



PCC Aerostructures

Supplier Quality Requirements

Manual

SQR - 10000

Release - New

Approvals				
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1.0 Introduction

We as the individual and combined members of PCC Aerostructures are dedicated to being the leading group of suppliers in the Aerospace Industry. We can only achieve our Customer's goals by working closely with and expecting the best from our Suppliers. We believe a strong, successful Supplier base will assist us in providing world class products and support for our Customers. We ask that our Suppliers join us in providing outstanding products with respect to quality, delivery, and price. Our objective is to support the development of future mutual goals for our organizations.

2.0 Acknowledgement

Acceptance of the terms and conditions of this document by Purchase Order acknowledgement, shall be unconditional. No provision contained herein may be added to, modified or superseded unless otherwise specifically authorized on the PO or POC by the authorized Buyer and Supplier Quality representative of the issuing PCC Aerostructures Company.

3.0 Purpose

- 3.1 This document establishes general, expected and mandatory quality assurance requirements for use on Purchase Orders from PCC Aerostructures companies (also referred to as "Sites" or the "Buyer"). It is intended to clearly define all minimum general requirements for the

Supplier and their Sub-tiers to assure that all products delivered by the Supplier, per the Purchase Order, conform to PCC Aerostructures specified requirements for Safety, Quality, Reliability, and Integrity. This document is applicable to all work performed under terms of a contract between PCC Aerostructures companies and any PCC Aerostructures approved supplier for the manufacture or supply of any aerospace industry product and procured processing activity. Nothing herein shall be construed as a waiver of any other provisions of the contract of which it forms a part.

- 3.2 Inspection/test requirements specified by design drawings or design control documents shall be in addition to any inspection activity performed in accordance with this document. Any additional Site specific requirements, whether customer or regulatory, will be identified on the Purchase Order and located on the PCC website for the specific Aerostructures company or provided with the purchase order.
- 3.3 It is the responsibility of the supplier to obtain and comply with the latest version of this document which can be obtained by accessing the PCC website or submitting a request to the applicable buyer.
- 3.4 In the event there is a conflict between the contents of this document and the Purchase Order, the Purchase Order shall take precedence.
- 3.5 This Document shall be in addition to and used with "PCC Standard Terms and Conditions" as noted on the Purchase Order requirements.

4.0 Quality System Requirements

- 4.1 Supplier shall implement and maintain a quality management system in accordance with the respective standard. Mandatory customer certification requirements will be flowed down through the PO or contract if/as necessary. (Ref: Fig 4-1)
- 4.2 Supplier shall provide a written notification to the applicable purchasing department and Quality department focal of any changes in the supplier's management, ownership, location/address, name, and/or quality system within 72 hours of the date of change.
- 4.3 Supplier shall provide written notification of the placement on probation or suspension of any certifications regarding their Quality

System or processes to the contract issuing PCC Company's. This shall be directed to the buyer and the Quality department focal within 72 hours of action.

Supplier Capability	Quality Standard
Build-to-Print	AS9100/ISO9001
Distributor	AS9120
Processor	NADCAP AC7004 or AS9100/ISO9001
Calibration Laboratory	A2LA, ISO 10012, ISO17025

Fig. 4-1

5.0 Supplier Sub-tier Requirements

- 5.1 The Supplier shall flow and make available the requirements of this document to their Sub-tier suppliers.
- 5.2 It is Supplier's responsibility to ensure and validate compliance by Supplier's Sub-tier sources for all applicable requirements and to maintain documented evidence confirming said compliance.
- 5.3 When Buyer's purchase order requires the use of Sub-tier sources approved by buyer or buyer's customers, Supplier's Quality system shall assure that only Sub-tier sources currently approved by Buyer or Buyer's Customers are used to procure product or services, and includes the exchange of any proprietary technical data.
- 5.4 Use of specified Sub-tier sources does not relieve Supplier of compliance to all product technical and quality requirements.
- 5.5 Buyer reserves the right to inform the Supplier that a Sub-tier source has been unapproved by the Buyer and therefore the Supplier shall not use the Sub-tier source in processing of Buyers product
- 5.6 If there is a question of the approval status of any Supplier please contact the contracting PCC Aerostructures Company buyer for clarification.
- 5.7 Suppliers are expected to monitor performance (i.e. quality and delivery) of their Sub-tiers to determine how Sub-tiers are performing to requirements.

6.0 Management Responsibilities

- 6.1 **Contract review** - It is the responsibility of Supplier to review all orders placed. Review must be adequate to ensure that Supplier has the resources and capability to comply with the terms of the order as well as scheduled requirements.
- A. Suppliers shall ensure purchase order requirement differences are resolved by contacting the applicable buyer prior to the Supplier's commitment to supply the product or service.
- 6.2 **Proprietary and Confidentiality Information** - All drawings/documentation supplied to our Suppliers with regards to Purchase Orders or request for quotes are to be considered proprietary information. Refer to PCC Aerostructures Non-Disclosure Agreement for more information.
- 6.3 **Right of Entry and Access** - The Buyer's authorized representatives and its Customer's and Regulatory representatives may enter Supplier's facility and any facility involved in the order, at any level of the Supply Chain at all reasonable times to conduct preliminary inspections and tests of product and work in process, and have access to all applicable records. This requirement shall also be flowed down from Supplier to any level of its Supply Chain.
- Note:** the rights asserted above (6.3), may be partially limited to non-proprietary facilities (area's), processes and equipment of the Supplier and/or Supplier's Sub-tiers. Supplier must present in writing an assertion of proprietary rights prior to contract award or Purchase Order acceptance.
- A. The Supplier and/or Sub-Contractor shall provide adequate provisions at Supplier's facility for Buyer to review Supplier system and products.
- 6.4 **Continuous improvement and Training** – Supplier shall demonstrate a continuous improvement program that targets initiatives to improve safety, product quality, delivery and lower costs. The Supplier shall ensure personnel performing work affecting conformity to product requirements are competent on the basis of appropriate education, training, skills and experience.

6.5 **Foreign Object and Debris (FOD)** – PCC Aerospace suppliers and their Sub-tiers shall ensure work is accomplished in a manner preventing foreign objects or material in deliverable items.

- A. Suppliers and their Sub-tiers shall maintain material handling, part protection, work area housekeeping, tool accountability, hardware accountability, and parts and materials in a manner sufficient to preclude the risk of FOD incidents and in accordance with NAS 412 and/or AS9146 (scheduled release Qtr. 2 - 2016).
- B. The Supplier's FOD program shall be subject to audit review and approval by PCC Aerostructures and/or Customer's.

6.6 **Document Sources** - Copies of Buyer proprietary documents and special documents not generally available from commercial sources, required by Supplier to comply with PO requirements, will be furnished to Supplier by Buyer upon request.

- A. Copies of Industry or Government documents and/or standards are available from a number of commercial sources, and Supplier is responsible for obtaining such documents.
- B. Any problem experienced by Supplier in obtaining required documents should be brought to the attention of Buyer prior to acceptance of the PO.

6.7 **PROHIBITED PRACTICES**

The following acts and practices are prohibited, and any violations not approved by Buyer in writing may result in disqualification of Supplier.

- A. **FACILITY CHANGES** – During performance of the PO, Supplier shall give Buyer Quality Manager written notice before relocating any production, inspection or processing facilities; or transferring the work between different facilities, or making other changes which may affect product safety, quality or delivery. This must be submitted within 30 days of product ship date.
- B. **SYSTEM AND MANAGEMENT CHANGES** – Supplier shall inform Buyer of any changes in facility location, added facilities, changes in quality system and/or changes in management by written notice within 5 days of change.

- C. **UNAUTHORIZED-PRODUCTS-CHANGES-OR SUBSTITUTIONS** – Supplier shall not make any changes or substitutions to any product(s) or service required by the applicable drawing, specification, or document without written authorization by Buyer.
- D. **UNAUTHORIZED REWORK** – Supplier shall not perform any rework or rework methods on product damaged or found to be discrepant during fabrication or processing, or on defects in castings or forging, unless such reworks are able to bring the product back 100% to drawing compliance.
- E. **SUBCONTRACT WORK** – Supplier shall not subcontract or relocate any work outside of the USA unless written permission is issued by Buyers Quality Department. The Supplier shall notify the Buyer with a declaration of intention, with Purchase Order, part numbers, part names and the address, phone, and name of Quality Manger, (or designee) affected by the change request.
- F. **UNAUTHORIZED Repairs – are PROHIBITED.**
- G. **UNSUITABLE MATERIALS FOR PACKAGING ARE PROHIBITED** - Material such as newspaper (due to acidic nature of ink), “peanuts” or “popcorn” for packaging product is prohibited. Parts must be packed in preservation paper, bubble wrap etc., per best commercial aerospace material.

7.0 Product Realization

- 7.1 **Configuration control** - The Supplier shall maintain a configuration management system to ensure technical data is available to validate characteristics of a product, change history, and changes are verified. Supplier shall not to make any change in materials or design details, which would affect the part or any component part thereof without prior written Buyer approval. The Supplier will identify, on the statement of Conformance and / or packing sheet, the as-built engineering revision level of the end item product being delivered. Comments and questions regarding configuration control should be addressed to Buyers product and engineering support group.

- 7.2 **Production/Quality Planning** - The Supplier shall prepare manufacturing and inspection test plans, indicating operational sequence, inspection and test points, all product and process traceability requirements and other pertinent control media for the items to be fabricated per Purchase Order. Accountability for each manufacturing, inspection and test requirement at each control point shall be clearly identified.
- A. When purchase order requires the Supplier to use Buyers manufacturing plans, the Supplier will utilize Buyers production planning {step-by- step) without deviation of content or order during performance of operations.
 - B. When required by PO, legible and reproducible copies of the manufacturing plans shall be submitted to the buyer for approval. Approval must be received in writing prior to start of manufacturing. If required per PO, approved plans may be “frozen” and in part or total shall not be revised without the written authorization of the buyer.
- 7.3 **Classified or Controlled Products** - Classified or Controlled Parts are considered "Primary", "Critical", "Flight Safety", and "Fracture Critical". The classification is noted on the purchase order when it applies. The Supplier's shall note the classification; i.e. "Critical Part" on each page of the manufacturing or process plan and certificate of conformance.
- 7.4 **Product traceability** - The Supplier shall maintain the traceability of all product through all stages of production including all relevant production documents. The Supplier's process shall ensure traceability of product from the raw material used to the finished product.
- A. The Supplier shall ensure that the product will be identified with a unique traceability number at all stages of manufacturing process.
 - B. Identification and traceability of the individual lot, batch, heat number, exposure units and cure times etc., shall be maintained from time of receipt by Supplier, from Supplier's Sub-tier sources, to delivery to buyer.
- 7.5 **Buyer/Customer Furnished materials** - The Supplier shall identify, protect and safeguard Buyers property for use or incorporation into final product.

- A. The Supplier shall complete a receipt inspection of the Buyers furnished material. If any discrepancies exist, the Supplier shall resolve with Buyer, prior to any work performed.
- B. If Buyers provides furnished material to Supplier, traceability of the material to the Buyers purchase order must be maintained through all stages of manufacture at the Suppliers facility. This traceability must be included on the Suppliers Certificate of Conformance or pack- slip. Excess or nonconforming material must be properly documented, identified and returned with the end product. Failure to properly document, identify and return nonconforming material will cause delivery to be denied until the issue is resolved. Supplier is expected to make every effort to prevent material scrap.
- C. The Supplier shall ensure that the Buyers furnished material is not intermixed with any other Buyer furnished material. The Supplier must maintain full traceability of product at all times for each of the Buyer's Orders.

7.6 Special Process Approval - When placing work at Sub-tiers, the end customer may specify how special processes, production of raw material and the procurement of selected parts standards are performed in accordance with contractually established engineering specifications, drawings and quality requirements.

- A. The Supplier shall evaluate end Customer approved sources (i.e. D1-4426) at an interval not to exceed monthly for additions/revisions that affect the Supplier's statement of work defined within the purchase order.
- B. Revisions that impact the Supplier's ability to provide compliance shall be brought to the attention of the Buyer within 5 working days.

7.7 Supplier Request for Information - If the Supplier requires clarification on any the Buyers technical requirements, the Supplier can officially request clarification with the Buyer.

- A. The applicable document will be signed by the Buyers representatives to officially clarify the problem.
- B. This RFI does not constitute any MRB authority and can only be used for clarification purposes. PCC Aerostructures does not issue MRB authority, any such

request would have to be directed to the appropriate engineering design authority.

- C. The request for information additionally does not relieve the Supplier from their obligation to perform first part analysis prior to Buyers PO acceptance.
- D. Reference and copy of the document should be included in the Supplier shipping documentation.

7.8 **Machined Parts** - Suppliers shall not offload or subcontract any work without prior written approval from Buyer. Only Buyer or customer furnished drawings/data are to be used in the manufacture of machined parts.

- A. Suppliers shall perform first piece setup inspections to assure that a conforming part will result from setup, equipment and tools, feeds and speeds, and operator practices.

7.9 **Raw Materials** - Where the Supplier supplies raw material either directly to a PCC Aerostructures Site or purchases the material for use in the manufacture of machined or sheet metal products for a Site (standard hardware items are specifically excluded from this paragraph), the Supplier shall assure the material is manufactured and distributed by sources approved by PCC Aerospace's Customers.

- A. Raw material test reports and/or notarized reports, in accordance with all applicable specifications, must be kept on file and traceable to end item products delivered to PCC Aerospace. All items delivered to PCC Aerospace must maintain Job/Lot traceability.
- B. Where our Customer does not specifically require approval of the manufacturer and/or distributor of raw material, the Supplier shall assure that the material is manufactured in the United States of American or in a country in which the United States of America has ratified a Bi-Lateral Airworthiness Treaty.
- C. Certificate of Compliance with actual results of physical and chemical test reports must accompany each shipment where the Supplier furnishes the raw material (on First Article jobs or as requested only). For serial production jobs, the physical and chemical test reports must be retained on file. Material must be identified by Mfg. Lot, Batch, heat lot and or heat treat load (if

applicable). Test reports must be traceable to the material lots shipped.

7.10 Standard Hardware - Where the Supplier supplies hardware items of standard design (whether industry or PCC Aerospace's Customer standard) and the hardware is controlled by a qualified producer's list (QPL), the Supplier shall provide a certificate of source of supply when the direct PCC Aerospace Supplier is not on the QPL.

A. In the instance that PCC Aerospace's Customer requires the Distributor to be approved by the Customer, the Supplier shall only use and/or supply hardware from PCC Aerospace's Customer approval Distributor.

7.11 Customer Owned Tooling, Gages, and Fixtures-

- A. Supplier shall maintain an Accountable Property List to monitor activity and location of all Buyer, final Customer or Government owned tooling/gages/fixtures in their custody.
- B. This list will include both the tooling/gages/fixtures supplied by a PCC Aerostructures facility and the tooling/gages/fixtures fabricated by the supplier to manufacture contracted components but owned by Buyer or its customer(s).
- C. Tooling shall remain the property of Buyer or its Customer. All tooling shall be marked by Supplier as property of Buyer and segregated by Supplier from the property of Supplier or the property of others.
- D. A Supplier receiving Buyer or Buyer Customer owned tooling/gages/fixtures shall return these after purchase order requirements are completed unless written authorization is received from Buyer.
- E. A Supplier shall submit a written request and receive a formal Buyer approval before any alteration or repair is performed on Buyer or Buyer Customer tooling/gages/fixtures.
- F. Supplier is responsible for the repair of all loaned tooling/gages/fixtures damaged after receipt by the Supplier, and for the preservation of tooling/gages/fixtures which are not in use.
- G. The Supplier is responsible for the replacement or replacement

costs of any tooling/gages/fixtures that are lost, damaged beyond repair, or not returned.

- H. All furnished tooling/gages/fixtures in the custody of a Supplier are subject to periodic Buyer inventory audits and calibration.
- I. Supplier shall return all Buyer or Buyer Customer loaned gages on or before calibration due dates.

7.12 **Verification of Purchased product -**

- A. Suppliers shall inspect, upon receipt, all subcontracted parts, components, and outside processes used in the fulfillment of Buyers purchase orders.
- B. The Supplier is responsible for executing verification activities to ensure conformity of any procured materials, products and services used in the fulfillment of a Buyers purchase order. (*Ref. Measurement and Analysis sec. 8.1.*)
- C. Supplier must provide objective evidence of product conformity. Suppliers must verify purchased product against the latest applicable specification.

7.13 **Delegated Inspection Authority -** The approval criteria and use of Supplier delegated inspection authority as well as limitations will be as defined and controlled by each PCC Aerostructures Sites procedure.

- A. The Site Director/Manager of Quality reserves the right to approve any Supplier at discretion and also reserves the right to override performance level indicators in special circumstances. The application and approval process is as follows:
 - 1) Supplier nominates an individual to become a PCC Site delegated source inspector.
 - 2) Submit a formal request and provide the nominated individual's resume.
 - 3) Obtain approval from applicable site Quality authority.
- B. Quality management determines which acceptance method (stamp or signature) to use and as identified within the approved DIA authorization.

- 7.14 **First Article Inspection (FAI)** - The Supplier will perform a first article inspection (FAI) on the first lot, unit, part or assembly of each type shipped. Documented results, actual dimensions or findings, shall also be furnished with the first item shipped.
- A. Concurrent with delivery of first production product(s) and First Article sample, the Supplier shall provide the Buyer and have on file in their facility a First Article Inspection Report (FAIR) documenting the results of Supplier's First Article Inspection (FAI) and/or test of the product and for each Sub-tier component.
 - B. All First Article Inspection reports shall be in accordance with AS9102 "First Article Inspection" process and documented on the prescribed forms unless superseded by purchase order requirements.
 - C. First Article Report must be re-accomplished under the following circumstances.
 - 1) Document changes (drawing, Parts List, Specs, etc.) including relevant drawing or flag notes.
 - 2) Any part which has not been produced by Supplier for a period longer than 24 months. (Or as designated by site specific requirements)
 - 3) Changes to Supplier facility including; moving, expansion, change in manufacturing sources, inspection method, or substantial renovation, and significant management changes.
 - 4) Change in manufacturing process or equipment use.
 - 5) Change to the Bill of Materials (material, material specs, details, etc.)
 - 6) Note: FAI requirements may be satisfied by previously approved FAIs performed on identical characteristics of similar parts produced by identical means. A partial FAI that addresses differences between the current configuration and prior approved configurations may be completed using only the affected fields in the FAI forms.

- D. **Note:** Customer and Site specific FAI requirements (such as NET inspect) will be flowed by purchase order and made available to the Supplier.
 - E. **Note:** FAI part families may only be used when coordinated and approved by Buyer in advance of part manufacturing date.
 - F. **Note:** FAI will not be performed on any prototype parts, or parts manufactured using methods not representative of the normal production process, or non-production parts unless specified in the contract.
 - G. When requested by Buyer, a Last Article Inspection (LAI) shall be performed on a part or assembly prior to reallocation of the manufacturing site. LAI consists of full FAI activities content including all activities necessary to capture all manufacturing and inspection activities.
 - H. **Note:** All Suppliers generated First Article Records shall be retrievable and accessible within 24 hours notification from Buyer or Buyer customers upon request.
- 7.15 **Product Identification** – All Products must be identified (part mark) per the engineering/specification requirements or as directed on the purchase order. Suppliers manufacturing planning shall reflect the required part marking information including type/method and format at the proper operation sequence.
- 7.16 **Serialized Parts:** When applicable, Serial numbers for all products on the Buyers purchase order shall be assigned by the Buyer, applied on all products and recorded on all applicable documentation by the Supplier. The assigned serial numbers shall not be altered or replaced without prior written authorization from Buyer.
- 7.17 **Packaging and Shipping** - Supplier shall pack the Product to prevent damage and deterioration taking into account method of shipment, location of shipment and destination of receipt, as well as time associated with shipment.
- A. Supplier shall use preferred carriers and service levels as dictated by Buyer's purchasing as noted on the purchase order. Use of unauthorized carriers must first be approved in writing from Buyer

or Supplier will be responsible for the transportation charges associated with the shipment.

- B. Packaging design shall be suitable for, and consistent with the requirements and limitations of the transportation mode specified by Buyer.
- C. If Buyer ships utilizing reusable packaging, that same packaging must be used when returning product. A charge will be incurred by Supplier for loss of reusable packaging.
- D. Intrusive methods of marking the Country of Origin (i.e. etching, vibropeening) shall be authorized by Buyer prior to use. The purchase order or a "condition of supply" and document may include specific packaging instructions.
- E. Buyer may charge Supplier for damage to or deterioration of any Products resulting from improper packing or packaging. Supplier shall comply with any special instructions stated in the applicable Order.
- F. Items capable of being degraded or damaged by static electrical charges must be packaged in such a manner as to preclude their exposure to the generation of discharge of static energy.
- G. Reference ASTM-D9351-98 for "Standard Practice for Commercial Packaging"
- H. Reference MIL-STD-2073-1D for "Standard Practice for Military Packaging"
- I. Ref: Shipping Documentation Requirements

7.18 **Calibration Program** - Supplier shall maintain the National Institute of Standards and Technology (NIST) traceable calibration system capable of insuring the accuracy of all measuring equipment utilized in the inspection and acceptance. Traceable calibration certifications for calibration standards must be maintained on file and available for review by PCC Aerostructures Company's or their customers.

8.0 Measurement and Analysis

- 8.1 **Inspection Program** - The supplier is responsible for executing verification activities to ensure conformity of products in the fulfillment of a PCC Aerostructures purchase order. This includes all inspections and tests that are required to substantiate conformity.
- A. Supplier shall employ receiving, in-process and final inspection and testing to the extent necessary to verify product conformance to all applicable requirements.
 - B. Inspection records, certifications, test reports and technical data statements of quality shall be maintained by Supplier as objective evidence or product quality required by the order.
 - C. Supplier shall perform 100% inspection of all characteristics on all products covered by the Buyers purchase order. Records of Supplier's 100% inspection results shall be maintained on file at the Supplier and shall be available to Buyer upon request.
 - D. The Supplier may use a statistical sampling plan provided it has been approved by the Buyer in advance of its utilization of product acceptance. The Supplier Sampling plan system must be compliant to ARP 9013 or equivalent and approved by buyer's quality management.
 - E. Hidden features including part characteristics that would be impossible or difficult to inspect following subsequent operations. Suppliers who produce characteristics that are not verifiable upon receipt, "Hidden characteristics" shall maintain records of inspection (documented dimensions) on file and have these records available upon request.
- 8.2 **Statistical Process Control** - PCC Aerostructures encourages the use of SPC to track and improve process capabilities. Statistical Process Control techniques should be employed on key, critical, or controlling characteristics as specified within the drawing(s).
- A. SPC per specific methodology is mandatory when required by Buyer's PO or contract requirements.

- 8.3 **Raw materials** - The supplier is required to review, verify to requirements, and provide raw material Certificate of Conformance and Material Test Reports with each shipment.
- A. The Supplier shall provide certification from the original mill or manufacturer. Unless otherwise specified, the supplier shall use the material specification revision level in effect at the time of the release of purchase order.
 - B. Any departure from required specifications must be submitted and approved in writing by Buyers Quality department before shipment.
 - C. Metals Certification shall be from the original mill and shall contain:
 - 1) material specification and applicable revision
 - 2) material description
 - 3) alloy and condition
 - 4) physical properties
 - 5) chemical analysis {when applicable}
 - 6) heat lot number
 - A. When raw material is purchased from a distributor, include the distributor's certificate of conformance along with certification from the original mill/manufacturer. Material Test Reports shall contain actual results of chemical and/or physical analysis, as applicable for each lot or batch number.
 - B. Supplier utilizing test reports to verify conformance of purchased metallic raw material to applicable specification requirements shall periodically validate the reports through independent testing of material received. Test reports shall be retained and made available on request for a minimum of 7 years.
 - C. The Supplier is required to perform hardness and conductivity test on aluminum and hardness test on other hard metals prior to fabrication in order to verify material temper to engineering. Results of such verification shall be maintained on the supplier's manufacturing plan {work order} or other inspection status documentation.
 - D. Drop Ship Procedure: When Buyer owned material is received

at the Supplier's facility the Supplier shall send an email including the material certification to the current Buyer's point of contact.

- E. Suppliers of Limited Shelf Life materials (Paints, Adhesives, Sealants, etc.) shall not ship products with less than 70 days or a minimum of 75% of shelf life remaining unless specifically authorized by Buyer.

- 1) Supplier shall identify the container, package and packing sheet with Governing Specification, Name of Manufacturer, Date of manufacture, Cure date if applicable, Batch Number/Net Contents (as applicable) Storage Requirements (e.g., temperature, etc.) Expiration date.

8.4 **Processors** - Processes are defined as Material Test Laboratory, Heat Treat, Shot Peening, Non-Destructive Testing, Chemical Processes, Welding, Coatings, and Non-conventional machining.

- A. Supplier and Supplier's Sub-tier processors must meet the end use Customers certification eligibility requirements as flowed down from Buyer's PO. (I.e. Nadcap).
- B. Unless otherwise specified on the purchase order, the processor shall use the process specification revision level in effect at the time of the release and acceptance of Buyer's purchase order.
- C. Parts and/or assemblies processed after the purchase order date and/or delivered after the process specification was superseded are acceptable.
- D. Cancelled or superseded military specifications shall be processed to the latest specifications.
- E. Supplier is required to review, verify to requirements, and provide process certifications with each shipment. Any departure from required specifications must be approved by Buyer's quality department prior to shipment.

8.5 **Certificate of Conformance** - The Supplier shall furnish, with each shipment, a Certificate of Conformance (C of C) that must be signed by an authorized representative of the Supplier's quality organization and must show the part number, revision level, PO number, quantity shipped, date of shipment and deviation/concession number when

applicable to ensure the product meets the requirements of the engineering documents and the Purchase order.

- A. When the Purchase Order does not specify the revision level of the engineering documents or specification, the latest engineering documents or specification will apply.
- B. The Supplier shall provide a copy of all Certificates of Conformance from the Supplier's subcontractor when the subcontractor's work is completed.
- C. The original Certificate of Conformance for each part number should be kept in the Supplier's files for future audit purposes. If no Certificate of Conformance is received with the shipment, the shipment will be rejected and may affect the Supplier's quality and delivery rating.
- D. Certificate of Compliance with actual results of physical and chemical test reports must accompany each shipment where the Supplier furnishes the raw material (on First Article jobs only).
- E. For serial production jobs, the physical and chemical test reports must be retained on file.
- F. Material must be identified by heat lot and or heat treat load (if applicable). Test reports must be traceable to the material lots shipped.
- G. If the Supplier manufactures parts for PCC Aerospace and then applies finishes (plating, painting, etc. either by sub-tier or in-house) the Supplier shall perform 100% Rockwell and Conductivity (as applicable) inspection of the part prior to application of the finishes.
 - 1) Such Rockwell and Conductivity shall be performed per specifications by PCC Aerospace's Customers.
 - 2) The Supplier shall provide a written certification of 100% Rockwell and Conductivity, including actual upper and lower readings and specification (including the revision level) to which the Rockwell and Conductivity inspection was performed.

- H. Where PCC Aerospace supplies the material for this order, the Supplier shall certify on each shipment that the Supplier has not made an unauthorized substitution of the material.
- I. PCC Aerospace Quality Assurance must approve any substitution of material. PCC Aerospace will conduct 100% Rockwell and Conductivity inspection, as applicable, on parts directly contracted to thermal processing suppliers.
- J. PCC Aerospace inspection shall not be construed as relief to the processing supplier to perform as requirements to the specifications.

8.6 Source Inspection

- A. In-process Source Inspection: Unless superseded by the PCC Aerostructures Company unique requirements; If products to be delivered under the purchase order require in-process inspection, tests, or both, by buyer's quality representative at the points specified in the purchase order, the Supplier shall notify buyer at least forty-eight (48) hours in advance of the time the product will be ready for in-process inspection.
 - 1) Supplier's measuring and test equipment, facilities, and personnel shall be made available for use by Buyer's representative when requested.
- B. Final Source Inspection: Unless superseded by the PCC Aerostructures Company unique requirements; Product to be delivered under the Buyers purchase order which require final source inspection, tests, or both, by Buyer's quality representative prior to delivery to buyer, the Supplier shall notify buyer at least forty-eight (48) hours in advance of the time product will be ready for final inspection.
 - 1) The Supplier's measuring and test equipment, facilities, and personnel shall be made available for use by the Buyer's representative when requested.
- C. Government Source Inspection: Unless superseded by the PCC Aerostructures Company unique requirements; when Government Inspection is required prior to shipment from

supplier's facility and upon receipt of an order, promptly notify the Government Representative who normally services supplier's plant so that appropriate planning for government inspection can be accomplished.

- 1) In the event the Government office cannot be located, supplier shall notify the buyer for instructions. The Government Representative who services the supplier's plant shall be notified at least forty-eight (48) hours in advance of the time the article(s) are ready for inspection and/or tests unless otherwise specified.
- 2) The Supplier's measuring and test equipment, facilities, and personnel shall be made available for use by the Buyer's representative when requested.

8.7 Shipping Documentation: - In addition to the Certificate of Conformance any additional documentation such as; product certifications, test reports, First Article reports etc. that is required per the PO terms, must be provided either before or included with the shipped products.

- A. PCC Aerospace reserves the right to charge a minimum \$150 for product delivered that lacks the required documentation requirements detailed with this document and purchase order quality clauses.

9.0 Control of Non-Conforming Products

- 9.1 Supplier shall maintain an effective system for controlling nonconforming materials and products including procedures for identification and segregation, identifying nonconforming items immediately upon discovery.
- 9.2 Supplier shall limit access to all non-conforming products.
- 9.3 If Supplier delivers nonconforming products from another source, Buyer may at its option and at Supplier's expense return the Products for credit and refund, require Supplier to promptly correct or replace the Products, correct the Products, and/or obtain replacement products from another source.
- 9.4 Under no circumstances shall nonconformities nor the nonconformance process be used in advance of an anticipated design change.

- 9.5 Buyer will also have an option to debit Supplier for any Buyer supplied Raw Material and/or servicing value lost due to Supplier nonconformance.
- A. These remedies are in addition to any remedies PCC Aerostructures has as stated in PCC's Standard Terms and Conditions or may have at law or equity.
- 9.6 **Material Review Board (MRB) Authority**
- A. Supplier's disposition authority of nonconformance is limited to rework and return to supplier. Other dispositions that fall outside of re-work and return to supplier shall be submitted to Buyer as follows:
- B. Supplier will document discrepancies, other than noted above, on their own Discrepant Material Report. Supplier will be subject to a charge for discrepancies deemed satisfactory to submit to MRB for disposition, amount will be dependent on the scope of the evaluation. Buyer reserves judgment on whether the discrepancy is to be submitted to MRB.
- C. Supplier's shipping document shall include a note stating "nonconforming parts and Material Report worksheet included in shipment." A tag, stating "nonconforming part", shall be affixed to each discrepant part.
- D. Discrepant material delivered to Buyer without the proper documentation, including, but not limited to a Discrepant Material Report), as well as inadequate identification of nonconforming product, may be subject to a \$250 processing/handling fee for each line item received.
- 9.7 **Notice of Escapement Disclosure (NoE)**
- When the supplier identifies or becomes aware of defective product/service that has escaped from the supplier's facility and shipped to a PCC Aerostructures Company, the supplier shall immediately notify Buyer.
- Written Notification shall be addressed to Buyer's Quality Assurance and shall be received in a timely manner. PCC Aerostructures may debit suppliers per the PCC "Standard Terms and Conditions" for adverse impact as a result of the escapement.

Written Notice must include:

- 1) Supplier Name
- 2) Part Numbers
- 3) Serial Number, Heat Lot Number, Batch number
- 4) PO Number
- 5) Quantities
- 6) Dates Delivered
- 7) Description of Defect

Note: Additional information and/or notification process may be required depending on specific Buyer and or Buyers Customers requirements.

9.8 Supplier shall identify and document any additional products that may be affected by the same or similar conditions of the disclosed non-conformance.

10.0 Corrective/Preventive Action

- 10.1 In all cases of Supplier caused scrap and/or rework, Buyer reserves the right to issue a “Request for Corrective Action” to direct and track root cause investigation efforts and ensure documentation of effective corrective action.
- 10.2 The Supplier agrees to provide a formal response upon request using the Buyer provided CAR form. The CAR response form must be completed fully and returned within the timeframe indicated on the form.
- 10.3 Non-Conforming products that have been shipped to Buyer and not returned may be required in support of a RCCA investigation. The Supplier must contact the Buyer to request the materials as needed.
- 10.4 Buyer reserves the right to require additional industry-recognized investigative tools such as an 8D, cause map and/or fishbone diagram as needed to ensure that the true root cause of the defect has been identified.
- 10.5 Each identified root cause must be addressed by a specific corrective action. Each corrective action must include objective evidence of a documented improvement to the production process which will become a permanent part of all future planning with the intent to mitigate the risk of a repeated failure.

- 10.6 Buyer's Quality must approve all Corrective Action Responses by reviewing documented evidence or by observation at the supplier site.
- A. When a due date extension is needed, contact the Buyer. Requests for an extension must be in writing, approved by applicable Quality focal and contain the following:
- 1) Reason for the extension request
 - 2) Current status of the investigation
 - 3) Date being requested for final submittal
- 10.7 Delinquent responses without extension requests will be escalated to Buyers Quality management for review and possible further actions.

11.0 Document and Data Control

- 11.1 All data provided to Supplier is considered proprietary to either PCC Aerostructures or its Customers. All drawings, specifications and other information must be controlled to the extent required to ensure that dissemination is limited to individuals performing tasks related to Buyer's purchase orders or requests for quotations.
- 11.2 Supplier shall maintain an English translation of all quality documents related to PCC products.
- 11.3 Digital Product Data (DPD) provided to Supplier is to be considered "for reference only" unless Supplier is approved to handle DPD in accordance with the PCC Aerostructures requirement in the "Special Requirements Section" of this document. Partial or Full approval may be granted depending on the Supplier's capabilities and procedural controls.
- 11.4 Supplier shall notify Buyer of any discrepancies, conflicts or omissions found on product engineering or purchase orders. Product engineering conflicts that cannot be resolved will be submitted for resolution to the appropriate engineering authority. Additional specifications or drawings required can be requested from the primary point of contact.
- 11.5 **Retention of records** - Supplier shall maintain on file at Supplier's facility, Quality records traceable to the conformance of product/part numbers delivered to Buyer.
- 11.6 Supplier shall make such records available to regulatory authorities and Buyer's authorized representatives.

- 11.7 Supplier shall retain such records for a period of not less than (7) years from contract end as covered in PCC "Standard terms and Conditions" unless otherwise specified by PO.
- 11.8 All records must be available on file at Supplier for the service life of the applicable product family as described above
- 11.9 At the expiration of such period, Buyer reserves the right to request delivery of such records. If Buyer chooses to exercise this right, Supplier shall promptly deliver such records to Buyer at no additional cost on media agreed to by both parties.

End of General Requirements Section

Special Requirements Section

SR – 100 Counterfeit Parts Prevention

For the purpose of this clause, Work consists of those parts delivered under this Contract that are the lowest level of separately identifiable items. (I.e. articles, components, goods, and assemblies). “Counterfeit Work” means Work that is or contains items misrepresented as having been designed and/or produced under an approved system or other acceptable method. The term also includes approved work that has reached a design life limit or has been damaged beyond possible repair, but is altered and misrepresented as acceptable.

Supplier must agree and shall ensure that Counterfeit Work is not delivered to PCC Aerostructures Company’s.

Supplier, if eligible for utilization of the Government-Industry Data Exchange Program (GIDEP), shall utilize the GIDEP process to screen their material and products for risks, taking appropriate mitigating actions when necessary, and alert the industry of encountered counterfeit parts.

Supplier shall only purchase new and authentic products to be delivered or incorporated as Work to PCC Aerostructures Company’s directly from the Original Component/Equipment Manufacturer (OEM/OCM) or through an OCM/OEM authorized distributor chain or authorized aftermarket manufacturer. Work shall not be acquired from independent distributors or brokers as defined in AS6174 (or AS5553) unless approved in advance in writing by PCC Aerostructures.

Supplier shall immediately notify PCC Aerostructures. with the pertinent facts if SUPPLIER becomes aware or suspects that it has furnished Counterfeit Work. Supplier shall maintain OCM/OEM certifications of conformance with traceability (including the name and location of all supply chain intermediaries from the original manufacturer and build identification such as date codes, lot codes, serialization or other batch identification) that authenticates traceability of the affected items to the applicable OCM/OEM. SUPPLIER shall provide said documents when requested by PCC Aerostructures.

In the event that work delivered under this contract constitutes or includes Counterfeit Work, SUPPLIER shall, at their expense, promptly replace such

Counterfeit Work with genuine Work conforming to the requirements of this contract.

Notwithstanding any other provision in this contract, SUPPLIER shall be liable for all costs relating to the removal and replacement of Counterfeit Work, of re- inserting replacement Work, and of any testing necessitated by the reinstallation of Work after Counterfeit Work has been exchanged, Supplier shall pay for all other damage, loss or claims arising out of Counterfeit Work. The remedies contained in this Quality Clause shall be in addition to any remedies PCC Aerostructures may have at law, equity, or under other provisions of this Contract.

This clause applies in addition to any quality provision, specification, statement of work, or other provision included in this Contract addressing the authenticity of Work. To the extent that such provisions conflict with this clause, this clause takes precedence (prevails).

SUPPLIER shall include the requirements of this clause to any and all subcontractors in lower tier contracts included in the delivery in or furnished as Work for PCC Aerostructures.

SR – 200 Human Rights Violations

In addition to the provisions set forth in the Terms and Conditions of this contract, Supplier further commits that any material violation of law by Supplier relating to basic working conditions and human rights, including laws regarding slavery and human trafficking, applicable to Supplier's performance under this Contract/ Agreement may be considered a material breach of this Contract/Agreement for which PCC Aerostructures (buyer) may elect to cancel any open Orders between buyer and the Supplier, for cause, in accordance with the provisions of this Contract/Agreement, or exercise any other right of buyer for an Event of Default under this Contract/Agreement.

Supplier shall include the substance of this clause, including this flow down requirement, in all subcontracts awarded by Supplier for work under this Contract/Agreement.

SR – 300 Conflict Minerals Act - Section 1502 of the US law known as the "Dodd-Frank Act"

PCC or their subsidiaries cannot accept any parts, materials, or commodities containing or consisting of the conflict minerals coming from the Democratic of the Congo or adjoining countries. Currently the list consists of four minerals: tungsten, tantalum, tin and gold. The Conflicts Mineral Law requires U.S. and certain foreign companies to report and make public the use of so-called minerals and all materials, parts or commodities containing or consisting of the conflict minerals need to be properly screened and comply with all trade-related laws and regulations

SR – 400 Compliance to 40 CFR Part 82 "Ozone-depleting substance,"

"Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as--

- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- (2) Class II, including, but not limited to hydrochlorofluorocarbons.

Supplier shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as applicable:

Warning Contains * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

Warning Manufactured with * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

* Supplier shall insert the name of the substance(s).

PCC Aerospace requires that the provisions/requirements set forth above be included in Supplier's direct supply contracts as well as the obligation that they be flowed to the Sub-tier supply chain.

SR – 500 Regulatory / Export Control Compliance –

Supplier shall comply with all regulatory and export control requirements. Export controlled information or material is any form of information or material that cannot be released to foreign nationals or representatives of a foreign entity, without first obtaining approval or license from the Department of State for items controlled by ITAR or EAR. Export controlled information must be controlled as sensitive information and marked accordingly including flow down to Sub-tiers. When applicable, the purchase order will identify the specific required information.

In the event that performance of any PCC Aerostructures purchase agreement involves the use of or access to articles, technical data or software that is subject to export controls under 22 United States Code 2751 – 2799 (Arms Export Control Act) and 22 Code of Federal Regulations 120-130 (International Traffic in Arms Regulations or “ITAR”). Supplier represents and warrants that it is either 1) a U.S. Person as that term is defined in the Export Laws and Regulations, or 2) a Foreign Person as that term is defined in the Export Laws and Regulations and has disclosed to Buyer’s Representative in writing the country in which it is incorporated/authorized/ organized to do business, and all nationalities of any dual or third- country national employees who will require access to the data, articles or services provided hereunder. Supplier shall comply with any and all Export Laws and Regulations, and any license(s) issued there under.

1. Registration. If Supplier is a U.S. entity and is engaged in the business of either exporting or manufacturing (whether exporting or not) defense articles or furnishing defense services, Supplier represents that it is registered with the U.S. Department of State’s Directorate of Defense Trade Controls, as required by the ITAR, and it maintains an effective export and import compliance program in accordance with the ITAR.
2. Foreign Persons. Supplier shall not re-transfer any export- controlled information (e.g. technical data or software) to any other non- US person or entity (including the Supplier’s dual and/or third-country national employees) without first complying with all the requirements of the applicable Export Laws and Regulations. Prior to any proposed retransfer, Supplier shall first obtain the written consent of the Buyer. No consent granted by Buyer in response to Supplier’s request shall relieve Supplier of its obligations to comply with the Export Laws and Regulations, nor shall any such consent constitute a waiver of the requirements hereinabove, nor constitute consent for Supplier to violate any provision of the Export Laws and Regulations.

SR – 600 Material Safety Data Sheets (MSDS)

Materials noted on this purchase order must be supplied in accordance with OSHA's hazard communication standard 29CFR1910-1200, OSHA instruction CPL2-2.38, August 5, 1985. Materials not received in compliance with OSHA requirements will be subject to immediate rejection and return as Vendor's expense. In addition, if Vendor is aware of any additional precautions and / or handling techniques instituted with regard to other customers the Vendor is required to submit those safeguards with the MSDS. Vendor is required to forward a Toxic Substances Control Act (TSCA) certification letter to the Helicomb Buyer for the product purchased on this Purchase Order, with the statement that, every chemical component of the product is listed by the Toxic Substances Control Act Inventory (P.L 94-94-969).

SR – 700 Digital Product Definition (DPD) Data

When DPD data is provided, the Supplier shall maintain a documented DPD procedure to ensure the integrity of product engineering and/or tooling, and configuration is maintained throughout the supplier's DPD system from receipt of Buyer's supplied data through creation of derivatives to product acceptance and process improvement. Supplier shall include a flow diagram in the documented procedure that graphically depicts the flow of data from receipt to product validation, and in analysis of measurements for process improvements. The flow diagram shall specify all segregated, secure storage locations of authority and derivative media and shall specify all supplier departmental functions responsible for performance of CAD/CAM operations including the delivery of Buyer's provided data to Sub-tier Suppliers. To ensure the Supplier's DPD system is compatible with PCC Aerostructures requirements, Supplier shall maintain and make available to Buyer upon request a list of the current level of hardware configuration, software, software revisions, and other digital system information for computing equipment that receives authority data. The Supplier shall notify Buyer within thirty (30) days of any changes to DPD processes, CAD, CAM, CAI software, and measurement equipment. The Supplier shall assure nonconforming digital product definition datasets are identified as discrepant, segregated and reviewed for disposition and a corrective action system includes reporting, tracking

and resolving all transmission, hardware, software and dataset problems, and product deficiencies to Buyer.

Supplier is responsible for securing access to digital data provided by Buyer. When developing NC Programs, the Supplier shall maintain traceability from the NC Program to the original dataset and ensure only current authority datasets are available for use in production and inspection. Production acceptance software and tooling shall be validated prior to use and re-validated as changes are made. Data protection (encryption) shall be used when electronically transmitting digital data. Training records, which specially identify DPD training has been administered shall be maintained. The Supplier shall conduct audits on all operations affecting DPD data and related documentation to assure compliance with contractual requirements, software and production part quality standards, and the observance of security restrictions. Buyer reserves the right to evaluate the Supplier's DPD system to determine if the Supplier has adequate documentation, hardware/software, equipment, and inspection capabilities and are in compliance with specified DPD requirements. Supplier shall flow down these requirements to their Sub-tier Suppliers.