibilities for issue and revision of documentation shall remain the same. Quality documentation shall be reviewed revised and reissued when any change has been made per the document control procedure.

The Engineering Department at Lapp USA is responsible for revising specifications.

All Directors and Managers shall be responsible for documenting their department processes and procedures for continued quality throughout the company.

# Document Control & Revisions: 4.2.1

## **CORPORATE DIRECTIVE:**

10-609-EN Directory of Preservable Records must be implemented.

## **CONTROLLED DISTRIBUTION:**

Controlled distribution will be used to verify that the most current revision of any document is in use where an activity having a direct effect on quality is being performed. The controlled distribution will be from the Document Control Database in System 9000 and Visual Quality. These databases contain the Master List of all approved procedures and work instructions. All unmarked copies of procedures are considered to be controlled copies. All processes are maintained in the Quality Manual or electronically. Procedures shall be established to ensure that all printed, controlled copies of documents are current, and that all obsolete versions are positively retrieved and destroyed to prevent their unintended use.

## **REVISIONS:**

No revisions are allowed to documentation without the approved release of a new document, revised as needed.

Current revisions of the Organization Chart will be reflected in electronic versions of the Corporate Quality Manual in Lotus Notes.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of Lapp Holding N.A. suitable to their process.



# Quality Records: 4.2.4

## POLICY:

Records will be gathered and stored within the appropriate marked databases. This practice shall provide for uncomplicated recall. Metrics to demonstrate continual improvement will be stored in databases for easy retrieval.

Appropriate safeguards shall be maintained to ensure the preservation of these records.

A limited number of records will be in hard copy form.

## PURPOSE:

To ensure that the appropriate quality records are gathered, maintained, and disposed of in a controlled manner.

## RESPONSIBILITIES:

Personnel that generate quality records are responsible for their maintenance and storage.

A Quality Representative is responsible to oversee this process utilizing audit findings to alert personnel to potential errors and see that the appropriate records are disposed of in a timely fashion.

The IT Department is responsible to ensure that electronic records and other computer applications are safeguarded. For these items procedures will define steps to ensure their preservation and accessibility.

## DESCRIPTION:

General Records are generated and maintained to control activities affecting quality. These records serve to demonstrate that the policies in this Quality Manual, and the underlying procedures, are adhered to. Records shall be retained per established record schedules, or as specifically outlined by an entity. Record retention periods outlined by Lapp Holding A.G. Directive 10-609-EN Directory of Preservable Records supercedes all other record retention requirements.

**Quality Records shall be, but are not limited to, the following:**

RECORD	RETENTION PERIOD*
ISO 9001:2000 Standard	Certification cycle or as specified
Calibration Records	10 years or as specified
Contract Review Records	10 years or as specified
Corrective/Preventive Actions	10 years or as specified
Cable Specifications	Product life plus 5 years or as specified
Inspection and Testing Records	10 years or by contract or as specified
Internal Audit Reports	10 years or as specified
List of Approved Suppliers	Continuous or as specified
Management Review Records	10 years or as specified
Manufacturing Documentation	Service life or as specified
Nonconforming Material Report	10 years or as specified
Product Safety Reports	10 years or as specified
Personnel Training Records	10 years or as specified
Product Traceability Records	10 years or as specified
Quality Manual	Continuous or as specified
Quality Procedures	Obsolescence or revision or as specified
Sales Order Information	10 years or by contract or as specified

\*Lapp Holding A.G. (Parent Company)

## REFERENCE DOCUMENTATION:

Documented procedures, work instructions, flowcharts, and records are established by each subsidiary of Lapp Holding N.A. suitable to their process.

# Quality Systems, Procedures & Planning:

## 4.2.1, 4.2, 4.2.3, 5.4

### **POLICY:**

Each subsidiary of Lapp Holding N.A. will establish and maintain a documented Quality Management System using System 9000 Quality Management System software, Visual Manufacturing/Quality, Prelude, SAP and/or any other approved system as a means of ensuring that all products and services conform to specified internal and external requirements. The Corporate Quality Manual will provide guidelines for all subsidiaries. A Process/Quality Manual/Organizational Chart detailing all departments within the Quality Management System specific to each subsidiary will be prepared. The Manual will define any exclusions including details and justifications. All the pertinent information regarding the policies, their purpose, scope, and responsibilities, that govern Corporate Directives outlining respective procedures, work instructions, and flowcharts will be outlined.

The Quality Management System will include the preparation of documented procedures/processes, department goals, work instructions where required and supporting forms which will allow the effectiveness of the implementation of the system.

The Quality Management System will include the identification and means to acquire any controls, processes, inspection equipment, fixtures and total production resources to achieve the required quality level.

### **PURPOSE:**

This policy ensures that our employees, customers, and potential customers understand that we maintain up-to-date documented quality system that controls all the work that affects the quality of the product or services we deliver.

### **RESPONSIBILITIES:**

It is the responsibility of the Quality Director, NA to ensure that each subsidiary meets the requirements of ISO9001 Standard.

### **DESCRIPTION:**

The Quality Management System is managed through the use of System 9000 Software, Visual Manufacturing/Quality, Prelude, SAP and any other accepted system that allow for and controls our compliance to ISO9001, through the use of four documentation levels. Level I, Quality Manual, Level II Procedures/Processes, Level III Work Instructions and Level IV forms and records. Personnel not having on line access to these documents are to be given access to printed, controlled copies of same.

### **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of Lapp Holding N.A. suitable to their process.

# Quality Policy: 5.3

## **POLICY:**

Each subsidiary of Lapp Holding N.A. will be responsible to define and document their policy statement and objectives. Senior Management of Lapp Holding N.A. subsidiaries will ensure that the policy statement is understood, implemented, and maintained at all levels of the Organization. The Policy Statement and objectives are reviewed for effectiveness at each Management Review Meeting. Continual Improvement Plans are formulated by the pilot companies of Lapp Holding N.A. and the results monitored by the Head of Quality in Stuttgart Germany.

## **PURPOSE:**

This policy ensures that the most senior management of the company is seen to take an active role in the Quality Management System.

## **RESPONSIBILITIES:**

Upper Management is responsible for ensuring the implementation of the Quality Policy.

## **DESCRIPTION:**

The Quality Policy for each subsidiary is prominently displayed in various areas throughout the company.

The Quality Policy is reviewed for adequacy, effectiveness, and relevance by the upper management of the Lapp Holding N.A. subsidiaries along with the President of Lapp Holding N.A. Analysis of customer survey responses, market trends, and service levels are discussed during management review to align objectives and adjust the quality policy statement as required.

All employees are made aware of the quality management system during employee orientation. An ISO awareness overview is provided to all employees.

Department managers of Lapp NA subsidiaries are responsible for setting department goals and objectives. Quarterly quality meetings are held.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of Lapp Holding N.A. suitable to their process.

# Policy Statement: 5.3

## Policy Statement:

LAPP Holding N.A. will strive to meet 100% of our customer requirements.

Customer  
Oriented



Family  
Values

Innovative

Success  
Oriented

### Lapp stands for:

- Best People
- Manufacturing Excellence
- Strong Brands
- Lean Processes
- Continually Improving Our Customer Complaints, Customer Service Rate, Supplier Service Rate, and Cost of Quality
- Achieving Category 1A in Lapp's 2007 Audit

# Lapp Holding N.A. Quality Policy

## Policy Statement, Lapp Group, N.A.:

Lapp Group, N.A. will strive to meet 100% of our customer requirements through open communication, innovative ideas, and continual improvement. We will continually seek to improve environmental performance by reducing and preventing environmental hazards and impacts of our operations and products at all life-cycle stages, from design to customer use and disposal.

Subsidiaries of the Lapp Group, N.A. are committed to continually improving their key performance indicators - by reducing customer complaints, improving the customer service rate, reducing supplier incidents, and increasing the supplier service rate - to ensure that our internal and external customers' requirements are fully satisfied.

# Management Responsibility: 5, 5.2.1

## **POLICY:**

It is the policy of Lapp Holding N.A. to market and distribute products of such quality that will reliably perform their intended functions so that the company is recognized as a quality leader in the industry. All products offered for sale to the company's customers must be consistent with applicable regulations and approvals, prevailing state-of-the art, and contract requirements or advertised specifications.

## **PURPOSE:**

To ensure that our customers and employees, clearly understand that the management of our company is involved and participates in the Quality Management System.

## **RESPONSIBILITIES:**

The Senior Management of each Lapp Holding N.A. subsidiary is responsible for implementing a quality management system that embraces the philosophy of Lapp Stuttgart while sustaining certification to and meeting requirement of ISO9001. The Senior Management of each subsidiary will monitor continual improvement plans to ensure customer satisfaction is achieved and to reach category 1A in 2007S and 2007P internal audits. Management is responsible for establishing the quality policy and objectives and ensuring that the objectives are being met. Policy statements and objectives are reviewed at Management Review Meetings held annually.

## **DESCRIPTION:**

In pursuit of this overall management policy, it is the intent of Lapp Holding N.A. that:

- No product offered to a customer will contain a known condition that is inconsistent with the applicable contract requirements or advertised specifications, and laws and regulations applying to it. Senior Management of each subsidiary will ensure that the necessary resources are available to achieve the customer requirements.
- All product offered to the marketplace will consistently meet or exceed the customer's expectation and thereby contribute positively to the company's product quality reputation.
- Products containing the company trademark must be made to the same exacting product standards and quality requirements regardless of where the material was purchased or manufactured.
- It is essential that products of like product identification are interchangeable regardless of the location of the manufacture.

## **CUSTOMER SATISFACTION/CUSTOMER FOCUS:**

Customer Satisfaction is defined by the methods to monitor information on customer perception in meeting customer requirements. Customer surveys are sent out to customers at each subsidiary at a minimum of once a year. Surveys are posted on the web site where responses are directly sent to the Quality Director of N.A. Feedback is analyzed, charted and reviewed at Management Review Meetings. Continual Improvement Plans are developed to ensure improvement is achieved.

Quality performance indicators, which include customer complaints, cost of quality, supplier service rate, customer service rate, supplier quality incidents and customer returns are entered in the intranet and reported to Lapp Holding AG on a monthly basis. Performance is monitored and measured against performance standards.

# Management Responsibility: 5, 5.2.1

## **QUALITY OBJECTIVES:**

The Quality Representative for the Lapp Holding N.A. subsidiary ensures that quality objectives are established at relevant functions and levels within the organization.

## **IMPROVEMENT:**

Management facilitates the continual improvement process through the use of the quality policy, objectives, audit results, surveys, analysis of data, and effectiveness of corrective and preventive actions. Management Review Meetings are held at minimum every year with each Lapp Holding N.A. subsidiary. Copies of audit reports, internal and external surveys, analysis of survey responses, minutes and follow up actions from past Management Review Meetings, corrective and preventive actions, quality policy and objectives for each subsidiary are maintained in the Quality Matters Database. Information is reviewed at Management Review Meetings along with input requirements of the ISO Standard.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.



# Responsibility & Authority: 5.5

## **POLICY:**

The responsibility, authority, and the interrelation of all personnel who manage, perform, and verify work affecting quality will be defined in company procedures that relate to the management of the Quality Management System.

All personnel who need the organizational freedom and authority to initiate action to prevent the occurrence of product nonconformity are granted that authority by issuance of this policy. Further, these personnel are charged to identify and record any product quality problems; initiate, recommend, or provide solutions, verify the implementation of solutions, control further processing, delivery, or installation of nonconforming product until the deficiency or unsatisfactory condition has been corrected.

## **PURPOSE:**

The purpose of this policy is to define the responsibility and authority that all employees of the company have regarding the needed freedom to ensure that our customer receives satisfactory product and service.

## **RESPONSIBILITIES:**

It is the responsibility of the Senior Management of Lapp Holding N.A. facilities to ensure that the Quality System of their Company is maintained and that all employees have the right to stop nonconforming product or services from reaching the customer. It is the responsibility of all employees to actively seek methods and means of improving the quality of our products and services.

## **DESCRIPTION:**

The most Senior Manager of each Lapp Holding N.A. subsidiary is responsible for the quality of company services and products. Responsibility for implementing the quality procedures of the company is delegated to the Quality Representative. The Quality Representative is responsible for maintaining the PAR/CAR database and ensuring that corrective action is implemented.

All employees have the organization freedom to identify problems; to initiate, recommend, solve and/or verify solutions to quality problems, and to access Management at any level if action is required.

A Corrective Action Request (CAR) can be initiated by any employee who finds a nonconforming condition existing in a process or product. Corrective action requests shall be implemented in accordance with the Corrective Action Procedure. Records of all Corrective Actions are to be submitted to the Quality Director, NA.

## **QUALITY MANAGEMENT REPRESENTATIVE:**

There is an appointed ISO Management Representative for each Lapp Holding N.A. subsidiary. The responsibilities of the ISO Management Representative is to ensure that the quality management system is established and maintained throughout the organization, and to report on the performance of the quality system including needs for improvement/resources at the company's Management Review Meeting held annually.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Management Review & Management Responsibility:

## 5.6,

### **POLICY:**

The Management Representative, as defined by this policy, has the authority and responsibility to manage the quality processes, define and establish a complying system, identify, evaluate and require correction of any and all quality related problems, verify implementation and its effect, and control further processing or shipment of nonconforming material or defective product.

Staff members trained as quality auditors shall assist the Quality Representative in preparing the necessary reports for Upper Management that will adequately and objectively review and evaluate the quality system. Meetings are held annually, at a minimum, with Senior Management of Lapp Holding N.A. to discuss trends discovered, customer returns analysis, corrective/preventative actions/internal assessments, customer satisfaction, and continual improvement including resources required to achieve objectives. Minutes of all Management Review Meetings are retained.

### **PURPOSE:**

This policy ensures that management continues to be engaged in the quality system and monitors the progress of the system.

### **RESPONSIBILITIES:**

Responsibility for company performance of the quality system, including International Standards and associated procedures is assigned to the Quality Representative.

### **DESCRIPTION:**

The authority for implementation and maintenance of the quality system is delegated to all managers and supervisors with primary responsibility for coordination and evaluation of the system by the Management Representative. Specific responsibility for quality matters is assigned to the Quality Representative.

The Quality Representative at the Lapp Holding N.A. subsidiary will prepare necessary information for Management Review Meetings as requested by the Quality Director of N.A. The meeting will review the quality system conformance to the current methodology and international standard. Minutes of all Management Reviews will be prepared by the Quality Director, NA and sent to all Lapp Holding N.A. subsidiaries with copies sent to the President of Lapp Holding N.A.

Inputs and outputs will include the following:

- Review Input: Results of Audits, Customer Feedback, Process Performance and Product Conformity, Status of Preventive and Corrective Actions, follow-up actions from previous management reviews, changes that could affect the quality management system, and recommendations for improvements. Review outputs to include but not be limited to improvement of the effectiveness of the quality management system and its processes, improvement of product related to customer requirements, and resource needed.

### **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established for the quality management system of the Lapp Holding N.A. entity as required.

# Training: 6.2.2

## **POLICY:**

Training needs will be identified by the Department Manager and listed in the Job Description of each employee. Training needs will be identified and training provided according to established procedures.

## **PURPOSE:**

To ensure that all functions that can affect the quality of our product or process are staffed by qualified and trained personnel.

## **RESPONSIBILITIES:**

The Department Manager/Director is responsible for maintaining all functional training requirements and records of training. All training must be validated and documented as being validated. The Department Manager will determine the core competency of his worker and ensure that requirements to fulfill the position are met. Department Manager/Directors are responsible for identifying the training requirements for their respective personnel and ensuring that they receive the required training.

## **DESCRIPTION:**

All employees will receive ISO Awareness Training. During the ISO Awareness Orientation, the employee will receive a copy of their job description, procedures, processes and work instructions. Training schedules, records and validation of training will be recorded by the Manager of the Department. Training methods include, but are not limited to: group training, formal classroom, ad hoc programs, apprenticeship, on-the-job training, professional education and experience.

A three-month evaluation checklist will be sent to the Manager of a new hire to ensure that the employee is adapting to job responsibilities outlined in the job description.

Exit interviews will be held with all employees leaving the company.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Inspection, Measuring & Test Equipment:

## 7.1, 7.5.3, 7.6

### **POLICY:**

Equipment used for inspection, measuring, or testing (test equipment) which influences final product configuration or performance to include equipment on loan and supplied by the customer or an employee shall be checked for accuracy on a predetermined maintenance schedule (master calibration list). The schedule shall include equipment locations, number or type, frequency of checks, check method, and actions to be taken in case of unsatisfactory results.

### **PURPOSE:**

To ensure that all equipment used to verify product or service conformance to requirements is maintained, inspected, and calibrated as required. To ensure that controlled conditions exist for all test activities resulting in known accuracy.

### **RESPONSIBILITIES:**

Quality Representative or designee is responsible for the requirement of the calibration program.

### **DESCRIPTION:**

#### **IDENTIFICATION OF MEASUREMENTS:**

Every operation of the test equipment under calibration will be examined and, if out of tolerance, calibrated. Controlled equipment is calibrated and adjusted against certified equipment having a traceable relationship to the National Institute of Standards and Technology (NIST).

#### **IDENTIFICATION OF TEST EQUIPMENT:**

Equipment controlled according to this policy will be permanently marked and identified prior to uses for product acceptance. At the time of receipt, or return to service of a piece of test equipment, a calibration cycle will be assigned. Labels or marking are used to indicate approval status and the calibration due date.

#### **CALIBRATION PROCEDURES:**

The manufacturer's calibration specifications and procedures (if any) for the individual equipment shall be used in calibration of the company test equipment. If a manufacturer does not supply calibration procedures for a piece of test equipment, the Quality Representative will create a procedure in accordance with the manufacturer's calibration specification.

A master calibration list of all test equipment under calibration control will be maintained showing the control number, calibration level, model, serial number, nomenclature, manufacturer, calibration procedure, calibration cycle, locations, calibration due date, and appropriate calibration laboratory (supplier or in-house standards laboratory). If a piece of test equipment is found to be out of tolerance when it is submitted for calibration, it will be recorded in the equipment history file. If test equipment cannot be calibrated within specifications it will be repaired before returning to service.

#### **ASSURANCE OF PRECISION:**

All inspection, measuring and test equipment shall be verified as capable of obtaining the required precision of the measure process.

#### **CALIBRATION LABELS:**

Calibration labels or marking shall be placed on calibrated test equipment.

# Inspection, Measuring & Test Equipment:

## 7.1, 7.5.3, 7.6

### **CALIBRATION RECORDS:**

All current calibration certificates for test equipment shall be retained. The master calibration list and equipment history list shall be constantly updated to show the most current status of test equipment.

### **OUT OF TOLERANCE:**

During calibration, if a piece of test equipment is found to be out of tolerance, the effect it had on the process will be determined. Corrective actions, which may include product recall, will be implemented if deemed necessary by the results of the investigation.

### **CALIBRATION LABORATORY - OUTSIDE:**

The calibration service must have a traceable relationship to the National Institute of Standards and Technology (NIST).

### **PRESERVATION AND STORAGE:**

Test equipment will only be stored in areas where the environmental conditions cause no damage. During calibration, test equipment will be cleaned and preserved (if necessary).

### **CALIBRATION LABELING - VOIDING:**

The calibration label is placed on the exterior of test equipment in locations that would void the calibration label if adjustments to the calibration were made or the test equipment was physically opened. Records and certificates of conformance will be kept and presented upon request by the customer.

### **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Inspection & Testing: 7.1, 7.4.3, 7.5.3, 8.2.4

## **POLICY:**

Documented procedures, specifications, prints, packing list or other documentation outlining inspection parameters are issued for all products to ensure compliance to specification requirements are maintained. Product is inspected and inspection records retained.

## **PURPOSE:**

To ensure that the product is tested before use, during use, and after use. To ensure that product sent to customers meet all the requirements as outlined.

## **RESPONSIBILITIES:**

Warehousing and other groups as required, verify product or service performance in accordance with documented procedures.

## **DESCRIPTION:**

### **RECEIVING INSPECTION AND TESTING:**

All material shall be inspected and tested to applicable requirements of purchase orders, specifications, packing lists, prints or drawings. Rejected material will be placed in a nonconforming area segregated from stock. The nonconforming area shall be clearly marked.

### **IN-PROCESS INSPECTION AND TESTING:**

#### **IN-PROCESS INSPECTION:**

Personnel shall perform in-process inspection in accordance with established inspection procedures. The inspection and/or test procedures shall identify the inspection or test parameters.

#### **STATISTICAL METHODS:**

The test results data recorded from the products during in-process inspection will be used to identify trends that would affect quality. Results are periodically reviewed. If a trend is found, it will be traced to the specific process that is causing the fault and the process will be reviewed and corrected. Analysis of vendor's products or processes are performed as required to ensure continual improvement is achieved.

#### **NONCONFORMING MATERIAL:**

Defective material will be identified at any stage of the process; incoming inspection final test and customer returns. A nonconforming material report or quality control rejection report/log will be initiated. The material will then be held in a designated area for review. Rework material is to be inspected and records retained.

#### **FINAL INSPECTION/RECEIVING INSPECTION:**

All products processed by the company shall be inspected according to documented procedures to verify that inspections and tests have been completed. This assures the item complies to all applicable specifications or contractual obligations.

#### **VISUAL INSPECTIONS:**

Visual inspection shall verify that the following requirements have been met:

- A. Dimensional Accuracy
- B. Correct Part Number
- C. Agency Certification Criteria and Labels (optional)
- D. Acceptable Condition

# Inspection & Testing: 7.1, 7.4.3, 7.5.3, 8.2.4

## **INSPECTION AND TEST RECORDS:**

All inspections and tests shall be evidenced by a record and shall be available for review with the company, by customers, for determination of conformance to requirements. The company will submit for acceptance only those items that fully meet contract requirements.

## **REPETITIVE COMPLAINT/INSPECTION FAILURE:**

If a complaint or inspection failure is repetitive for the same problem, the following steps must be taken:

1. Root cause analysis performed. Verify solution is effective.
2. Tightened inspection for repetitive failures. Inspection Plan - 100%.  
Continue 100% inspection on next six lots. If no failures are detected, product is placed on VIP Program (dock-to-stock). If a failure, is noted 100% inspection on the next six lots.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.



# Design & Development: 7.3, 7.3.1, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 7.3.6, 7.3.7

## **POLICY:**

Each Subsidiary having Design and Development Planning define in their approval scope will adhere to the following guidelines. Design and Development Planning defines the stages of design or development processes, design review, verification and validation activities appropriate to each design or development stage, and the responsibilities and authorities for design or development activities.

Interfaces between different groups involved in design or development activities are managed to ensure effective communication and clarity of responsibilities in accordance with the Design Control and Planning Process.

Planning output is updated, as appropriate, as the design or development activities progress.

## **PURPOSE:**

To ensure that the customer requirements as well as regulatory requirements are met.

## **RESPONSIBILITIES:**

Design and development is the responsibility of the Lapp USA Engineering Department in Florham Park, N.J.

## **DESCRIPTION:**

### **7.1 DESIGN/DEVELOPMENT INPUTS**

Inputs relating to product requirements are defined and documented. This includes functional and performance requirements, applicable regulatory and legal requirements, applicable information derived from previous or similar designs, and any other requirements essential for the design or development activities. These inputs are reviewed for adequacy by the Lapp USA Engineering Department. Incomplete, ambiguous or conflicting requirements are resolved, as per the procedures. Product Classification Numbers (risk assesment) are assigned by the Product Manager in conjunction with Engineering.

### **7.3. DESIGN/DEVELOPMENT OUTPUTS**

The outputs of the design or development process are documented in a manner that enables verification against the design or development inputs. These outputs ensure that the design input requirements are met. They provide appropriate information for production operations. The design or development outputs contain or reference the product acceptance criteria, and define the characteristics of the product that are essential to its safe and proper use.

### **7.3.4 DESIGN/DEVELOPMENT REVIEW**

At suitable stages indicated in the design plan, systematic reviews of design/development activities are conducted as per the Design Control Procedures. The design reviews are conducted to evaluate the ability to fulfill requirements, and to identify problems and propose follow-up actions.

Participants in design/development reviews include representatives of functions concerned with the design/development stages being reviewed. Records are maintained which reflect the results of the reviews, approvals, and subsequent follow-up actions.

# Design & Development: 7.3, 7.3.1, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 7.3.6, 7.3.7

## 7.3.5 DESIGN/DEVELOPMENT VERIFICATION

Design/development verification is performed to ensure the output meets the design/development inputs. Records are maintained which reflect the results of the verification and subsequent follow-up action. Design verification is performed on lab samples, prototypes, and pre-production product history. Design/development verification is performed to ensure the output meets the design/development inputs. Records are maintained which reflect the results of the verification and subsequent follow-up actions. Design verification is performed on prototypes, lab samples, pre-production product history.

## 7.3.6 DESIGN DEVELOPMENT VALIDATION

Design/development validation is performed to confirm that resulting product is capable of meeting the requirements for the intended use. If applicable, validation is completed prior to delivery or implementation of the product. Where it is impractical to perform full validation prior to delivery, partial validation is performed to the extent applicable per customer requirements. Records are maintained which reflect the results of the validation and subsequent follow-up actions, including regulatory paperwork approvals, i.e., UL/CSA approvals. Design validations performed on production product and approval and validation is made with regulatory agencies prior to first run.

## 7.3.7 CONTROL OF DESIGN/DEVELOPMENT CHANGES

Design/development changes are identified, documented and controlled. This includes evaluation of the effect of the changes on constituent parts and delivered products. The changes are verified and validated, and approved before implementation. Records are maintained which reflect the results of the review of changes and subsequent follow-up actions.

## 7.3.8 DIRECTIVES OF PARENT COMPANY - LAPP STUTTGART

Print/Packaging/Design Directives have been set by the parent company, Lapp Holding AG. All subsidiaries within Lapp Holding N.A. must comply with Corporate Directives. It is the responsibility of the Engineering Department in Florham Park, NJ to ensure that the requirements are put in the technical specifications.

## REFERENCE DOCUMENTATION:

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Purchasing: 7.4, 7.4.1, 7.4.2

## **POLICY:**

Purchased material and services from suppliers and outsource suppliers must conform to requirements established by the company. Supplier selection, process control, receiving inspection, and testing are methods available to provide purchase material control. Outsource suppliers go through the same process for approval as regular suppliers. Outsource suppliers are assembly houses, calibration houses, IT services and freight carriers.

## **PURPOSE:**

To ensure product purchased by the company meets the requirements of the product being manufactured or serviced, or outsource, that the supplier is qualified and remains qualified, and that contractual requirements made with customers are fulfilled.

## **RESPONSIBILITIES:**

- Purchasing - All vendors must be approved
- Approved vendor lists to be established
- Initial inspection reports for all new items
- Vendor to be monitored

## **DESCRIPTION:**

### **DOMESTIC SUPPLIERS - PREREQUISITE:**

A Certificate of Insurance must be on file for all domestic vendors before an order is generated.

### **ASSESSMENT OF SUPPLIERS:**

- One or more of the following evaluation methods may be used:
  - Surveys
  - Past History
  - Qualifications - Capacity and Capability Analysis - Regulatory approved items
  - Vendor Ratings
  - Regulatory/third party approval of a QMS (Quality Management System) certified to ISO/QS Standard
  - Approval by Parent Company
  - References from past users
  - Accredited supplier (ISO/NIST)
  - Audit 2007S or 2007P
- Corporate Directive - addressing purchasing, approval of new suppliers, product ownership must be implemented
- Corporate Directives 10-641-EN Approval of Products, 10-644-EN Product Liability of Supplier, 10-623-EN Product of Owner in the Lapp Group, 10-605-EN Approval of Suppliers must be implemented. Internal audits are conducted to verify compliance.

# Purchasing: 7.4, 7.4.1, 7.4.2

Suppliers that meet quality requirements, price and delivery concerns are placed on the AVL ( Approved Vendor List.) Top suppliers are rated on a monthly basis and must continually meet performance standards of Lapp Holding N.A. in order to remain on the AVL (Approved Vendor List).

To verify that the supplier's quality system is effective, specific inspection and/or audit controls will be implemented. It is the responsibility of the Purchasing Manager to set guidelines for a supplier to remain active on the AVL.

At minimum, for noncritical part suppliers, a completed supplier questionnaire must be reviewed by the Quality and Engineering Director before the supplier is placed on the AVL (Approved Vendor List).

A 2007S or 2007P audit should be performed on all critical suppliers. Results of the audit to be provided to management.

## **CORPORATE DIRECTIVE:**

All corporate directives as they relate to Purchasing and Suppliers must be implemented. Directive EN-641-EN Risk Dependent Approval Procedure Products/Suppliers must be fully enforced by the Head of Quality, Engineering, Marketing, and Purchasing. Directive EN-10-605-EN specifically requires the appropriate approval of suppliers and products for the Lapp Group worldwide. All products must have classification numbers and defined product owners. New Products must have an initial sample inspection report completed with FMEA, when requested.

## **GLOBAL BLOCKING OF SUPPLIER:**

If a global supplier has been blocked by the Head of Quality Worldwide and there is an urgent need to purchase material from that supplier, the supplier must submit test data to the representative for supplier quality at U.I. Lapp. The representative will forward the test documentation to the Corporate QA Manager, N.A. to review, approve, and retain. Upon disposition of the test data, the Corporate QA Manager, N.A. will inform Purchasing to release the shipment. Otherwise, there should be no purchasing of material from any supplier who is blocked by the Head of Quality Worldwide.

## **OUTSOURCE SUPPLIER:**

The Type and extent of control to be applied to outsource processes are as follows:

- All outsource suppliers must be approved and placed on an approved supplier list (AVL).
- Assembly House -Freight Carriers are monitored for performance.
- Calibration Services and IT Services - suppliers that meet IT requirements, price and delivery concerns are placed in the AVL in Lotus Notes. To verify that the supplier meets requirements, past performance and references are reviewed and approved by the IT Manager.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Exclusions: 7.5.1

## **POLICY:**

The subsidiaries of the Lapp Holding N.A. Group has not yet entered into a contract requiring the servicing of their products in the field. If this activity should be required in the future, documented procedures will be prepared.

Exclusions are service for all subsidiaries, design and development for Lapp Tannehill, Lapp Canada, Mexico and Systems. Shipping for Lapp Canada is performed at Florham Park, NJ, along with Contract Review, Inside Sales, Customer Service, Purchasing Engineering, Quality, Accounting, and Human Resources services. Internal Audits for Lapp Canada are performed at the Lapp USA facility.

Exclusions do not affect the organizations ability, or responsibility to provide product that meets the customer statutory and regulatory requirements.

## **Further exclusions to the ISO9001:2008(E) Standard are as follows:**

- Clause/Section Number
- Clause Section

## **REASON FOR EXCLUSION:**

7.5.1 Control of production and (Service Provision element only). There are no post delivery activities under warranty provisions carried out at any of the N.A. facilities. Manufactured cables are not considered serviceable items. As such, Lapp Holding N.A. does not service it products once they have been shipped to the customer. There are no post delivery activities under warranty provisions carried out at any of the N.A. subsidiaries. Exclusion does not affect the organizations ability or responsibility to provide product that met customers applicatory statutory and regulatory requirements.

## **PURPOSE:**

To document the exclusions in our Quality Management System.

## **RESPONSIBILITIES:**

Sales will be responsible to identify the need for service procedures, if and when it is developed into the QMS. Quality Assurance is responsible to oversee the preparation of documented procedures for all other exclusions, if and when they are implemented.

## **DESCRIPTION:**

Sales will notify Quality Assurance prior to executing a sales contract which will require servicing of the product.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Product Identification & Traceability: 7.5.3

## **POLICY:**

Material shall be controlled by a lot system that provides identification from receipt through delivery to its drawings and/or specifications and applicable production documentation, when required. All in-coming material is assigned a serial number for product identification, when required.

## **PURPOSE:**

To ensure that all products are traceable, when required, to the original manufacturer.

## **RESPONSIBILITIES:**

Warehouse personnel, unless otherwise noted, are responsible to ensure that product is properly identified so as to be traceable throughout the distribution cycle.

## **DESCRIPTION:**

### **IDENTIFICATION:**

Material is identified and logged.

### **TRACEABILITY:**

All traceable parts and material are identified with part and lot numbers prior to being released to storage. All other parts have a minimum identification of a part number. Traceability is mandatory when required by contract.

### **STORAGE:**

Storage of material is locatable by the lot identification number. When required, material is issued from storage by the lot identification number, location code, and/or part number.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Customer-Supplied Product, Handling, Storage, Packaging Preservation & Delivery: 7.5.4, 7.5.5

## **POLICY:**

Material used for production must be properly identified, documented, and maintained from incoming receipt to customer delivery. When necessary, the material must be protected and controlled to prevent unauthorized use.

## **PURPOSE:**

To ensure that all material used in the manufacturing cycle is properly handled, stored, released for production use, and delivered to the customer in such a manner as to assure that the quality of the product or service meets all stated requirements.

## **RESPONSIBILITIES:**

All personnel that handle, store, package or deliver products (or services/customer supplied products) are responsible for assuring that this policy is implemented.

All personnel have the responsibility to ensure company products are protected and maintained against cosmetic and functional harm. This is especially important within, but not limited to, the Packaging and Shipping Departments. Care is used when selecting modes or types of transportation.

## **DESCRIPTION:**

### **CUSTOMER-SUPPLIED PRODUCT - INTELLECTUAL INFORMATION:**

Customer Supplied Production (Specification/Sample/Drawings) will be maintained and stored. All drawings/specifications received by the customer will be identified and controlled.

### **HANDLING:**

Material shall be protected from damage. Due to the nature of the company's products, cautious handling of parts is a fundamental requirement of all employees. Special handling requirements require written procedures.

### **STORAGE:**

Stored material that requires inspection must bear acceptance evidence before it can be placed in stock. The material must be identified by a company part number, stored in assigned locations, and segregated by lot number (when required).

All material issued from stock will be recorded.

### **SHELF LIFE**

If a condition arises that causes deterioration, the material will be inspected to determine usability.

### **ENVIRONMENT:**

Material shall be maintained in an appropriate environment to prevent damage or degradation. Periodic inspections of the storage area will include steps to identify and rectify product nonconformity's resulting from storage.

### **PACKAGING:**

Products shall be packaged to ensure cleanliness, preservation, protection, and labeling, for delivery and subsequent storage by the customer. Appropriate material and equipment necessary for Shipping to perform their function shall be available.



# Customer-Supplied Product, Handling, Storage, Packaging Preservation & Delivery: 7.5.4, 7.5.5

Products must be packaged according to the Delivery Regulations of U.I. Lapp Gmbh, June 2005, Rev. 1.02.

Preservation of product (including packaging/labeling requirements) are reviewed during contract review and the design process to ensure product integrity.

## **DELIVERY:**

Material and/or manufactured products will be packaged and transported in such a way to assure the cosmetic and functional integrity of the products. No mode of transportation or method of packaging will be used when it could degrade the quality of the product. Where required by contract, the company will guarantee the safety of the product through shipping and delivery.

## **SECURITY:**

Lapp Group, N.A. subsidiaries have a vital interest in ensuring a safe, healthy and secure working environment for our employees, the customers we serve and our visitors. Self-policing audits are performed at the Florham Park Facility to ensure work areas and entry points are secured. Lapp Holding N.A. is CTPAT certified. Documented procedures are implemented to enforce security requirements.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Control of Customer Property: 7.5.4, 7.5.5

## **POLICY:**

Control and care of all customer property is maintained and controlled by the organization.

## **PURPOSE:**

To ensure that customer supplied property is properly controlled and maintained.

## **RESPONSIBILITIES:**

The Engineering/Sales/Purchasing Department is responsible for control of customer property.

## **DESCRIPTION:**

Customer property is identified, verified, protected and maintained for use or incorporated into the design of a product. Occurrence of any customer property that is lost, damaged, or otherwise found to be unsuitable for use shall be recorded and reported to the customer.

Customer property includes intellectual property. Customer supplied property is a document of external origin and is controlled and maintained electronically or in hard copy.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Process Control/Monitoring & Measurements: 8.2

## **POLICY:**

Quality is controlled in processes throughout Lapp Holding N.A. through documentation, inspection, training, supervisor control, internal audits, and employee awareness.

## **PURPOSE:**

To ensure that production and services are carried out in an efficient and controlled manner.

## **RESPONSIBILITIES:**

Department Managers are responsible for ensuring this policy is carried out and that processes are maintained in a controlled condition. Each Department Manager is responsible for identifying their processes and to ensure that they are effective.

## **DESCRIPTION:**

Process performance is measured on a monthly basis and reviewed during monthly Quality meetings. Department process charts containing goals and targets are used as visual aids to increase employee awareness.

Operations documentation will be comprised of bills of material, product labeling instructions, cutting and special instructions. Lot identification documentation shall be established and maintained throughout processing to ensure traceability.

## **SUPERVISION:**

Managers shall contribute to quality through training employees, interpreting and enforcing company objectives, monitoring employee performance and attitude, and by communicating overall awareness of good quality and customer's requirements.

## **WORK ENVIRONMENT:**

A suitable working environment shall be maintained. This includes control of overcrowding, accumulation of scrap and/or trash, unorganized storage of material, and inadequate lighting.

Secure working environment shall be maintained. Employees are issued an electronic ID badge upon hire. This badge allows access into the building. Visitors must sign in at the receptionist desk.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

## Internal Audits: 8.2.2

### **POLICY:**

A strategic system of planned and periodic audits shall be implemented to verify compliance with all aspects of the Quality Assurance System. Final reports will be sent to the Quality Director, N.A.

### **PURPOSE:**

To ensure that the requirements of the ISO Standard are met and that the Quality Management System is functioning correctly, identifying problems, and implementing corrective action to ensure continual improvement through all processes.

### **RESPONSIBILITIES:**

The Quality Representative is responsible to ensure that internal audits occur as scheduled, results are posted and sent to Quality Director, N.A. electronically and corrective action initiated as required.

### **DESCRIPTION:**

Internal quality system audits are conducted periodically to determine whether the quality management system conforms to the requirements of the company and the ISO9001:2000 Standard. The audits assess whether the quality system elements are effectively implemented and maintained. The procedures define the planning and scheduling of the audit program. Consideration is given through the audit planning, as to the status and importance of the activities and areas to be audited, as well as the results of previous audits.

### **OVERVIEW/CONTINUAL IMPROVEMENT - ANALYSIS OF DATA:**

All functions having a direct effect on quality shall be audited at least once each calendar year or more frequently as required by the importance or the need of the activity; i.e., change of management, previous audit results. Audits will be used to monitor customer satisfaction by ensuring corrective and preventive actions are addressed.

Internal Auditors will review all open corrective actions for effectiveness in implementation of corrective action. This will be done by reviewing customer complaints, product quality performance ratings, on-time delivery performance and any other report that provides measurements on performance.

Customer or certifying agency audits, when documented, shall serve to supplement information to management for overall quality system and product performance.

Audits shall be performed in accordance with written procedures and checklists contained in the system 9000 Internal Assessment Database if available, by personnel not directly accountable to the function or area being audited. Paperwork (hard copies of documents used during the audit) will be retained at the facility where the audit was conducted.

Documented objective evidence shall be part of the audit results. Concerns, findings, and corrective action for audit items shall be reviewed. Recommendations will be made to the manager having direct responsibility for the area being audited.

Audit personnel shall be qualified by education and/or experience. All internal auditors trained in house will have training noted in their Employee Training Records.

# Internal Audits: 8.2.2

## 2007S/2007P AUDITS:

2007S audits are conducted on Lapp USA/Lapp Canada/Lapp Systems, Lapp Mexico, Lapp Tannehill and 2007P on Lapp Cable Works by parent company, UI Lapp. Results of the audits are documented and continual improvement plans with action items sent to UI Lapp Stuttgart (parent company). This is a system audit and includes all the elements in ISO and Corporate Standards relating to process and product conformity. These audits are full system audits that satisfy Company requirements during the year the audit is performed. Continual Improvement Plans are developed in response to these audits.

Organization environment and risk analysis are integrated in the QMS. N.A. organizations must consider the risks pertinent to their situation and document their concerns by classifying risk priorities both in process and product.

## REFERENCE DOCUMENTATION:

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Statistical Techniques, Monitoring & Measuring of Product, Analysis of Data: 8, 8.2.3, 8.2.4, 8.4

## **POLICY:**

Statistical techniques as appropriate are employed to measure the effectiveness of the quality system. These techniques include sampling, problem determination, root cause analysis, mapping and gap analysis in processes. Statistics and reports are discussed during the Management Review Meeting.

## **PURPOSE:**

To ensure that statistical measures are appropriate and are capturing the information required to monitor and measure product and process.

## **RESPONSIBILITIES:**

The Quality Management Representative in conjunction with IT is responsible for the development, deployment and review of statistical techniques as used in the Company. Senior Management reviews this data at Management Reviews and on a regular basis to determine the effectiveness of the current process.

## **DESCRIPTION:**

### **SAMPLING PROCEDURE CRITERIA:**

Sampling procedures must take into account several factors to ensure that statistical techniques will satisfy requirements. Batching, sample selection history of part, inspection adjustment techniques, material review and impact of lot rejection are some of the factors that are reviewed when establishing statistical methods.

### **MEASUREMENT ANALYSIS AND IMPROVEMENT CONTINUAL IMPROVEMENT - VOICE OF THE CUSTOMER:**

Corrective and Preventive Actions will be used to determine effectiveness of products, services, and processes. Quality Management Representative will oversee the activities and report as required to senior management on the conditions as they exist at the Management Review Meetings.

### **METRICS:**

All graphs, charts, measurements should contain targets.

### **VOICE OF THE CUSTOMER:**

Surveys are sent out to the internal and external customer, at a minimum of once a year. Results are reviewed at the Management Review Meeting. Objectives and Quality Plans are implemented to ensure continual improvement and best practices are in place.

### **QEM FORMS:**

Quality Enhancement Meetings are held monthly. The company's objectives and department process targets are reviewed with the managers. If a target is not being realized after three months consecutive, a corrective action is sent to the manager. Continual improvement plans are implemented and validated for effectiveness before the corrective action is close.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Process Control Infrastructure/Competence, Awareness Training & Work Environment: 8.2.3, 8.2.4

## **POLICY:**

Each subsidiary of Lapp Holding N.A. will determine, provide, and maintain the infrastructure needed to achieve conformity to product requirements. The infrastructure includes defined processes by departments, buildings, workspace, and process equipment. The work environment is managed to achieve conformity to product requirements. The control of quality in processes shall be accomplished with documentation, inspection, training, supervisor control, and employee awareness.

## **PURPOSE:**

To ensure that production, processes and services are carried out in a controlled manner meeting product requirements.

## **RESPONSIBILITIES:**

Quality Representative and the respective Department Managers are responsible for ensuring that this policy is fulfilled and that our production processes are maintained in a controlled condition.

## **DESCRIPTION:**

### **COMPETENCE, AWARENESS AND TRAINING:**

The Department Manager determines the necessary competence for personnel performing work affecting product quality. Core competences are to be developed prior to writing up a job description. Training is provided to satisfy these needs. Training is documented in the employee's training records in Lotus Notes and is validated for effectiveness. All job descriptions are maintained in the Human Resource Department in Florham Park, NJ. If a job description changes, the information must be provided to the Human Resource Department in Florham Park within 48 hours. Organization Charts and Job Descriptions for all subsidiaries of Lapp Holding N.A. are kept on file in Human Resource, Florham Park, NJ.

### **TRAINING STANDARD FOR N.A. SUBSIDIARIES:**

Employees of the Lapp Group, N.A. will be required to receive 25 hours of training per year. Content of training will include 3 hours on security/safety CTPAT compliance, 2 hours on the company's culture, and 20 hours on job related topics. Training will be recorded by the Training Coordinator in Florham Park, N.J. Upon completion of training requirements, a Lapp Certificate of Training will be issued.

### **INFRASTRUCTURE:**

A suitable working environment shall be maintained. Buildings, workspace, and associated utilities are examined periodically to ensure suitability to conform with processes. Process equipment is evaluated to ensure that supporting services can be maintained. Control of overcrowding, accumulation of scrap/trash, unorganized storage of material and inadequate lighting is monitored for inadequacies.

### **OPERATIONS DOCUMENTATION:**

When training is not sufficient alone, work instructions shall be made available. Details shall be given to assure that a trained employee can perform his task to specified requirements. Work instructions shall identify the equipment and describe how it to be used unless it is self-evident or a job knowledge requirement.

Bills of material, product labelling instructions, cutting and special instructions comprise operations documentation. Nonconforming material shall be identified and segregated.



# Process Control Infrastructure/Competence, Awareness Training & Work Environment: 8.2.3, 8.2.4

## **SUPERVISION:**

Managers shall contribute to quality through training employees, interpreting and enforcing instruction, monitoring employee performance and attitude, and by communicating overall awareness of good quality. All training must be validated.

## **SPECIAL INSTRUCTIONS:**

Certain processes maintained by the company require special instructions. These instructions are to be prepared in a form of a work instruction. They are intended to ensure personnel possess the proper training and awareness to produce product that meets requirements. For example, special packaging instructions when a customer package requires special needs.

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Product Realization: 7.1, 7.2

## **POLICY:**

Material and services must conform to requirements established by the customer. Determination of customer requirements is conducted through the order review process. Review of product requirements specified by the customer, including the requirements for delivery and support is assessed. The reviews also include applicable product requirements not specified by the customer for necessary for intended use, and any obligations related to product, including regulatory and legal requirements. The reviews or product realization not only identify customer requirements but also assess any additional requirements determined by the organization.

## **PURPOSE:**

The review is conducted prior to the commitment to supply a product to the customer, submission of a tender, and/or acceptance of a contract order. These reviews ensure that the product requirements are clearly defined and can be met.

## **RESPONSIBILITIES:**

Contract or order requirements differences in tender or quotation are resolved prior to order acceptance by the Sales Department.

## **DESCRIPTION:**

### **CHANGE ORDERS:**

When product requirements are changed, the customer will be notified of the change, if required. Customer Communication is identified and implemented through product information, inquiries, contracts or order handling, including amendments.

### **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Control of Nonconforming Product: 8.3

## **POLICY:**

Procedures will be established and maintained that prevent the inadvertent use of nonconforming material or product.

## **PURPOSE:**

To ensure that nonconforming product is identified and prevented from inadvertent use until its disposition is determined.

## **RESPONSIBILITIES:**

The Quality Analyst/Inspector is responsible for segregating nonconforming product or identifying a person to perform segregation of defective product.

## **DESCRIPTION:**

The Quality Analyst/Inspector operates the nonconforming material system with the participation of the Warehouse/Purchasing and the customer if contractually required.

Nonconforming material is defined as parts or material that do not meet drawing specifications, or purchase requirements. Substantial nonconformities are conditions that are unsafe costly, frequent, or contractual nonconformance. Nonconforming material must be identified and segregated by means of either a rejection tag or nonconforming material report.

## **CONTROL OF NONCONFORMING PRODUCT:**

All N.A. affiliates will ensure that product which does not conform to product requirements is identified and place in a well defined Nonconforming Area. Records of the nonconformities and any action taken shall be maintained.

## **DIRECTIVE FROM GERMANY - Corporate Directive Quality Alert, No. 10-646EN:**

A Quality Alert (Potential Major Issue Report) Document is available upon request. Contact Darlene McBride: dmcbride@lappusa.com

**A Quality Alert must be completed and forwarded to the Head of Quality if one or more of the following situations occur:**

- Production stops due to Quality Issues effecting operating results > 20,000 Euro
- Production stop at external customer (potential claim > 20,000 Euro)
- High existing recovering claims by external customers
- Delivery Gaps to customers due to Quality Issues
- Quality Issues which might lead to recalls or soft recalls or replacement of our products in customer equipment
- Safety Issues
- Deliveries against Legal Requirements

The form is to be sent by the Quality Director, N.A. immediately (within 24 hours) from onset of the problem. The form will be located on the Intranet under "Quality" Section/Quality Standards.

# Control of Nonconforming Product: 8.3

## EN-643-EN PROBLEM-SOLVING METHODS FOR QUALITY ISSUES:

This directive outlines the problem solving methods to be employed with customer complaints. Document available upon request. Contact Darlene McBride: [dmcbride@lappusa.com](mailto:dmcbride@lappusa.com)

## REFERENCE DOCUMENTATION:

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Analysis of Data: 8.4

## **POLICY:**

Through Quality Planning we define, plan and implement the measurement and monitoring activities needed to assure conformity and to continually improve the effectiveness of the quality management system.

## **PURPOSE:**

This applies for the measurement and monitoring activities for all processes.

## **RESPONSIBILITIES:**

Procedures define the collection and analysis of appropriate data to determine the suitability and effectiveness of the quality management system and to continually improve its effectiveness. Surveys are sent at a minimum of once a year to determine external and internal customer satisfaction.

## **DESCRIPTION:**

### **PRODUCT/VENDOR PERFORMANCE:**

Vendor/product performance is monitored through inspection and testing procedures. Vendor performance is maintained and discussed during Management Review.

### **STATISTICAL METHODS:**

Test result data recorded from the products during in-process inspection will be used to identify trends that would effect quality. If a trend is found, it will be traced to the specific process that is causing the trend and the process will be reviewed for efficiency.

### **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Corrective & Preventative Action/Continual Improvement: 8.5.2, 8.5.3, 8.5.1

## **POLICY:**

A planned and documented program for preventive and corrective action will be established to ensure that conditions, actual or potential, adversely affecting quality are promptly identified. Customer complaints and other reports of nonconformance must be resolved. The causes of nonconformity will be determined, and positive steps taken to prevent recurrence.

## **PURPOSE:**

To ensure that a system of preventive and correction action exists by which continuous improvement to products, services, and processes can be accomplished.

## **RESPONSIBILITIES:**

All employees are responsible for implementation of preventive and corrective action. Quality Assurance will oversee the activities and report as required to senior management on the conditions as they exist in the preventive/corrective action system at Management Review Meetings.

## **DESCRIPTION:**

All employees have the obligation to identify and report nonconformity's, actual or potential. Corrective Action Requests (CARS) or Preventive Action Requests (PARS) may be initiated by any employee or customer. Discrepant material (product) or processes may be judged to be minor or a substantial nonconformity.

## **MINOR NONCONFORMITY:**

A minor nonconformity is a quality characteristic (i.e., workmanship and cosmetic) that may be accepted through the waiver process. These nonconformities do not affect form, fit, function, safety, or reliability. Remedial corrective action for minor nonconformities must be prompt and effective in returning the material or process to within the specifications of the applicable drawing(s) or product quality standards.

## **RECORD MAINTENANCE:**

All preventive/corrective action requests must as a final outcome, identify the cause of the problem and verify that the solution is effective. The originator of a preventive/corrective action has the responsibility to approve the resolution. The preventive/corrective action is reviewed during internal audits to ensure that an effective resolution has been obtained.

## **REPETITIVE COMPLAINT/INSPECTION FAILURE:**

If a complaint or inspection failure is repetitive for the same problem, the following steps must be taken:

1. Root cause analysis performed. Verify solution is effective.
2. Tightened inspection for repetitive failures. Inspection Plan - 100%.  
Continue 100% inspection on next six lots. If no failures are detected, product is placed on VIP Program (dock-to-stock). If a failure, is noted 100% inspection on the next six lots.

# Corrective & Preventative Action/Continual Improvement: 8.5.2, 8.5.3, 8.5.1

## **CAR/PAR:**

Effectiveness of corrective and preventative actions to demonstrate conformity of the process/product must be carried out during internal audits, process/product validation, and incoming inspection of product.

8D reports are completed on product failure to ensure desired outcomes are achieved.

Continual Improvement Indicators measuring Customer Service Rate, Supplier Service Rate, Supplier Incidents, Poor Cost of Quality and Customer Rejection Rates are plotted each month. Quarterly meetings are held to review service performance. Data is mapped and monitored to identify areas that are not meeting objectives. Corrective actions are issued to increase awareness and to create a plan to improve performance and validate effectiveness.

## **CIP - SWOT ANALYSIS:**

A continual improvement plan is submitted to Headquarters Lapp Holding AG at the beginning of each fiscal year. CIP includes indicators to monitor performance and aims to enhance customer satisfaction through the effective application of the system. Indicators including process outputs are recorded for tracking continual improvement; they are: Customer Complaints, Customer Service Rate, Supplier Service Rate and Customer Returns. A SWOT Analysis is performed to identify strengths and weaknesses and to incorporate those weaknesses into the plan for continual improvement of the system

## **REFERENCE DOCUMENTATION:**

Documented procedures, work instructions, and flowcharts are established by each subsidiary of the Lapp Holding N.A. suitable to their process.

# Interaction Between N.A. Subsidiaries

## **POLICY:**

The organization chart outlines the responsibilities as they relate to the N.A. subsidiaries.

## **PURPOSE:**

Executive responsibilities for Lapp Group of North America are defined in the Organization Chart.

## **RESPONSIBILITIES:**

The organization chart interaction between subsidiaries is maintained and revised by the Executive Assistant.

## **DESCRIPTION:**

\*See organization chart for Lapp NA.

### **INTERACTION OF LAPP USA:**

Lapp USA Florham Park Facility is the Headquarters for Lapp Canada.

\*See organization chart for Lapp USA (Sales & distribution).

### **INTERACTION OF LAPP CANADA:**

\*See organization chart for Lapp Canada (Sales & distribution).

### **INTERACTION OF LAPP TANNEHILL:**

\*See organization chart for Lapp Tanehill (Sales & distribution).

### **INTERACTION OF LAPP CABLE WORKS:**

\*See organization chart for Lapp Cable Works (Manufacturing facility).

### **INTERACTION OF LAPP MEXICO:**

\*See organization chart for Lapp Mexico (Sales & distribution).

### **INTERACTION OF LAPP SYSTEMS:**

\*See organization chart for Lapp Systems

\*Document available upon request. Contact Darlene McBride: [dmcbride@lappusa.com](mailto:dmcbride@lappusa.com)



# Interaction Between N.A. Subsidiaries

## HEADQUARTERS IN FLORHAM PARK, NJ

Accounting, Customer Service, Quality, Purchasing, Design and Development, Logistics, Human Resource, Contract Review, Information Technology and Marketing is performed at the Head Office at Florham Park, NJ. Internal assessments for Lapp Canada is performed at Florham Park.

Corrective and Preventive Actions are issued from the Florham Park Facility based on the need of a process/product deficiency. Since all internal cross functional departments activities reside in Florham Park, the bulk of corrective and preventive actions are entered in that system. If repetitive problems are found, the Customer Service Representative in Florham Park would create a corrective/preventive action.

Management Review is carried out via teleconference from the Head Office at Florham Park, NJ. Human Resources and training documentation is maintained at the Head Office at Florham Park, NJ. Engineering Design and Development, Purchasing, Inside Sales including, Contract Review, Logistics and Internal Assessments are performed at the Head Office at Florham Park, NJ for Lapp Cable Works, Lapp Systems, Lapp USA and Lapp Canada.

Lapp Indicators: CC Customer Complaints, CSR Customer Service Rate, SQI Supplier Quality Incidents, SSR Supplier Service Rate are monitored at Florham Park by the Quality Director of N.A.

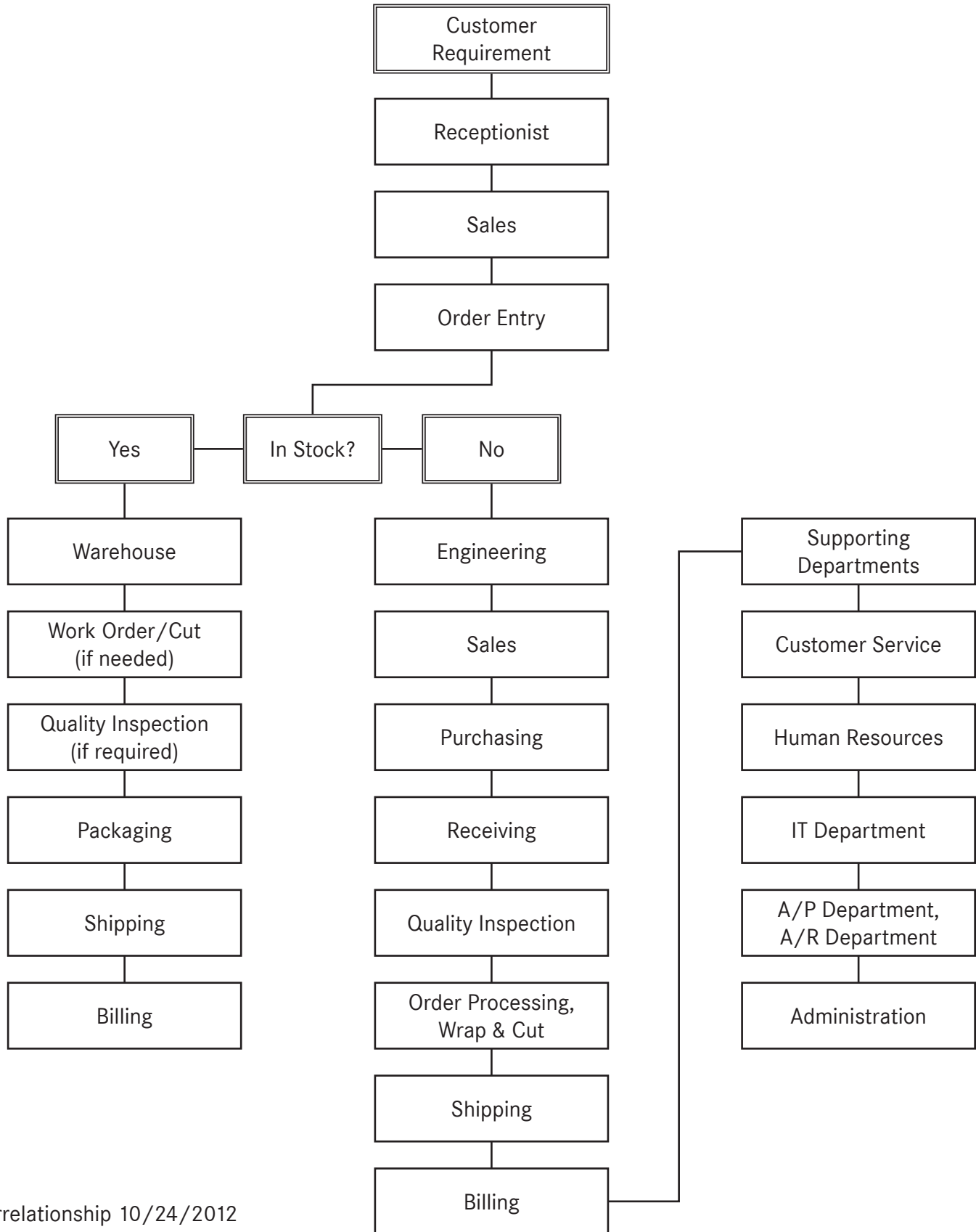
## LAPP CANADA

Technical Sales, involving Regional Sales Managers and District Sales Managers, is performed in Canada. This group is headed up by the Vice President.

All N.A. subsidiaries have Lapp Indicators: CC Customer Complaints, CR Customer Returns, CSR Customer Service Rate, SSR Supplier Service Rate, SQI Supplier Quality Incidents.

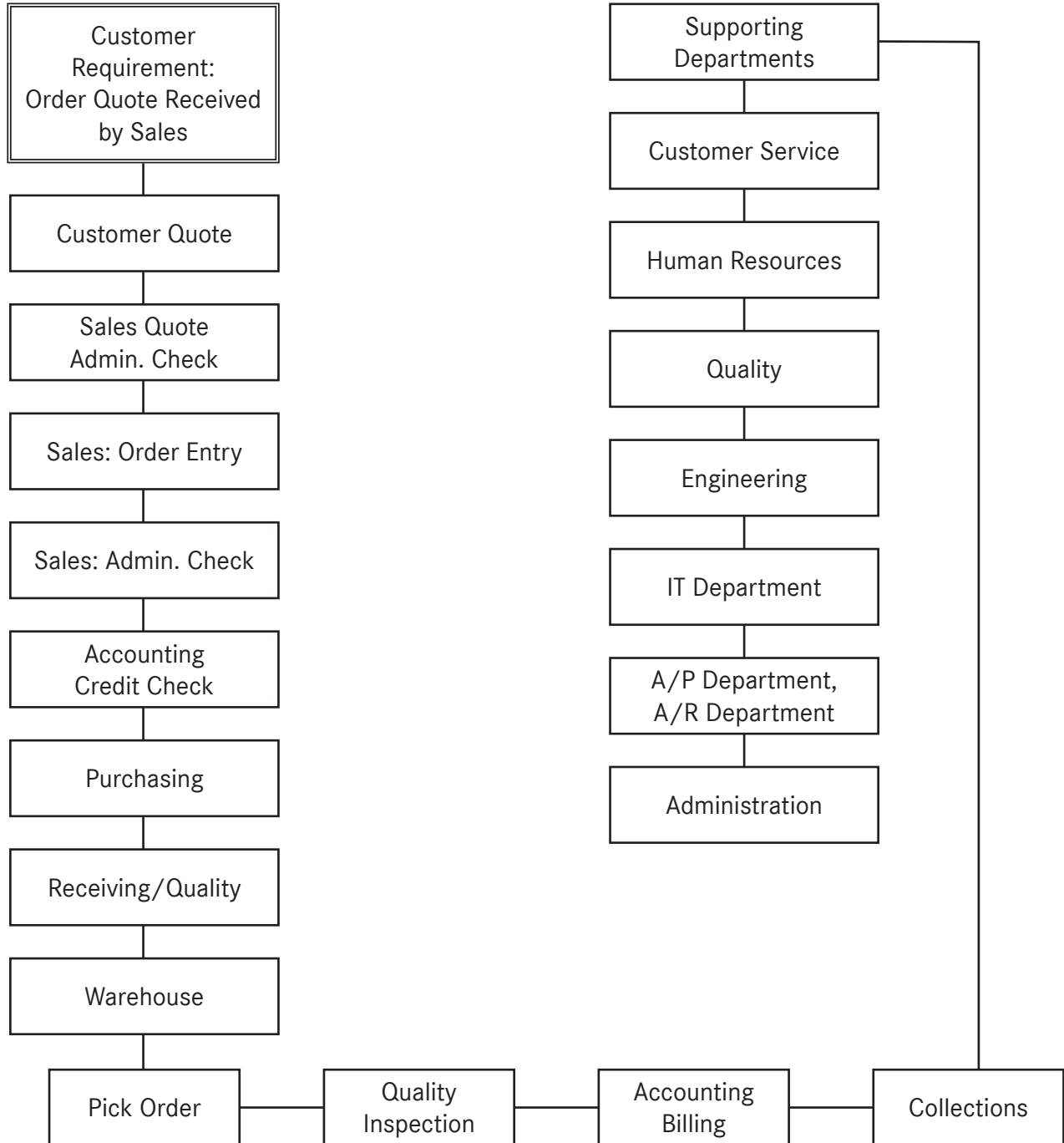
A process approach is used to determine whether the processes within each subsidiary meet the company's objectives. Process improvements and strategies are discussed at Management Review Meetings held annually at the Florham Park facility.

# Lapp USA Interrelationships: Lapp Canada



Interrelationship 10/24/2012

# Organizational Interrelationships & Processes Performed in Florham Park



Florham Park 10/24/2012

# ÖLFLEX®

Power & Control Cables

# SKINTOP®

Cable Glands

# SILVYN®

Conduit

# ETHERLINE®

Industrial Ethernet

# EPIC®

Connectors

# UNITRONIC®

Data Cables

# FLEXIMARK®

Marking Systems

# HITRONIC®

Fiber Optic Cables

## Lapp USA

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Florham Park, NJ 07932

800-774-3539

[www.lappusa.com](http://www.lappusa.com)

## Lapp Canada

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Mississauga, ON L5L 5Y7

877-799-5277

[www.lappcanada.com](http://www.lappcanada.com)

## Lapp Mexico

Metalurgia 2730  
Alamo Industrial, C.P. 44490  
Tlaquepaque, Jalisco

800-024-5277

[www.lappmexico.com](http://www.lappmexico.com)

## Lapp Tannehill

8675 Eagle Creek Parkway  
Savage, MN 55378

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# LAPP GROUP

This manual is a controlled document. Copies distributed to customers and employees are considered to be “uncontrolled”. For the most current update, contact Quality Director, N.A. Darlene McBride: [dmcbride@lappusa.com](mailto:dmcbride@lappusa.com)