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CHAMPLAIN CABLE CORPORATION

MANAGEMENT SYSTEM

QUALITY ASSURANCE MANUAL

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4.0 SCOPE: This manual is a general description of the quality system elements that will be applied to Champlain Cable Corporation **and its subsidiaries**. This manual provides management policies, strategies, and principles defining responsibilities for the development, implementation, maintenance, and management of the quality system. Procedures documented to implement the requirements of this manual shall contain necessary details assigning responsibilities and describing methods employed to satisfy these requirements. The manual encourages the incorporation of advanced or total quality concepts for continuous improvement and increased customer satisfaction.

4.1 MANAGEMENT RESPONSIBILITIES, ORGANIZATION AND REVIEW:

QUALITY POLICY AND OBJECTIVE

References:

[MSP-0007](#) Quality Policy

[MSF-0005](#) Quality Objectives

Our quality policy is one of continuous process improvement involving all employees with the objective of satisfying the needs of our customers while meeting our Financial Goals. The strength of this policy is based on:

- Full management commitment to and communication of the policy to all employees.
- Education and training of employees to assure active participation in the continual improvement of the Quality System with emphasis on defect prevention.
- Internal Quality System Audits and timely corrective actions for system elements that are found to be “non-conforming”.
- Periodic evaluation and certification of the Quality System by recognized third party agencies.

BUSINESS STRATEGY: Design, manufacture, and sales of insulated wire and cable products meeting current and future market needs for Transportation, DST and Industrial markets. CCC will also evaluate and include other product and market opportunities as they arise.

STRATEGIC PRINCIPLE

- Champlain Cable Corporation **and its subsidiaries** will efficiently utilize all of its resources towards becoming a premiere, quality manufacturer of wire and cable for demanding environments.
- This effort will be driven by a culture fostering innovation, commitment and personal responsibility.

CHAMPLAIN CABLE CORPORATION ORGANIZATION

The top level organization of Champlain Cable Corporation and their interactions are detailed in the organizational chart shown in Figure 1, below. These positions have the freedom and authority to implement all elements of TS 16949, ISO 9001:2000 and ISO 14001 requirements.

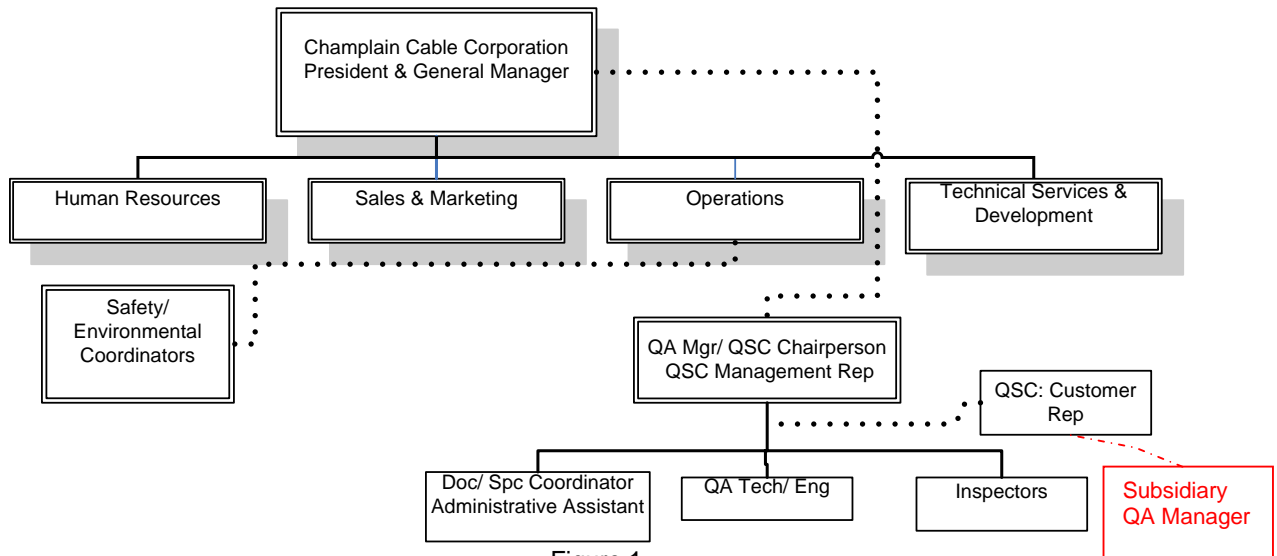


Figure 1

[MSP-0014](#) Quality Management System –Sequence & Interactions

NOTE: CCC Organizational Charts are reviewed and modified periodically. Figure 1 reflects the organization when the Quality Manual was reviewed and may not be the most current chart.

Responsibilities:

PRESIDENT AND GENERAL MANAGER will:

- Appoint an internal manager to establish, implement and maintain the Quality System which is to include periodic review of the entire system
- Actively participate in the Quality Steering Committee to ensure that corporate and quality goals remain synchronous
- Develop a one and three year business plan to include Benchmarking Feedback and a process to measure customer satisfaction

MANAGER OF QUALITY ASSURANCE is the Management Representative and will:

- Ensure that the Quality Policy is understood, implemented and maintained throughout the organization
- Establish, implement, review and maintain the Quality System
- Manage and report on the performance of the Quality System to Quality Steering Committee (which includes the Management Representative)
- Encourage a multi-disciplined approach for problem solving at all levels of the organization
- Chair the Quality Steering Committee
- Direct continuous improvement activities
- Oversee the Management review of all elements of the Quality System
- Communicate corporate Quality goals to the organization

- Oversee Internal Quality Audits
- Develop priorities for prompt solutions to customer related problems
- Coordinate and assist team activities
- Notify our Registrar in writing within five days of any change in Quality status when notified as such by the customer

QUALITY ASSURANCE ORGANIZATION:

The Quality Assurance Organization as shown in Figure 1 also indicates the authority and responsibilities for personnel who directly perform and verify work affecting quality.

Reference:

[MSP-0001](#) Business Plan

[MSP-0005](#) Management Review Process

QUALITY STEERING COMMITTEE IS THE CUSTOMER REPRESENTATIVE

This committee is chaired by the Manager of Quality Assurance who is responsible for implementing and overseeing the Quality System. The Quality Steering Committee will establish, monitor and support the Direction of the Quality System. It will define information that is to be monitored, the frequency of reporting and the method of measurement.

The Committee shall also:

- Establish Quality Goals and Measurement Systems such as: The Cost of Quality, Customer Returns, Internal Rejects and Cost of Scrap.
- Review performance toward these goals.
- Support activities to improve our overall performance including: Training efforts to support the Quality System, Reviewing Internal Quality Audit Results, promoting activities to prevent non-conformances, empowering employees at all levels to accomplish their objectives, responding promptly to customer related problems.
- Encourage and prioritize employee participation in team activities, assign team projects and monitor team progress.
- Promote quality consciousness throughout the organization.
- Review the effectiveness of the Quality System at least annually.
- Remain flexible to promptly address other issues as they arise.
- Promote and help maintain customer satisfaction.

Membership consists of the President / General Manager, **subsidiary quality manager** and Staff Members. Other employees may be invited as participants to help incorporate good quality practices, teamwork, employee empowerment and other such undertakings as required in the continuous improvement process.

DEPARTMENT MANAGERS AND SUPERVISORS

- Develop, implement, support and use quality systems that emphasize prevention rather than detection
- Identify training needs
- Identify and resolve problems related to the product or process
- Record quality related activities
- Initiate, coordinate, and implement corrective and preventive actions
- Verify the effectiveness of corrective and preventive action activities
- Control further processing of non-conforming product until unsatisfactory conditions have been resolved
- Resolve non-conformances found during Internal Audits

- Prevent potential defects and non-conformances

ALL EMPLOYEES

- Represent the needs of the customer in internal functions of TS 16949 Standards (although the Management Representative maintains the ultimate responsibility).

4.2 QUALITY SYSTEM

Reference:

26-1	Section 4.1 Management Responsibility
26-5	Organization Charts
ETP-001	Engineering Change Procedure
QCF-0626	QSC Evaluation
QCP-0308	Managing Process AQP (Advanced Quality Planning)
QCP-0371	Cost of Quality Report Procedure
QCP-0386	Production MRB Data Entry
QCP-0388	Outsourced Processes
QCR-0004	Quality System Requirements TS-16949
QCR-0007	Advanced Product Quality Planning and Control Plan

Quality Planning

Quality shall be measured by satisfying customer needs, anticipating quality related problems and implementing actions required to prevent problems from occurring. The TS 16949 Quality System incorporates the elements of ISO 9001:2000 Standards in addition to specific automotive customer requirements with an emphasis on continuous product and process improvement. CCC and its subsidiaries will communicate necessary information in the customer prescribed format when required.

Adequate resources for the functions of Quality Assurance, Process Engineering and Manufacturing are in place for process and product verification and continuous improvement activities. Quality Planning will also include specific customer requirements such as Control Plans, PPAP's and Failure Mode and Effect Analysis (FMEA) when specified. These activities will be coordinated through the QA Department. Adequacy of these resources is determined by job descriptions.

QUALITY MANUAL

The purpose of this manual is to define and reference Champlain Cable Corporation's Quality System, procedures and policies. These are the processes by which we plan, manufacture and deliver wire and cable to satisfy our DST, Industrial and Transportation customers.

4.2.1 ENVIRONMENTAL, HEALTH AND SAFETY OBJECTIVE

Our Environmental, Health and Safety policies guide us to minimize our impact on the environment and to provide a safe, healthy workplace for our employees. We are therefore committed to:

Prevention of Pollution through compliance to regulations, consideration and review of environmental impacts of our products and designs; including manufacturing, resource use

reduction, process changes, increased efficiency, recycling and treatment of hazardous materials.

Continual Improvement of our processes which comprise our environmental, health and safety management systems.

Regulation and other requirement compliance to all pertinent environmental, health and safety regulations through awareness and vigilance.

Champlain Cable Corp. **and its subsidiaries** strive to implement an effective environmental management system to protect our employees, their families, the community, and our customers from the potential adverse effects of its processes, products, and services that we can control and influence. This commitment is achieved through investment of company resources, including capital and expense monies, employee training and the continual improvement process.

Reference: [EVP-009](#) Environmental Management System Manual

4.3 CONFIDENTIALITY

Champlain Cable Corporation and its subsidiaries shall use reasonable care to keep confidential any technical process or economic information derived from drawings, specifications and other data furnished by the Customer in connection with the Order and shall not divulge, directly or indirectly, such information for the benefit of any other party without obtaining Customer's prior written consent. Except as required for the efficient performance of the Order, Champlain Cable Corporation shall not use such information or make copies or permit copies to be made of such drawings, specifications, or other data without the written consent of the Customer.

4.4 CONTRACT REVIEW

Purpose:

To establish a procedure for reviewing contracts to ensure that CCC is capable of meeting customer requirements.

Scope:

Inquiries, orders, contracts and amendments received from our customers are to be reviewed and agreed upon before they are accepted by CCC.

Reference:

[CSP-002](#) Contract Review

Responsibilities:

Marketing Specialist / Representatives

- Check that customer requirements are adequately defined.
- Resolve differences between the customer's requirements and our capability before the order is accepted.
- Document and maintain records of contract reviews and approvals.
- Document and communicate changes to the appropriate function.
- Obtain written approval for Control Plan changes from the customer when required.
- Monitor orders through the system to completion.

- The focal point for activities between CCC and its customers.

Engineering

- Determine feasibility of customer requests or changes to orders.

Production Control

- Coordinate scheduling activities through manufacturing and packaging.
- Maintain communication of changes between Marketing Specialist and manufacturing.

Procedure:

Marketing Specialist / Representatives will review, accept and communicate customer requirements (including changes) to and from appropriate CCC Personnel. All customer requirements shall be met.

4.5 DESIGN CONTROL

Purpose:

To provide documented procedures to control and verify the design of new materials through concept, prototype development, manufacturing and product launch to ensure that specified customer requirements are met. Ultimately the customer is the design responsible entity.

Scope:

New material designs, development, and design changes that are initiated by market opportunities and / or customer inquires.

Reference:

[RDP-0001](#) Project Management
QCR-0007 Advanced Product Quality Planning and Control Plan

Definitions:

Design control activities:

- Establish feedback loops from the customer to affected personnel
- Design input from the customer, regulatory and statutory agencies
- Design output acceptance criteria to include safety and dependability features
- Evaluate cost and risk factors for new product
- Design verification through performance, life reliability and durability testing
- Design validation to assure final product conformance
- Review and verify design changes including appropriate documentation and approvals
- Develop methods of product measurement, types of test, test and acceptability criteria throughout the process
- Help develop Control Plans, Process Flow Diagrams and Failure Mode and Effect Analysis when required by the customer
- The determination of feasibility of our product and process to satisfy specified requirements

Responsibilities:

VP of Technology

- To oversee and update activities related to project design including development plans, assignment of responsibilities, specifications, clarification, scheduling Design Reviews,

Design Output Verification, product / design validation, documentation, implementation and / or project termination

- Match required skills of the Project Manager with developmental requirements
- Maintain interfacing with the customer to clearly define customer needs including CAD / CAE activities when required
- Coordinate prior written approvals (or waivers) from customers before design changes are made
- Maintain records for each new design project and activity

Quality Assurance

- Coordinate Control Plan, FMEA and Warrant activities with customers

Procedure:

The VP of Technology: reviews and updates activities related to design control by conducting and documenting periodic meetings to provide input from appropriate functions of CCC including sales, marketing, manufacturing, QA and input from the customer through Contract Review or the control plan.

4.6 DOCUMENT AND DATA CONTROL

Purpose:

To establish a document and data control procedure for internal and external documents to ensure the availability and use of the appropriate revision at each operation.

Scope:

The origination, review, approval, release, maintenance and change of documents related to the Quality System which includes internal and external documents such as customer drawings.

Responsibilities:

Department Managers

- Maintain appropriate revision levels at each operation to preclude the use of obsolete or inappropriate documents
- Forward procedure changes referenced in the QM to the Manger of Quality Assurance for approval

Process Engineer

- Review and approve Engineering designs and changes
- Review industry specifications and standards
- Issue new and revised specifications to distribution lists
- Revise CCC documents and / or software in a timely manner
- Maintain identification of customer's special characteristics from Control Plans on appropriate internal documentation when required by the customer or QA
- Maintain software security to prevent unauthorized change
- Maintain the timely review and distribution of customer and regulatory drawings, etc., specifications and changes to those documents on appropriate type of media. The implementation date of change will be recorded.

Recipient

- Replace and destroy obsolete specifications in a timely manner
- Implement customer changes as specified on Engineering Documentation
- Notify affected personnel of changes when necessary

Manager, Quality Assurance

- Review and approve proposed changes to documents referenced in the Quality Manual
- Maintain identification of customer's special characteristics on appropriate documentation when required

Documentation Coordinator

- Review and process changes in controlled documentation for appropriate approvals, references, format, and distribution

Procedure:

Controlled documents will be reviewed for adequacy and approved (or rejected) by the same function or organization that performed the original review unless specifically designated otherwise. Assigned personnel shall have access to appropriate background information to assist in the review and approval process. A summary of changes and a description of the nature of the changes shall be accessible. Any obsolete documents retained for legal or knowledge preservation purposes will be properly identified.

4.7 PURCHASING

Purpose:

To establish a procedure to ensure that purchased product conforms to specified CCC, Customer, Regulatory and Governmental Safety requirements.

Scope:

Purchased material and key services that affect the quality of our product.

Reference:

- [OMP-0051](#) Procurement Procedure
- [MSP-0002](#) Delegation of Authority

Responsibilities:

Materials Manager

- To procure raw materials and services from suppliers that are listed on the approved suppliers list (either ours or the customer's list). However, CCC maintains responsibility for quality when customer assigned subcontractors are used.
- To assist in the evaluation, selection and development of new suppliers and their ability to satisfy TS 16949 and CCC requirements
- To provide and document a method for approving new materials
- To review monthly vendor quality reports to monitor our suppliers' capability to provide a quality product
- To periodically and methodically coordinate audits of major suppliers
- To review and approve purchasing documents for adequacy prior to release
- To assure that raw material comply with government regulations
- To be the coordinator of activities between CCC and its suppliers
- To assure that our suppliers have the most recent specification
- To require and maintain 100% on time delivery from our suppliers

- To assure Government and Safety compliance regarding constraints on restricted substances

QA Manager / QSC

- To track premium and excess freight charges from our suppliers' approval list

Procedure:

Purchase orders shall clearly identify procured materials by part number, revision level, description and / or specification. Orders will be reviewed and approved according to the Delegation of Authority ([MSP-0002](#)) and be issued only to approved suppliers. Where specified by contract, and with the permission of our supplier, our customer shall be afforded the right to verify the quality of our supplier's product at their premises. CCC will assist in the development of supplier compliance to TS 16949 requirements.

4.8 PURCHASER SUPPLIED PRODUCTS

Purpose:

To maintain documented procedures for the control, verification, storage and maintenance of customer supplied product, tooling, or packaging and to provide a system to report customer supplied product that is lost, damaged or is otherwise unsuitable for use by the customer.

Scope:

Material, tooling or packaging supplied by or consigned by our customer.

Reference:

[QCP-0340](#) Customer Supplied Product

Procedure:

In general, customer supplied product will be processed as any other material with the exception of reporting lost, damaged or unsuitable product to our customer per QCP-0340. Customer owned tooling and packaging will be permanently marked and its ownership shall be visually apparent.

4.9 PRODUCT IDENTIFICATION AND TRACEABILITY

Purpose:

To provide a method of maintaining product identification and traceability throughout the manufacturing process.

Scope:

Raw material, work in process, and finished product

Reference:

[QCP-0309](#) Product Identification, Traceability & In Process Test Frequency

[QCP-0367](#) Traceability for Datacom

[QCP-0399](#) Traceability Is Required on Special Product

Procedure:

Materials and product shall be identified through manufacturing and delivery by means of tags, tickets, travelers and / or labels. Finished material awaiting shipment shall be identified by its part number.

Traceability:

When required by contract, raw materials and manufactured product shall have its own unique identification to provide traceability.

Responsibilities:

Receiving Personnel

- Verify proper product identification

Manufacturing and Shipping Personnel

- Verify and maintain product identification

4.10 PROCESS CONTROL

Purpose:

To provide a procedure to outline appropriate activities to identify, plan and control operations that affect the quality of our product and to maintain customer requirements.

Scope:

Product manufactured by CCC and its subsidiaries.

Reference:

[OMP-0076](#) Maintenance / Preventive Maintenance
[QCR-0007](#) Advanced Quality Planning and Control Plan

Definitions:

Manufacturing – Transforming raw materials into finished goods to comply with customer requirements and special characteristics.

Process Controls – The approved equipment, appropriate work instructions, current specifications, quality criteria, properly calibrated measurement equipment, proper environmental conditions, operator training and / or qualifications necessary to produce a quality product to meet the needs of our customer.

Responsibilities:

Engineering

- Develop process and monitoring instructions for manufacturing personnel

Line Supervisors and Managers

- Assure that operator qualification requirements are specified and that operators are qualified for operating equipment
- Approve equipment and the process in conjunction with Engineering and other appropriate departments
- Oversee proper maintenance and calibration of equipment by assuring that equipment is made available when scheduled for preventative maintenance or calibration
- Assure that effective process controls of specified characteristics (including those designated by our customers) under their jurisdiction are maintained
- Assure that non-conforming material is moved to controlled areas such as MRB

- Support activities that will prevent non-conformances and implement corrective actions when non-conformances have been identified
- Maintain cleanliness, orderliness and repair of their operations
- Develop and maintain contingency plans for key equipment failures, power outages, labor shortages, etc. to reasonably protect the customer's supply chain
- Assure that job and work instructions are readily available to our personnel without disrupting their work

Operators are responsible for monitoring and controlling the process within their scope of operations. They have the authority and responsibility to stop their operation when product is out of specification or when there is sufficient negative feedback from their internal customers regarding the quality of their product. They shall also:

- Use appropriate documentation, materials, procedures, tooling, gages, set up instructions and equipment
- Maintain cleanliness, orderliness and repair of their operations
- Maintain the process to nominal and within the control limits
- Verify product quality after a major changeover or set-up
- Record any change in the process including preventive maintenance activities, raw material changes, equipment repairs, changes in line speed, tooling, process changes and corrective actions for points out of control. These records are available to our customers.

QA Manager/ SPC Coordinator

- Develop SPC Plans and Control limits based on customer or process requirements
- Review effectiveness of process controls to assure customer CPK requirements
- Coordinate SPC Training

Safety Coordinator

- Maintain compliance with applicable government, safety and environmental regulations

Maintenance

- Develop written objective for Preventative and Predictive Maintenance activities
- Identify key process equipment and provide resources to schedule and conduct an effective Preventative Maintenance and Replacement Part Program
- Maintain an effective maintenance plan and tool management system to include appropriate inventories, maintenance schedules, activities, and storage

All CCC Personnel

Personnel at all levels of CCC are responsible for maintaining appropriate quality or process controls to reduce variation in their area of responsibility.

4.11 INSPECTION AND TESTING

Purpose:

To establish a procedure to inspect or test product throughout the process and to ensure agreement between purchased or manufactured product and customer requirements.

Scope:

Product purchased or manufactured by CCC **and its subsidiaries**. There are three points for inspection and testing: Receiving, In-process, and Final Quality Inspection.

Reference:

- [QCP-0315](#) Receiving Inspection
- [QCP-0373](#) QA Product Handling Procedure to Identify Urgent Release
- [QCP-0396](#) Laboratory Requirements
- QCR-0027 Zero Acceptance Number C=O Sampling Plans

Responsibilities:

Receiving Inspector

- Inspect material and record results when required per [QCP-0315](#)
- Review certifications of compliance from suppliers as required
- Identify and move rejected material to receiving MRB area or controlled area
- Hold untested material until it has been tested and accepted
- Material that is released for “Urgent” use before required inspection or testing must be clearly identified for recall if necessary
- Record “Urgent” Releases per [QCP-0373](#)
- Initiate an immediate recall if the subsequent receiving inspection test fails
- Use recognized test and / or Calibration methods at the most recent revision level
- Use accredited laboratories as / when specified by the customer

In-Process Personnel

- Manufacturing personnel are responsible for conducting tests and recording results as required by the SOP’s, Control Charts or other documentation
- All product will be held until required testing and inspection is complete. Product that is released for “Urgent” use must be clearly identified for recall if necessary
- Record “Urgent” Releases per [QCP-0373](#)
- Initiate an immediate recall of that product if any test fails

Final Inspectors

- Final Quality tests will be conducted where required and recorded per the engineering drawing, or other documentation to provide evidence of conformance
- The Final Quality inspector is responsible for reviewing appropriate paperwork that provides evidence that test, operations and inspections were completed as required

QA Manager

- Assure agreement between customer requirements, the control plan and final inspection criteria
- Layout inspections and functional verifications will be conducted as required by the customer. Layout inspections will be scheduled and conducted annually unless otherwise specified. Results are available to the customer.
- Coordinate dock audits to verify conformance to all specified requirements

Design & Development / QA Lab

- Maintain documented laboratory procedures for receipt, handling, retention and disposition of samples
- Provide appropriate personnel for testing purposes
- Record environmental or other variables that may effect test results
- Verify capability to perform appropriate test and statistical methods

Procedure:

Inspection and test functions either “accept” or “reject: product based on the Zero Acceptance Number C=O Sampling Plans (QCR-0027), unless otherwise specified.

Samples will be verified by accredited laboratories when required by the customer. Acceptable product is forwarded to the next operation. Rejected material is moved to the appropriate MRB or hold area for disposition. Inspection and test activities are to be directed toward defect prevention rather than detection.

4.12 QUALITY ASSURANCE LABORATORY SCOPE

PURPOSE:

To provide standardized quality assurance work requirements, policies, program, procedures and instructions.

SCOPE:

The Quality Assurance Department when testing equipment and procedures are used to verify product test requirements or for testing. The Quality Assurance Test Equipment matrix identifies the equipment used for quality assurance testing, the range of the equipment, a reference to operating instructions. A training/ qualified inspector matrix is maintained on the computer network for the Quality department.

REFERENCE:

26-1 Management System and Quality Assurance Manual

[QCF-0689](#) Quality Assurance Test Equipment or Gage track test equipment list.

RESPONSIBILITIES:

QA Manager or Designee

- Assure that personnel are qualified to conduct testing
- Verify capability, where required, of equipment prior to use
- Communicate any problems with conformance to requirements to customer and initiator
- Maintain documentation of project results

QA Inspectors

- Monitor and control sample throughout the process
- Clearly identify samples as a sample for test with traveler, tag number, order number or project #.
- Record environmental conditions as required by specification or where the results may be influenced
- Conduct required test
- Verify calibration conditions of equipment used
- Record results of test
- Return results to initiator
- Maintain product identification and traceability throughout the process.
- Maintain special handling protection, retention disposal, environmental, statistical requirements and test methods or procedure
- Maintain identifying documentation.

PROCEDURE:

Maintain a list of qualified personnel for equipment, range restrictions for the equipment and reference to instructions for proper use or specifications.

4.13 INSPECTION, MEASURING AND TEST EQUIPMENT**Purpose:**

To provide a procedure for the selection, application, control, calibration and maintenance of Inspection, Measuring and Test equipment (including software) that is used to monitor product quality or equipment used to qualify or maintain production tools.

Scope:

Equipment used at CCC to monitor the quality of our product, regardless of ownership.

References:

- [26-2](#) Control of Inspection, Measuring and Test Equipment
- [26-3](#) Planning of Inspection and Test Equipment
- [26-4](#) Maintenance of Inspection, Measuring and Test Equipment
- [26-6](#) Control Procedure for Inspection and Test Equipment
- [26-7](#) Equipment Lists or **Gage track database**
- [26-8](#) Calibration Procedures by Reference Numbers

Responsibilities:**QA Manager**

- The proper selection of measurement, inspection and test equipment based on the complete measurement system, operating conditions and uses of the data produced
- Maintain the calibration procedure for inside and outside personnel
- Assure that out of specification readings are recorded
- Assure conformance before being put back into service
- Disposition product tested with equipment found to be out of tolerance
- Notify the customer if suspect material is shipped
- Oversee Gage Repeatability and Reproducibility (GR&R) studies
- Maintain appropriate revision levels

Electronic Technician / Inspectors

- Maintain the calibration system and schedule as outlined in [26-2](#) and as indicated by the QA Manager.

Procedure:

Inspection, Measurement and Test equipment will be identified, recorded and calibrated as scheduled on the master list of calibrated equipment. Measurement uncertainty will be known and be consistent with the accuracy required. Measurement equipment will be protected from unauthorized access (including software).

Calibration equipment will be traceable to N.I.S.T. or will have a documented Calibration Procedure. Equipment identification will be displayed or referenced on the equipment.

The company's own Inspection, Measuring and Test equipment, equipment supplied by customers or owned by an employee shall be subject to this calibration procedure.

Environmental conditions for measuring equipment shall be maintained while tests are conducted and when the equipment is not in use. The manufacturer's procedures for calibration will be maintained and followed unless specified otherwise.

The correct use of Inspection, Measuring and Test equipment shall be ensured by means of specifying the equipment and by providing instruction for the proper use of such equipment.

4.14 INSPECTION AND TEST STATUS

Purpose:

To provide a description of procedures for identifying the inspection and test status of CCC product.

Scope:

Raw material, work in process and finished product.

Reference

[QCP-0309](#) Product Identification, Traceability & In Process Test Frequency

Procedure:

Inspection and test status of product shall be documented on accompanying documentation or on the product itself by use of stamps, initials or signatures to indicate the completion of tests. This identification shall be done in such a manner that positive results and the releasing department are distinctly recognizable. The physical location of product does not constitute inspection or test status. Special and agreed upon additional verification tests or identification requirements will be maintained when specified by the customer or control plan.

In the case of non-conforming product, the product shall be visibly identified and be prevented from release for further processing. Product without identification shall be treated as untested product.

4.15 CONTROL OF NON-CONFORMING PRODUCTS

Purpose:

To establish a procedure to prevent inadvertent use of suspect or known non-conforming products or materials.

Scope:

Suspect and known non-conforming material found in our process which includes raw materials, work in process or final quality inspection.

References:

[QCP-0189](#) Material Review Board

[QCP-0315](#) Receiving Inspection

Definition:

Defective product does not meet specifications. It shall be visibly identified and separated from acceptable product.

Procedure:

Non-conformances shall be reviewed, analyzed and prioritized by appropriate personnel per [QCP-0315](#). Decisions shall be made with regard to any further processing of non-conforming products. The Material Review Board (MRB) may disposition non-conforming product for rework, sort, waiver (use as is), regrade or scrap as described in [QCP-0189](#).

Non-conforming products to the customer's specification will not be shipped without authorization to do so. Prior approval for product or process changes for automotive product will be coordinated where required. Concessions will be negotiated through the Sales Department. Product shipped under these circumstances will be appropriately identified on each container. The expiration date and quantity shipped by waiver will be tracked when required by the customer. Product with visible evidence of rework is considered non-conforming.

A description of the non-conformances will be recorded. Rework or sort instructions shall be clear and accessible to those carrying out the instructions. Rejected material that has been reworked or sorted shall be re-inspected by the Quality Department for conformance to requirements.

The analysis, treatment, disposition and verification of corrective actions for non-conforming products shall be documented, quantified and prioritized for tracking. They will also include signatures, dates and quantities involved.

4.16 CORRECTIVE AND PREVENTIVE ACTION

Purpose:

To provide a procedure to prevent occurrence and / or recurrence of actual or potential non-conforming products.

Scope:

Corrective Action programs maintained by CCC and its subsidiaries may include raw material rejects, work in-process rejects, customer returns or complaints, non-conformances found during internal audits and failure to satisfy 100% on time delivery when required by customer or from the supplier.

Preventive Action programs may include facilitated problem solving by cross functional teams at various levels of the organization, Brainstorming, FEMA, Pareto Analysis, Preventive Maintenance, Training, Calibration and the APQP process are governed by the Plan, Do, Check and Act Cycle.

References:

[QCP-0286](#) MRB / Corrective Action Procedure
[QCP-0308](#) Managing Processes (AQP)
[QCP-0414](#) Preventive Action

Responsibilities:

Manufacturing Supervisors

- Review quality records within manufacturing operations to help determine the cause of problems and coordinate the appropriate Corrective or Preventive Actions.

Quality Manager / Process Engineer

- Assist with data collection to help analyze data collected at various sources.

Procedure:

Reports of non-conformances, customer complaints, trend analyses of processes, quality cost and other issues of non-conformity shall be evaluated, prioritized and their causes determined. Records are to be maintained. Appropriate corrective / preventive actions shall be taken to deal with them based on the risks encountered by not taking action. The effectiveness of such action shall be documented and monitored by the issuer. Mistake proofing methodology will be used whenever feasible.

Corrective action and associated responsibilities shall be documented. Possible results of such action include improvements to production processes, reduction of scrap and cycle time improvements for the affected process as well as similar processes. These improvements shall include changes to documentation. Records of analyses will be maintained and be made available to customers when required. Corrective actions will be applied to other similar processes. Customer Returns will be analyzed, corrective actions will be implemented and a response to the customer using their format (when prescribed) will be used.

The effectiveness of preventive or corrective action shall also be taken into account in the review and evaluation of the Quality System. This will be reviewed by the Manager of Quality Assurance (or Designee) and the Quality Steering Committee as required.

4.17 HANDLING, STORAGE, PACKAGING PRESERVATION AND DELIVERY

Purpose:

To establish procedures to preserve and prevent damage to products, deterioration of their characteristics or improper identification caused by handling, storage, packaging and delivery. CCC will maintain responsibility for the Quality of our product through our suppliers of material, tooling or other services.

Scope:

Raw materials, work-in-process and finished product moved between our receiving dock and the product's destination (as determined by our customer).

References:

[OMP-0005](#) Shipping Procedure
[OMP-0007](#) Sparktest / Packaging

Handling, Packaging and Delivery:

Suitable devices, containers, pallets or other aids shall be used to ensure that product characteristics do not deteriorate as products are handled during packaging, transport, production, inspection and testing. Personnel shall be instructed accordingly. Product identification shall be preserved for the duration of such operations. Records of receipts and issues will be maintained for raw material and finished goods areas. Packaging shall be in accordance with fixed requirements, taking into account the risk of any damage to, or deterioration of, the product. The type and means of labeling, packaging and delivery shall be in accordance with customer requirements as required. Production scheduling will be order driven.

A documented procedure will be established to continuously optimize inventory turns over time, assure stock rotation and to minimize inventory levels. A system will be developed to establish and monitor delivery lead times. CCC will maintain and track performance to a 100% on time delivery and record supplier responsible premium freight charges and keep the customer informed of up-to-date delivery information. A corrective action system for less than 100% on time delivery will be implemented. Scheduling activities will be order driven. Electronic communication (ASN) is required unless waived.

Storage and Preservation:

The monitoring of stored products with regard to storage duration shall be documented and the corresponding responsibilities assigned. Appropriate methods will be used to preserve and segregate stored materials.

4.18 QUALITY RECORDS

Purpose:

To provide procedures to demonstrate the achievement of the required product quality and of the effective operation of the Quality System

Scope:

Records that relate to the Quality System including hard copies and electronic media.

Reference:

[QCP-0314](#) Record Retention

Quality System Records:

Records to verify the effectiveness of our operations and Quality System shall be readily retrievable (24 hours), legible and maintained with regard to the elements of the Quality System described. They shall be maintained in a suitable environment to prevent deterioration.

Quality records shall include records of the management review, contract review; design validation and verification reviews; audit reports, evidence of the monitoring of inspection, measuring and test equipment, training, approved vendor list, customer supplied product, product identification and traceability; process control, positive recall information, inspection and test records, results, non-conformance information, corrective actions, internal audits and quality related records from suppliers. Customer requirements for specific records will be maintained. Superseded records for a new part qualification will be maintained in the new part file. Requirements such as PPAP's, tooling records, etc. will be maintained while the part is produced plus one calendar year or as otherwise specified. All retention times are minimum time requirements.

The types of records, the duration times and the responsibilities for their safekeeping shall be clearly specified. Records of specific customer and supplier requirements will be recorded and maintained. Where required by contract, appropriate Quality Records will be made available to our customers. The ultimate disposition of Quality Records will be in accordance with standard business practices.

4.19 INTERNAL QUALITY AUDITS

Purpose:

To provide a procedure to verify that current Quality procedures are effective and comply with documented procedures including our working environment and the effectiveness of the Quality System.

Scope:

Internal audits conducted by CCC personnel.

References:

[QCP-0311](#) Internal Audit Procedure
[QCR-0029](#) Guidelines for Auditing Quality Systems

Responsibilities:

Manager, QA

- Establish the frequency (at least annually) and priority of Internal Audits based on the importance of activities.
- Publish Audit results to auditees and the Quality Steering Committee.
- Oversee the effectiveness of Internal Audits.

Procedure:

Internal Quality Audits are scheduled and conducted in accordance with QCR-0029 by qualified auditors working to an audit plan and an audit checklist. Audits will be conducted by personnel independent of those having direct responsibility for the activity being audited and shall include a review for a suitable working environment. Audit activities will cover all shifts of operations. The audit frequency will be adjusted according to findings.

Corrective Actions shall be assigned, reviewed and verified for effectiveness by the auditors in a timely manner.

4.20 TRAINING

Purpose:

To establish a policy for providing employees with the necessary training to perform job responsibilities that affects the quality of our product. The company encourages individual growth through in-house training programs and provides a tuition plan for formal training through local colleges and technical schools.

Scope:

Training programs that affect the quality of our product.

Reference:

[HRP-001](#) Development

Responsibility:

The Human Resources **Manager** is the focal point of training activities.

Definition:

Training can take many forms including classroom instruction, on the job training, specific skills training, videotapes, and / or general meetings.

Procedure:

Training is a strategic issue affecting the future of CCC. Training needs for the organization will be identified by management. They shall be based on factors such as introduction of new or improved equipment, processes and procedures.

Personnel performing specific assigned tasks shall be qualified on the basis of education, training and / or experience. Appropriate records of training will be documented and a system to measure the effectiveness of training will be established.

4.21 SERVICING**Purpose:**

To establish and maintain a procedure for performing and verifying that our service meets specified requirements and that a suitable method of feedback exists from the customer back to the appropriate individual or department within CCC.

Scope:

Champlain Cable Corporation does not currently have any contracts that obligate the company to provide installation or service above and beyond normal product service and delivery. Service activity not specified by contract (such as the treatment of a customer complaint) shall be determined and performed free of charge on a case by case basis. Service concerns will be recorded and will provide a feed-back system as required by the customer.

Reference:

[CSP-016](#) Customer Complaints

4.22 STATISTICAL TECHNIQUES**Purpose:**

To provide a procedure to determine the need and selection of the appropriate statistical techniques to establish, control and verify process and product capabilities.

Scope:

Manufacturing Processes within the Quality System.

References:

[QCP-0339](#) SPC Procedure
QCR-0007 Advanced Product Quality Planning and Control Plan

Responsibilities:**QA Manager**

- Identify training needs and coordinate appropriate training
- Coordinate development of Control Plans, FMEA's, Process Flow Diagram
- Coordinate Control Plan changes or warrants through the customer
- Assure suitable measurement equipment and techniques are used (GR&R)
- Oversee measurement of continuous improvement activities
- Monitor adherence to Control Plan and PPAP requirements
- Coordinate communication of SPC Data between CCC and the customer

Procedure:

The need to monitor (or to stop monitoring) a particular characteristic, the method of monitoring, equipment used, inspection or frequency will be determined by quality assurance with input from manufacturing personnel and engineering and / or Task Team. These will be recorded in the Control Plans and communicated to the customer as required.

Statistical trends are to be used, evaluated and responded to with the purpose of preventing non-conformance, reducing variation, continuously improving our process and product quality. Statistical methods include summary data, checklists, charts, Failure Mode and Effect Analysis (FMEA), Control Plans, short and long term capability studies. These records shall be available to appropriate personnel for review.

Quality Assurance and Process Engineering shall take leadership roles in the use of Statistical methods throughout the organization. Statistical methods training shall be included in the training requirements program and will be encouraged in all departments. Training will include the basic concept of variation, stability, control charts and problems associated with over adjustment.

4.23 CONTINUAL IMPROVEMENT**PURPOSE:**

To establish a comprehensive continual improvement program that ensures quality and conformance to customer requirements by seeking to continually improve manufacturing processes and methods.

SCOPE:

All CCC personnel and activities covered by ISO 9001:2000 / TS16949 quality management requirements and ISO 14001 environmental management requirements.

REFERENCE:

[CSF-020](#) Customer Product Requirement Form
[QCF-0396](#) Customer Complaint Form

Definitions:**Continual Improvement activities:**

- Establish feedback loops for customer and employee inputs
- Promote teamwork through effective communication

RESPONSIBILITIES:**QA Manager or Designee**

- Monitor and Evaluate Continual Improvement issues and issue corrective action when necessary

All CCC Personnel

- Personnel at all levels are required to use Continual Improvement tools to foster improvement and resolve recurring issues

PROCEDURES:

The QA Manager or Designee: review, monitor and update activities related to continual improvement procedures.