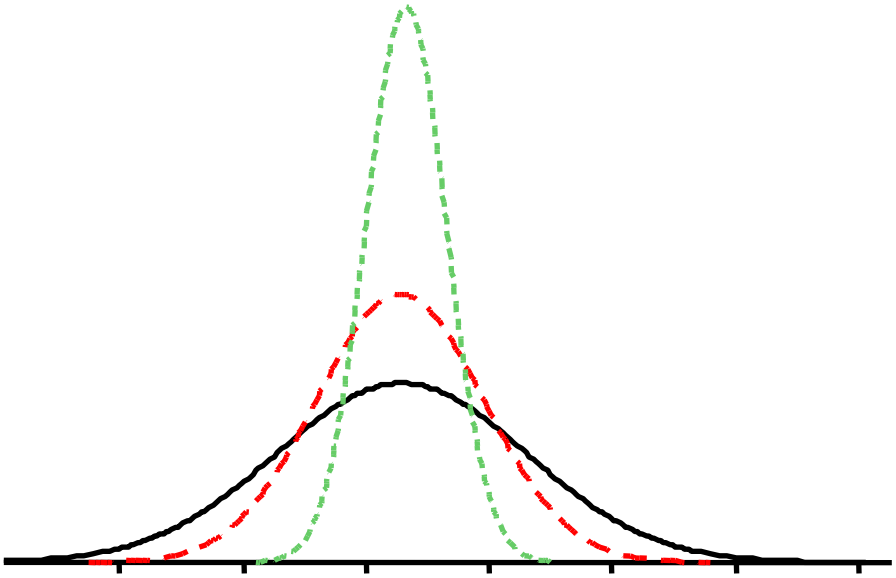
The Siemon Company

Supplier Quality & Commercial Qualification Manual



The latest revision of this manual is available online at the Siemon Company Supplier Resource Center: http://www.siemon.com/supplier/

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SIEMON QUALITY POLICY

Quality is a function of product conformance, price, delivery and service.

"One Siemon, One Team" is at the core of our company values and underscores our commitment to teamwork. We work toward common goals to consistently achieve high quality and performance in every area of our company. Our customers inspire us to deliver innovative products and services with a laser-focus on quality through continuous improvement. Beyond our products and services, every team member has the responsibility and is empowered to continually improve the quality of their work product and process. In all areas across the organization, our goal is to "do it right, do it once."

To aid in meeting the objectives of this policy, we have implemented a quality system compliant with ISO 9001 for The Siemon Company (TSC). This system employs a philosophy of prevention and continuous improvement rather than defect detection. This policy applies to both management responsibilities and operating procedures.

Introduction

This manual describes the Quality and Commercial related responsibilities of suppliers of components and raw materials used to produce finished goods in whole or in part by The Siemon Company (TSC). This manual will be used as a basis for establishing workable relationships between TSC and its suppliers. It is part of the purchase order by reference. The direction in this manual will not relieve the supplier of the obligation to furnish material conforming to all the requirements of the purchase order.

TSC recommends all suppliers of components or materials to be, or become, third party registered to ISO 9001 International Industry Quality Standard.

Supplier Agreement, Responsibility and Certification

TSC executes the supplier qualification process as documented in the Supplier Qualification Document, document code WTN-PUR-PRO-76 (Document Reference 120). Tier 1 suppliers are responsible for establishing and maintaining a quality system in accordance with this manual. A Tier 1 supplier's quality system shall prevent the shipment of nonconforming product**,** as well as minimize waste and costs. Upon demonstration of such, TSC will award the rating of a Qualified Supplier. The supplier is required to provide material in accordance with engineering specifications, statistical requirements and purchase order requirements, in the manner outlined in this manual. The supplier is responsible for all materials supplied to TSC, whether manufactured or processed by the supplier or procured from a sub-supplier. The supplier will provide a corrective action plan to correct non-conformances of supplied material within required time as specified in section 2.14 of this manual.

Tier 1 suppliers must have in place a Quality Plan that provides for continuous improvement in processes, products and systems, based on the principle of prevention rather than detection. In the absence of an ISO9001 compliant quality system, TSC may, at its discretion, and with the approval of senior management, work with a supplier to bridge any known quality system gaps to ensure the supplier has an adequate Quality Plan in place to support TSC's requirements.

1.1. Classification of Suppliers

TSC recognizes two classifications of Suppliers as defined in the Supplier Qualification Document, document code WTN-PUR-PRO-76 (Document Reference 120):

1.1.1. The following sections of this manual apply:

Section No.	Description	Tier 1 Supplier	Tier 2 Supplier
1	**Supplier Agreement**	**X**	**X**
2.1	Management Responsibility	**X**	
2.2	Quality System	**X**	
2.3	Contract Review	**X**	**X**
2.4	Design Control	**X**	**As required**
2.5	Document and Data Control	**X**	**X**
2.6	Purchasing	**X**	
2.7	Control of Customer Supplied Product	**X**	**X**
2.8	Product identification and Traceability	**X**	**As required by SQE**
2.9	Process Control	**X**	
2.10	Inspection and Testing (Product)	**X**	**As required**
2.11	Inspection, Measuring and Test Equipment (calibration)	**X**	**As required**
2.12	Inspection and Test Status	**X**	
2.13	Control of Non-conforming Material	**X**	**X**
2.14	Corrective and Preventative Action	**X**	**X**
2.15	Handling and Storage	**X**	**X**
2.16	Control of Quality Records	**X**	**X**
2.17	Internal Quality Audits	**X**	
2.18	Training	**X**	
2.19	Servicing	**X**	
2.20	Statistical Techniques	**X**	
2.21	Production Part Approval	**X**	**As Required**
2.22	Continuous Improvement	**As Required**	
2.23	Manufacturing Capability	**X**	
3.0	Supplier Qualification	**X**	**X**
4.0	Purchasing Documents	**X**	**X**
5.0	Quality Planning	**As Required**	
6.0	Significant Characteristics	**As Required**	**As Required**
7.0	Environmental and Hazardous Material Control	**X**	**X**
8.0	C-TPAT Customs Trade Partnership Against Terrorism - WTN	**As Required**	**As Required**

Table 1

2. Quality System Requirements

TSC is required to use the ISO 9001 standard when developing its supplier base. The following is an abbreviated summary of the ISO 9001 requirements, as well as additional TSC specific requirements relating to those requirements. Suppliers are expected to obtain their own copies of ISO 9001 or ISO 9000 as appropriate. TSC supplier survey reflects the requirements of ISO9001 and is used for initial qualification of TSC suppliers.

- Survey Form Number WTN-PUR-FRM-28, Supplier Quality Survey, Tier 2 (Document Reference F 228) will be used to assess Tier 1 Suppliers.
- Survey Form Number WTN-PUR-FRM-29, Supplier Quality Survey, Tier 1 (Document Reference F 227) will be used to assess Tier 2 Suppliers.

2.1. Management Responsibility

Suppliers must adopt a process approach when developing and improving the effectiveness of their Quality System. The Supplier's top management shall define its policy for Quality, including its objectives and commitment for quality. The supplier shall have a documented organization structure that is appropriate for its requirements. The Supplier's quality objectives and policies shall be clearly understood at all levels within the organization.

The supplier shall have a continuous improvement plan for processes and quality systems, with the status periodically reviewed and updated. Management shall have as a minimum an annual review performed to measure the effectiveness of the quality system. Records of such reviews and measures to correct deficiencies will be documented.

The supplier shall be responsive to TSC needs. They shall have a system in place to address any customer-related problems and track key events such as quotes, tooling, sample submission, pricing, quality, delivery and engineering problems.

The supplier shall appoint a management representative, who shall have defined authority and responsibility for ensuring that the requirements of ISO 9001 and TSC are implemented and maintained. The representative shall be identified in the Supplier's Quality Organization.

2.2. Quality System

The supplier shall establish and maintain a fully documented Quality System. The documented quality system shall be defined with manual, procedures and instructions in accordance with requirements of ISO 9000, or equivalent specification(s). The Quality Control Manual shall document the system used for each of the applicable elements required by ISO 9000, or equivalent specification(s). Systems not well defined in the manual shall be well defined in a procedure or work instructions.

The Quality Manual shall be reviewed and updated by management. This manual shall be signed and authorized by members of management.

The supplier shall develop procedures covering all phases of the system. The procedures shall describe the conduct of activity and processes, and documentation requirements for the internal system. A method for reviewing and revising the procedures shall be established. The procedures and documentation shall be available to all personnel in the supplier’s organization.

2.3. Contract Review

The supplier shall establish and maintain documented procedures for contract review and for the coordination of these activities. They shall review all orders to ensure that:

- All requirements are adequately defined and all differences are adequately resolved.
- The supplier has the capability to meet the contract requirements. Including a documented risk-analysis, identifying any risk factors, this may impact the supplier's ability to fulfill all contract requirements.
- Pricing is accurate and any discrepancies are resolved in advance of shipments.
- Delivery dates are confirmed within 24 hours after receipt of order.

2.3.1. Technical Conflict

If there is a conflict of technical terms or conditions associated with a purchase order, the order of precedence shall be:

- Text of Purchase Order
- The Drawing(s) referenced on the order, including published changes.
- Documents/specifications referenced on the drawing or purchase order.
- Documents/specifications referenced in other documents/specifications including this manual. Conflict in such secondary documents requires resolutions by TSC Purchasing supported by Supplier Quality.

Verbal directions or agreements are invalid at all times.

2.4. Design Control (Design responsible Suppliers only)

The supplier shall establish and maintain documented procedures to control and verify the design of the product, if applicable, in order to ensure that the specified requirements are met. All design changes and modifications shall be identified, documented, reviewed and approved by TSC before their implementation. The supplier shall have systems in place to ensure management of appropriate activities during concept development, prototype and production phases of new product planning.

2.5. Document and Data Control

The supplier must have a verifiable system and procedures for the distribution and updating of drawings, standards, specifications, procedures and work instructions. The system must prevent the use of outdated documents and assure that current documents are available and in use by all individuals and work areas which require them. All TSC drawings or specifications must be the authority for any local drawings and must be readily available at all appropriate manufacturing locations.

TSC product specifications and drawings are strictly TSC proprietary. Suppliers are not authorized to copy, or in any way make use of TSC information other than for the purpose of fulfilling specific contract requirements, without the written approval of TSC.

2.6. Purchasing (Control of TSC supplier's sub-contractors)

The supplier shall conduct a survey of any source/subcontractor facilities before placing business with them. The supplier is expected to have an assessment system to evaluate its sources and subcontractors. The supplier shall document the methods and survey used to evaluate a source or subcontractor's capability and shall maintain documentation of this process. The supplier shall have a documented Approved Supplier List. The supplier is expected to have a system for the control of material/product purchased from subcontractors to assure all incoming material meets physical, chemicals, visual, functional and dimensional requirement. The supplier must encourage its sub-suppliers to comply with the requirements of the ISO 9000 Industry appropriate or equivalent specification(s).

2.7. Control of Customer Supplied Product

The supplier shall establish and maintain documented procedures for the control of verification, storage and maintenance of TSC or their customer's supplied product, provided for incorporation into a TSC product or for related activities. Any such product that is lost damaged or is otherwise unsuitable for use shall be recorded and reported to TSC Purchasing for resolution. Siemon Form IS-1955-150 Property Loan Agreement for Temporary Transfer of Siemon Owned Equipment, Property or Tooling must be completed and executed prior to the transfer, drop shipment or direct shipment of Siemon property.

2.7.1. Supplier responsibility related to Siemon owned inventory

2.7.1.1. Supplier is not authorized to perform any anticipatory assembly and will be held financially responsible for any Siemon owned inventory used without written consent from an authorized Siemon representative. Siemon owned inventory should not be consumed or processed in any way without a purchase order and release from TSC.

2.7.1.2. Any discrepant part numbers and quantities received must be handled per applicable service level agreement.

2.7.1.3. Siemon may require monthly cycle counts on selected items – counts must be provided within 5 business days and should include components that are part of work in process at the supplier.

2.7.1.4. Physical inventory of Siemon owned inventory may be requested on a yearly basis.

2.7.1.5. If substantial discrepancies (as determined by Siemon) occur then the supplier will be asked to physically recount the item. If the recount provides conclusive evidence of a loss of Siemon owned inventory (based on supplier's count compared to Siemon perpetual records) then the supplier is responsible for the value of the difference between physical count and Siemon perpetual records.

2.7.1.6. Siemon reserves the right to inspect (with reasonable notification) any Siemon owned inventory held by suppliers.

2.7.1.7. Scrap of Siemon owned inventory may be provided by supplier in accordance with the applicable service level agreement.

2.7.1.8. Supplier is responsible for scrap on any item in excess of 2% of supplier total usage for that item for the week in which the scrap is reported. Supplier responsibility does not apply if it is determined that a defect in the scrapped items originated at Siemon.

2.7.1.9. Siemon owned equipment & fixtures shall remain the property of Siemon. Supplier is responsible for routine maintenance such as oiling and cleaning equipment to keep it operational. Supplier is responsible for the value of any lost/damaged equipment, other than normal wear and tear resulting from usage. Siemon owned equipment may only be used for the production of Siemon orders. Siemon reserves the right to audit and inspect Siemon furnished property and equipment on at least an annual basis. A complete physical inventory must be conducted on the last Friday of December.

2.7.1.10. Supplier is responsible and must honor its fiduciary duty to protect TSC owned equipment and inventory so it remains in good working order, protected and handled with care. Supplier is responsible for loss or damage while material or equipment is in supplier's possession.

Note: TSC provided tooling and returnable packaging is included in this element.

2.8. Product Identification and Traceability

The supplier shall have a procedure to identify and control materials having a shelf life restriction. The supplier is required to establish a lot traceability system that provides for positive identification and record keeping for each production lot throughout the major phases of receipt, manufacturing, inspection, and testing. The supplier shall have a procedure to trace the raw material through the process to the finished product purchase order, shipment trace number or supplier's lot number.

When suppliers are processing products with lot trace systems from other internal or external suppliers, they must maintain the identity of the original lot trace number on the packaging labels.

2.9. Process Control

The Supplier shall develop and maintain documented procedures, operator instructions, process sheets and test instructions for production, installation and servicing, where the absence of such documents could adversely affect quality.

The supplier must develop and maintain a formal documented system for the maintenance of production processes and equipment to ensure continuing process capability. The frequency of such maintenance should be based primarily on statistical data, manufacturing equipment recommendations and past history.

The Supplier shall comply with all TSC and/or their customer's requirements for documenting and controlling special characteristics.

The supplier shall notify TSC of any significant process or design change that may affect the fit, form or function of deliverable product. Included but not limited to changes of the location of manufacture, manufacturing method and/or material used in the process. Changes in any of these factors require prior written approval by TSC.

Section 5 of this manual describes the process control methodologies employed by TSC.

2.9.1. Special Processes

TSC considers the following Supplier processes “special processes”. The process and or operators of the special process shall be qualified as deemed necessary by TSC in order to satisfy the customer, safety, and business requirements. Note: Where a special process is in use, procedures shall be established by the Supplier to verify the accuracy, variability and skills and special environments needed to perform such operations.

The list of “Special Processes” that TSC requires elevated levels of quality and statistical process control, by the Supplier include, but are not limited to;

- Color Matching
- Plating
- Sheet Metal Finishing
- Soldering
- Welding
- Heat Treatment
- Laser Marking/Engraving
- Chemical/Vapor Cleaning
- Fiber Assembly
- PC Board manufacturing
- Copper and fiber cable manufacturing

2.10. Inspection and Testing

Inspection and testing activities shall be performed at a minimum of:

2.10.1. Verification of Incoming Product

May include one of the following methods:

- Receipt of statistical data
- Receiving inspection and/or testing
- Second or third party assessment
- Part evaluation by accredited contractor or test laboratory
- Subcontractor warrants or certifications (in combination with one of the methods above.
- Incoming inspection may be waived if supported by statistical data.
- Source inspection of the product by a Siemon Company Quality Representative at the supplier's site.

2.10.2. Final Inspection and Testing

Shall be conducted according to established processes. Records of all inspection activities will be maintained in accordance with supplier retention schedules and procedures.

2.10.3. Final Inspection Test data

When required by TSC drawing, contract or PO the supplier must assure reports are supplied with each shipment. Data must be reviewed for completeness and conformance as part of the final inspection process. Test data when sent electronically must be sent to: **quality_assurance@siemon.com**

2.11. Inspection, Measuring and Testing Equipment Control

The supplier must utilize and maintain adequate inspection, measuring and test equipment to ensure the accuracy of all materials shipped to TSC.

The supplier must document and exhibit the proper maintenance and calibration of all measuring and test equipment. All personal measuring instruments are to be included in the program. TSC recommends the calibration program comply with the requirements of ISO 10012-1, Quality Assurance Requirements for Measuring Equipment.

2.12. Inspection and Test Status

The inspection and test status of product shall be identified by suitable means, which indicates the conformance or non-conformance of product with regard to inspections and tests performed.

The identification of inspection and test status shall be maintained, as defined in a control plan and/or documented procedures, traceable throughout production and delivery of the product to TSC to ensure that only product that has passed the required inspections and tests are dispatched for use.

Location of product in the normal production flow does not constitute suitable indication of inspection and test status unless inherently obvious (i.e. material in automatic production transfer process).

2.13. Control of Nonconforming Material

The supplier shall establish and maintain a system to ensure that all non-conforming and suspect product is immediately identified, segregated and dispositioned. The supplier is expected to properly record all non-conformances and dispositions.

When a supplier becomes aware that nonconforming or suspect material has been shipped to TSC, the supplier shall implement the following:

- Promptly notify TSC Supplier Quality or Purchasing, that TSC may have received the nonconforming or suspect material.

- Issue a Return Material Authorization (RMA) at time of notification.
- Communicate to TSC what corrective action has been taken.
- Any product or services provided by the Supplier which do not meet the acceptance criteria, whether found by TSC or TSC's Customer, will be rejected and the supplier will be responsible for correcting all nonconformances.

Any costs associated with nonconforming materials received from suppliers will be recovered from that supplier. This includes, but is not limited to:

- TSC labor
- Transportation
- Special handling fees
- Customer fees and/or penalties
- Lost productivity
- Warranty

Lots determined to be non-conforming by TSC are subject to one or more of the following dispositions with the supplier's concurrence.

- Return to the supplier.
- Scrap at TSC facility at supplier expense.
- TSC reworks the lot at supplier expense.
- TSC performs 100% inspection, at supplier expense, and returns defective products to supplier
- Use, but provide notice of non-conformance and make adjustments necessary to compensate for deficiencies.

2.14. Corrective and Preventive Action

When either TSC or the supplier discovers a non-conformance, the supplier must have a formal system to resolve the problem and verify that the solution implemented resulted in correcting the non-conformance.

The supplier shall utilize the Eight Discipline (8D) method or suitable alternative. The supplier shall take corrective action, when it is determined that the process is not stable or capable of producing the required product, and/or when it is verified that material does not conform to specifications.

Corrective actions must address the root cause of the nonconformance or instability, and may not be closed until objective evidence validates the effectiveness of the action.

TSC reviews incoming production material to ensure conformance with all applicable specification requirements. Review of the material also extends up to the time of actual use of an item or when a production operation has been performed on an item. If a nonconformance is detected by TSC in any of these stages of review, a Supplier Corrective Action Request (SCAR) will be issued to the supplier. Nonconformance includes, but is not limited to, product nonconformance, administrative elements, (i.e. packing list errors, invoice errors, document omissions, nonconforming packaging etc.)

Suppliers who fail to provide adequate corrective action by the due date assigned on the Supplier Corrective Action Request, may have their material subjected to rejection upon receipt by Receiving Inspection, and/or be suspended on the part number involved, pending acceptable corrective action.

Corrective actions initiated as a result of a TSC Supplier Corrective Action Request (SCAR) will remain open until TSC is satisfied the corrective action is effective.

Nonconformance of a repeated nature is an indication of poor root cause identification, or correction. TSC will institute progressively stringent containment requirements, specific to the nonconforming material, on that supplier. The extent of the containment requirements will be based on the severity of the nonconformance, and the risk they pose to TSC or its customers. Action may include suspension of the supplier's qualified status.

2.15. Handling, Storage, Packaging and Preservation

A full description of Siemon Company packaging and labeling requirements are detailed in Siemon Document WTN-QAL-PRO-111 Instruction for Packaging and Labeling of Supplier Products (Document Reference 210).

The supplier shall establish and maintain system for handling, packaging, storing, labeling and delivering of the product. The handling system shall provide methods and means of handling that prevents damage or deterioration.

The supplier shall use designated storage areas or stock rooms to prevent damage or deterioration of product, pending use or delivery. Appropriate methods for authorizing receipt to and dispatch from such areas shall be stipulated.

An inventory management system shall be established and documented to continuously optimize inventory turns over time, assure stock rotation and minimize inventory levels.

The supplier shall provide control of packaging to the extent necessary to ensure conformance to specified requirements from time of receipt until the supplier's responsibility ceases. TSC Buyer shall advise the supplier of special packaging requirements.

The supplier is expected to provide the resources and systems for consistent on-time delivery and is expected to establish an activity that coordinates supplier production scheduling with TSC's planning information and/or schedule requirements. Suppliers are expected, at all times, to conform to TSC's specified routing instructions. Any freight cost associated with movement outside of these guidelines will be the responsibility of the supplier.

Suppliers must be in compliance with regulations governing the documentation necessary for the movement of goods between countries. These regulations include compliance with requirements for describing product on the invoice.

2.15.1 Bar Code Labeling

When required the supplier shall maintain a system to ensure that all materials purchased by TSC, are shipped and labeled with a bar code label meeting TSC requirements.

2.15.2 Preservation

All drawing oils and rust bans used by the supplier for the preservation of stampings and finished product purchased by TSC must be approved by TSC. SDS sheets to accompany the first shipment. Changes require re-submittal of SDS.

Supplier Identity

No supplier logos or identification of any kind shall be used on packaging or product unless explicitly authorized by TSC.

2.15.3 Delivery and Freight (Shipping to a non-Siemon location)

General Instructions:

Unless directed by TSC buyer all freight is to be shipped collect to the Siemon account. The supplier will be responsible for cost of all freight not shipped in accordance with Siemon Instructions.

The Siemon Logistics Team will communicate documents that outline the preferred method of carriage. Carrier selection is based on the location, the size and weight of the shipment. Should the suggested carriers not service the shipper's location, call The Siemon Logistics Team in your region for alternate routing.

Declared Value:
The Supplier must not declare any value, for insurance purposes, on the Bill of Lading unless directed to by the terms of the Purchase Order. If the Supplier does declare a value without the buyer's permission, all insurance charges will be deducted from the Supplier's invoice.

Air Freight:
Under No Circumstances shall the shipper utilize premium freight service to be used at the expense of TSC without advance specific shipment permission and instructions. If authorized, use the specified preferred air carrier and ship collect to TSC. Note: Written authorization from TSC must accompany shipment.

2.16. Control of Quality Records

TSC requires that the Quality Records pertinent to the manufacturing of the product to be available for evaluation per the following record retention requirements.
FAIRs (Production part approvals), control plans, tooling records, purchase orders and amendments shall be maintained for three calendar years after the last delivery of that product.

Quality performance records (e.g., control charts inspection and test results shall be retained for seven calendar years after the year in which they were created.

Records of internal quality system audits and management review shall be retained for three years.

These requirements do not supersede any governmental or customer requirements. All specified retention periods shall be considered "minimums".

Records must be maintained in a legible manner and shall be readily retrievable. Electronic records can be kept, but must be stored and maintained in the same manner as all "hard copy" records. All records shall be stored in such a way to prevent loss, deterioration or damage.

2.17. Internal Quality Audits

The supplier shall have a formal documented method for auditing the complete quality management system. The audit shall verify whether quality activities and results comply with planning and to determine the effectiveness of the system.

Audits must be scheduled according to status and importance of the activity. Completed audits shall be maintained in a manual or file for TSC review.

2.18. Training

The supplier shall establish and maintain a system for identifying the training needs and providing the training for all personnel performing activities affecting quality.

The supplier shall maintain appropriate records of training and job qualification.

Training should be viewed as a strategic issue affecting all personnel and training effectiveness shall be periodically evaluated. Training must performed in a timely manner in order to assure the quality of product produced for TSC is not adversely affected.

2.19. Servicing

Where product related servicing is a specified requirement, the supplier shall establish and maintain documented procedures for performing, verifying and reporting that the servicing meets the specified requirements.

2.20. Statistical Techniques

The supplier shall establish process controls on each significant characteristic identified by either the supplier and/or TSC. The supplier shall retain appropriate evidence to show that significant characteristics are controlled.

ANSI Z1.4 is recommended for statistical sampling once processes are under statistical process control. Other methods may be used if approved by TSC.

Suppliers are required to have basic statistical knowledge, including an understanding of variation and process capability.

2.21. Production Part Approval - FAIR (First Article Inspection Report)

TSC requires Production Part Approval (FAIR) for the following:

- All new or modified part numbers and materials
- A significant product or process change
- A change in manufacturing location
- Special circumstances resulting from product or process problems.
- TSC may request a FAIR as part of a SCAR.

The supplier must include a copy of the FAIR with the initial shipment of product. The supplier must also maintain results of the FAIR inspection. Results must be available on request.

In case of duplicate tooling, multiple cavities or station; a FAIR from each cavity or station shall be required. At least one sample from each cavity or station shall have a dimensional inspection completed.

Unless otherwise specified by TSC, all FAIR submissions must include:

- Ballooned Drawing
- Dimensional layout on all drawing dimensions. TSC form number 179 is the recommended format. AS9102 format may also be used and is available from the Society of Automotive Engineers (SAE) website.
- The supplier must provide material and performance test results on physical, chemical and performance requirements as listed on the drawing as part of the FAIR.
    - Material certification
    - Performance certification or performance test data as required by the drawing.
        - When the certification is submitted the test data must be able to be produced when requested.
        - Test data can be sent to TSC at quality_assurance@seimon.com .
    - Compliance to RoHS initiative (reference section 8 of this document).
    - Color analysis (L*A*B), if applicable
    - Plating analysis, if applicable
        - Plating Thickness
        - Composition

        - Porosity
        - Adhesion test results
        - Plating sampling plan
    - SDS for any material as required by section 8 of this document must be included.
    - Capability Study on thirty (30) pieces minimum on significant characteristics taken from a minimum three hundred (300)-piece production run.
        - Process Capability (Ppk) calculated for each major characteristic. Ppk greater than or equal to 1.33 are desirable.
        - Note: if multi-cavity mold, samples must be selected representing each cavity. A reduced sample size may be requested if the lot size will not support this requirement. Contact TSC Supplier Quality for adjusted requirement
    - Material and performance test results from a Qualified Laboratory if required.
    - Control Plan for each major characteristic identified on the drawing
    - Process Flow Chart for each significant characteristic if required
    - Process Failure Mode Effect Analysis (FMEA) if required.

Suppliers who are unable to perform the required inspections or test within their own facilities are responsible for having these services performed by a reliable outside source. If a third party is used they need to be identified on the FAIR.

TSC purchase order may require the following:

TSC will not accept responsibility for products or services produced prior to FAIR approval. The supplier assumes risk for production prior to FAIR approval.

Packing slip must note “FAIR Enclosed”.

Detailed FMEA and control plan training materials and forms may be requested from TSC through the responsible buyer or Suppler QE.

2.22. Continuous Improvements

A comprehensive continuous improvement philosophy shall be fully deployed throughout the Supplier's organization.

Once a process and has demonstrated stability and acceptable capability, the Supplier shall develop specific plans for continuous improvements of the process.

Other areas for continuous improvement must include:

- Increase availability of product
- Increase cost competitiveness
- Improving productivity and process control
- More efficient use of resources
- Reducing testing frequencies
- Eliminating waste
- Reducing cycle time
- Customer satisfaction
- Excessive handling and storage

Performance indices can be used to measure progress.

TSC is committed to supporting its suppliers in continuous improvement efforts wherever possible, and expects suppliers to participate in joint mutually beneficial projects.

The objective of this element is to improve quality and reduce cost.

2.23. Manufacturing Capabilities

Suppliers shall use advanced quality planning process described in section five of this manual,

When applicable, FMEAs, capability studies and statistical data, are to be used to minimize the occurrence of nonconforming material.

Suppliers shall provide appropriate technical resources for tools and gage design, fabrication and full dimensional inspection. If any of this work is subcontracted, a tracking and follow-up system is required.

The supplier shall establish and implement a system for tooling management, including:

- Maintenance and repair facilities and personnel
- Storage and recovery
- Set-up
- Tool change programs for perishable tooling

If any of this work is subcontracted, a tracking and follow-up system is required.

All tooling and/or equipment used in the manufacturing of TSC product shall be maintained in a condition that will assure that quality parts will be produced and reasonable tooling life will be maintained.

All tooling owned by TSC must be permanently identified, or otherwise controlled by electronic records, as the property of TSC with TSC tool number. Tooling owner by TSC shall only be used in the fulfillment of TCS supply orders. TSC tooling designs and tools are deemed as confidential and are not to be viewed or discussed with any party not expressly authorized by TSC.

Tooling invoices will only be paid when the FAIR is completed by supplier and approved by TSC Receiving Inspection for production on new or revised parts, unless otherwise agreed to with TSC purchasing.

2.24 SAFETY CERTIFICATE OF COMPLIANCE

Components that are safety critical for the manufacturing of TSC finished products will need to have a Certificate of Compliance (COC) emailed by the supplier for each shipment.

- Email address: ResinCerts@siemon.com
- Subject Line: “Siemon PN & Identifier” example ” 100.0003, Lot #09302009”
- Documentation that cannot be emailed will have to be packaged with each shipment.

Supplier COC Minimum Information:

- Manufacturer Contact Information (usually address & phone number)
- Customer: TSC
- Manufacturer Part#
- Siemon Company Part#
- Purchase Order Number:
- Identifier/Lot #
- Manufacture Date:
- Ship Date:

- Quantity:
- Specifications: (Siemon, Supplier or Third Party)
- Manufacturer representative's name, signature or function to authorize and attest to information accuracy

Additional information required from resin suppliers

- Material UL File Number:
- Material Grade & Color:
- Part Number:
- Minimum Flame Rating:
- Material Analysis for Lot#:

3. Supplier Qualification and Classification

Supplier Qualification and Classification requirements- A full description of Siemon Company supplier qualification and classification requirements are detailed in Siemon Document 120: Supplier Qualification.

Approved Supplier - Qualified suppliers are added to TSC Approved Supplier List. TSC does not purchase materials or product related services from companies, which are not on the approved supplier list. An approved supplier is considered qualified to produce materials and services for TSC. As a condition of approval, the supplier must sign a Mutual Nondisclosure Agreement.

A supplier failing to meet performance or survey requirements must take immediate improvement measures. TSC Purchasing and Supplier Quality will monitor the effectiveness of such actions. Failure to improve performance or survey deficiencies may lead to progressively more stringent controls on the suppliers by TSC up to and including disqualification.

3.1. Right of Entry

Employees of TSC, or a third party authorized by TSC, have the right of entry to the Suppliers facility. The Supplier must in turn include right of entry provisions in any authorized subcontractors. This right of entry provisions shall allow Employees of TSC, or a third party that is authorized by TSC, to verify the quality of workmanship, records, materials, and physically review applicable production lines in process, at any facility of the supplier or subcontractor.
Note: Representatives of TSC, or authorized third parties that require access to your facility, will sign any applicable non-disclosure agreements that you may deem necessary.

4. Purchasing Documents

It is the responsibility of the supplier to obtain any and all referenced documents on TSC PO, drawing or other communication. All documents must be requested through TSC buyer to assure the correct revisions are provided. TSC is not responsible for errors or omissions as a result of documents referenced but not supplied by TSC. It is the supplier's responsibility to perform a complete contract review.

5. Quality Planning

- The supplier is expected to utilize Advanced Quality Planning methodologies on new or changed products. Develop and review Design and/or Process Failure Mode and Effects Analysis (FMEA) when required by TSC.
- Develop a Process Control Plans.

5.1. Development

Suppliers with design capability shall have multi-disciplined systems in place to ensure management of appropriate activities during concept, development, prototype and production.

The supplier shall have a Process Failure Mode Effect Analysis (PFMEA) in place. The controls stated in the control plans shall be based on the highest RPN numbers outlined in the PFMEA to ensure that process issues are initially contained and addressed through continuous improvement measures.

5.2. Control Plans

TSC may require a control plan for components, process or materials having Major characteristics. and for certified part number/families. Such characteristic are identified on the drawing or in a TSC specification. The control plan shall be organized in a material flow sequence from incoming material to packaging/shipment and must address all significant characteristics and high risk FMEA concerns. The control plan shall be reviewed and updated as required, especially after every design and process change. Control Plans may represent families of homogeneous items produced from the same process stream. New or revised control plans shall be approved by TSC Supplier Quality Engineer.

The following are the minimum required items that must be on each Control Plan:

- Control Plan Number
- Part Number/Latest Change Level
- Part Name/Description
- Supplier/Plant
- Customer Quality Approval/ Date
- Part/Process Number
- Process Name/Operation Description
- Machine, Device, Jig, Tools for Manufacturing
- Characteristics Number
- Product
- Process
- Special Characteristics Classification
- Product/Process Specification/Tolerance
- Evaluation/Measurement Technique
- Sample Size/Frequency
- Control Method
- Reaction Plan

5.3. Process Flow Chart

The supplier shall have a process flow chart that will be organized in a material flow sequence from incoming material to packaging and shipment. The flow chart should be reviewed and updated as required. Process Flow Charts may represent families of homogeneous items produced from the same process stream.

5.4. Certified Parts

Individual part number or part family certification applies to Tier 1 Suppliers, when all of the following requirements are met, the following sections 5.0-6.0 of this manual describe the requirements for certifying parts for TSC:

- A process control plan that has been approved by TSC.
- The initial production shipment received is in compliance with all purchase order requirements.
- The minimum Cpk, PPM or ‘ Z’ score requirement is met on each dimension in the control plan.
- Historical evidence of good product quality and on-time delivery.

5.4.1 Certified Part Numbers purchased from a Tier 1 Suppliers do not require receiving inspection.

5.4.2 Whenever a Certified part number is rejected, it must revert back to 100% lot Receiving Inspection.

6. Characteristic Classification

6.1. Major Characteristics

Major characteristics are those products, process and test characteristics that will significantly affect form, fit or function of the end product. Statistical techniques are utilized to reduce and control variation within specification limits. TSC requires 1.33 Cpk (233 ppm) for all major characteristics unless otherwise specified.

6.2. Major Characteristics

Are identified on Siemon part drawings by a capital M. in a hexicon.

6.3. Minor Characteristics

Are not identified as significant or major and must be maintained within engineering specification.

Any additional Supplier control characteristics shall be designated on the Supplier's Process Control Plan.

7. Environmental and Hazardous Material Processes

A supplier shall have a process to ensure compliance with all applicable government safety and environmental regulations, including those concerning handling, recycling, eliminating or disposing of hazardous materials. Appropriate certificates or letters of compliance should evidence this.

Suppliers are encouraged to adopt the principles of the ISO 14001 Environmental Management System.

TSC Environmental Policy:

"The Siemon Company is committed to protecting and preserving the environment. We have implemented an Environmental Management System to continually reduce the environmental impacts of our activities, products and services, and to assure our continued compliance to applicable laws, regulations, permits, and company policies. We will continually improve our Environmental Management System to enhance environmental performance."

All supplier supplied materials or processes used in part manufacturing shall satisfy current governmental and safety constraints on restricted, toxic and hazardous materials including but not limited to RoHS compliance, as well as environmental and electrical considerations applicable to the country of manufacture and sale. The supplier must be able to provide compliant material as specified by TSC purchase order. They must be able to provide evidence of compliance as necessary.

This section details various substance regulations which apply to Siemon products. All materials provided to Siemon must comply with these regulations and the supplier must provide documentation to confirm compliance. In addition, the supplier is responsible for ensuring that the product complies with the latest version of the legislation listed above. In case of discrepancies between legislation, the more stringent requirement shall apply. The supplier will be asked to provide a written statement of compliance using Siemon's approved form or Siemon's environmental material compliance platform. (See WTN-RDL-PRO-161 Supplier Environmental Compliance (document reference 1235) section **7.0 Restricted/Controlled Substance Regulations:**

- Waste Framework Directive (SCIP): 2008/98/EC (latest revision) on waste electrical and electronic equipment (WEEE).
- EU's regulation number 1907/2006 concerning Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). The supplier shall immediately notify Siemon of any Substances of Very High Concern (SVHCs) contained in material supplied to Siemon.
- EU RoHS Directive 2011/65/EU & 2015/863/EU – "Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS)."
- Russia ROHS Directive (EAEU TR 037/2016)

- China RoHS GB/T-26572, known as the Administrative Measure on the Control of Pollution Caused by Electronic Information Products (ACPEIP)
- EU Packaging Directive 94/62/EC
- EU Batteries Directive (2006/66/EC)
- Conflict Minerals(CMRT and ECMRT) (requires reporting under US SEC Dodd- Frank Act requirements)
- Ozone Depleting Substances (ODS)
- Persistent Organic Pollutants (POPS) Regulation (EU) 2019/1021
- Environmental Protection Agency - Toxic Substances Control Act (TSCA)
- PFAS (regulation EU 2019/1021 and EPA).
- California Proposition 65. Safe drinking water Office of Environmental Health Hazard Assessment.
- Carbon Dioxide (CO2) Emissions
- Leadership in Energy and Environmental Design (LEED)
- Living Building Challenge (LBC) Red List
- Environmental, Social and Governance (ESG)
    - The Siemon Company is responsible for collecting and reporting on environmental, social, and corporate governance (ESG). Also known as environmental, social, governance is an approach to investing that recommends taking environmental issues, social issues and governance issues into account when deciding which companies to work with.
    - Environmental aspect: Data is reported on climate change, greenhouse gas emissions, biodiversity loss, deforestation/reforestation, pollution mitigation, energy efficiency and water management.
    - Social aspect: Data is reported on employee safety and health, working conditions, diversity, equity, and inclusion, and conflicts and humanitarian crises, and is relevant in risk and return assessments directly through results in enhancing (or destroying) customer satisfaction and employee engagement.
    - Governance aspect: Data is reported on corporate governance such as preventing bribery, corruption, Diversity of Board of Directors, executive compensation, cybersecurity and privacy practices, and management structure.

A Safety Data Sheet (SDS) must be submitted for all items as defined under the Clean Air Act, OSHA, or any other applicable regulations. Safety Data Sheets must be submitted to your purchasing representative immediately upon receipt of purchase order **AND** prior to the material shipping to TSC facility. There must also be a copy of the SDS with the shipped product and attached in a manner that is clearly visible to the receiving personnel where required by OSHA standards.

Approval of each SDS should be obtained as early as possible prior to shipping any material to TSC facility. If no SDS information is provided prior to receipt, TSC reserves the right to return the material at the suppliers' expense and cancel payment.

When an outside contractor is to perform work on the campus of TSC, he must be advised, by Plant Engineering, of the hazardous chemicals present in the area work is being done. Also, an SDS must be reviewed and approved by Plant Engineering and posted in a readily visible area for any chemical being used by a contractor in an interior construction site. Potentially exposed Siemon employees must be advised of this**.**
The supplier is responsible for ensuring that their product complies with the latest version of the legislation listed above. In case of discrepancies between legislation, the more stringent requirement shall apply.

The supplier may be required to complete a Siemon form confirming compliance of specific part numbers.

The supplier may be asked to complete a Siemon EMS self-assessment and/or allow an onsite EMS audit to assure compliance with Siemon Environmental policies.

8. C-TPAT Customs Trade Partnership Against Terrorism

To help secure the international supply chain. As a member of the **Customs-Trade Partnership Against Terrorism** (C-TPAT) program, Siemon has committed ourselves to new and improved security protocols throughout our operations. These new protocols are designed to enhance the security of our facilities, people, cargo shipping, cargo receiving and cargo tracking processes. Our goal is to prevent cargo loss and cargo tampering including the introduction of contraband, such as illegal merchandise, drugs and weapons of mass destruction into our cargo boxes and containers.

As a Siemon approved supplier, we would like to communicate the importance of the C-TPAT program and ask that all suppliers research the program for suitability and feasibility for possible addition to your business program. Please reach out to your commodity leader for more information.

APPENDIX A:
Associated Documents (Bibliography)
The following publications contain additional information that will be of assistance to TSC suppliers:

B-8069043 Siemon Finished Goods label drawing
ISO 9001 Quality management systems - Requirements
ISO 10012 Quality Assurance Requirements for Measuring Equipment
WTN-PUR-PRO-76 Supplier Qualification (Document Reference 120)
WTN-QAL-WI-79 Supplier Corrective Action Request (Document Reference 204)
WTN-QAL-PRO-111 Instruction for Packaging and Labeling of Supplier Products (Document Reference 210)
WTN-QAL-PS-179 Cable Packaging (Document Reference 638)
WTN-RDL-PRO-161 RoHS and REACH Compliance (Document Reference 1235)
WTN-PUR-POL-34 TSC Supplier Code of Conduct
WTN-ADM-POL-26 Siemon Societal Responsibility Statement (Document Reference 2047)
WTN-QAL-WI-327 Return of Suspect Raw Material from Outside Processing (OSP) Supplier
WTN-FIN-POL-35 Siemon Purchase Order Terms and Conditions

APPENDIX B:
Associated Forms

NDA – Non-disclosure Agreement
IS-1955-150 - Property Loan Agreement for Temporary Transfer of Siemon Owned Equipment
F 179 – First Article Inspection Report.
WTN-PUR-FRM-29 Supplier Quality Survey – Tier 1 (Document Reference F 227)
WTN-PUR-FRM-28 Supplier Quality Survey – Tier 2 (Document Reference F 228)