

<p>PRE-TECH PRECISION MACHINING</p>	<p>Document Type: Procedure</p>	<p>Approval Date: 07/02/2018</p>	<p>Document No: 4754</p>
<p>Title: Standard Quality Clauses</p>	<p>Departments: Purchasing</p>	<p>Approved by: Ralph Runne Tom Martello</p>	<p>Rev. No.: 17</p>

Standard Quality Clauses

Purpose: The purpose of this document is to flow down purchase order requirements.

Scope: This document includes requirements from internal quality requirements as well as those specified to Pre-Tech from our customers to meet the requirements of their purchase orders and customers.

Responsibility: It is the responsibility of the Materials Manager to ensure the purchasing department is flowing down the proper quality clauses to suppliers. It is the supplier's responsibility in accepting purchase orders to comply with the requirements provided herein.

Quality Clauses:

100 Sampling Plans

General Inspection Type II (ANSI/ASQC Z1.1 Sample size code letters inspection) Single Sampling Plan for normal inspection (ANSI/ASQC Z1.4) [less the Acceptance and Rejection Numbers].
Any non-conformity identified requires a 100% sample of the non-conforming dimension.

Figure 1: Attribute, Accept on Zero (C=0) Sampling Plan

Lot Size	Acceptable Quality Level (AQL) Percent															
	.010	.015	.025	.040	.065	.10	.15	.25	.40	.65	1.0	1.5	2.5	4.0	6.5	10.0
2-8	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	5	3	3	3
9-15	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	13	8	5*	3	3	3
16-25	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	20	13	8	5*	3	3	3
26-50	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	32	20	13	8	7	7	5	3
51-90	ALL	ALL	ALL	ALL	ALL	ALL	80	50	32	20	13	11	11	8	5	4
91-150	ALL	ALL	ALL	ALL	ALL	125	80	50	32	20	13	13	11	9	6	5
151-280	ALL	ALL	ALL	ALL	200	125	80	50	32	29	29	19	13	10	7	6
281-500	ALL	ALL	ALL	315	200	125	80	50	48	47	29	21	16	11	9	7
501-1200	ALL	800	500	315	200	125	80	75	73	47	34	27	19	15	11	8
1201-3200	1250	800	500	315	200	125	120	116	73	53	42	35	23	18	13	9
3201-10000	1250	800	500	315	200	192	189	116	86	68	50	38	29	22	15	9
10001-35000	1250	800	500	315	300	294	189	135	108	77	60	46	35	29	15	9
35001-150000	1250	800	500	490	476	294	218	170	123	96	74	56	40	29	15	9
150001-500000	1250	800	750	715	476	345	270	200	156	119	90	64	40	29	15	9
500001-Over	1250	1200	1112	715	556	435	303	244	189	143	102	64	40	29	15	9

NOTES:

- (1) ALL indicates that the entire lot must be inspected
 - (2) **Critical** characteristics require 100% inspection
 - (3) **Major** characteristics require .65% AQL unless otherwise specified **
 - (4) **Minor** characteristics require 2.5% AQL Unless Otherwise Specified
 - (5) AQL levels for tightened and reduced inspection shall be one level above and below 0.65% AQL for major characteristics and one level above and below 2.5% AQL for minor characteristics, respectively.
 - (6) Extracted from "Zero Acceptance Number Sampling Plans" (ISBN 0-87389-305-0). Selected elements of this table have been modified by UTC. Reprinted with permission of the American Society for Quality.
 - (7) Contact Member for information about sampling risks (e.g., Operating Characteristic Curves etc.).
- * **For Hamilton Sundstrand:** The sample size required is six relating to a 2.5% AQL for lot sizes 9 to 25.
 ** **For Hamilton Sundstrand:** The AQL required for Major Characteristics shall be .10%

**Inspection plans that do not meet the stated requirements must be statistically valid and approved by Pre-Tech.

109 Calibration Requirements

The supplier's calibration system shall be traceable to the current revision of ISO 17025. The supplier shall conduct verifiable periodic audits of this system to monitor its effectiveness and to make any corrections required. The supplier is responsible for obtaining and any gages necessary to assure product conformance. Documented proof of this system and its effectiveness shall be available upon request.

109.1 Outside Calibration Services

All calibration service providers must be require and maintain records of annual eye exams for calibration technicians qualifying Pre-Tech measuring equipment.

110 Inspection Reports & Retention

All shipments must include inspection reports.
Reports must include the PO #, Part #, Lot size, and sample size, for each dimension, range of results, special requirements, critical items and key characteristics, inspector name and date.
Inspection Records must be maintained for 10 Years.

110.1 Documentation

All quality and shipping documentation must be clear, legible, retrievable, and maintained for ten years.
All suppliers, external providers and processors must have a system of disposal for all documents not required to be held for traceability purposes.

110.2 Acceptance Authority Media

All suppliers required to have Acceptance Authority Media must have established controls for stamps and/or electronic signatures. A person may not make or cause to be made any fraudulent, intentionally false or misleading statements on any application for a certificate or in any record or report that is kept, made or used to show compliance with any requirement of Pre-Tech Precision Machining's product.

111 Special processes

Special processes such as heat treating, plating/painting/surface enhancements and non-destructive testing must be NADCAP accredited.

112 Certificate of Compliance or Conformance

All orders must be accompanied with a certificate of compliance or certificate of conformance.

113 Drawing Interpretations

Drawing to be interpreted per ANSI Y14.5

114 First Article

AS9102 First Article Inspection report required.

115 Shelf Life

Formulations for solutions, materials and age sensitive materials must have a minimum of 75% of their remaining shelf life and state their date of manufacture and expiration date.

116 Notification of Changes

The supplier must notify Pre-Tech Plastics of any significant changes to their process affecting product quality and submit an AS9102 First Article Inspection with the following shipment. Changes include but are not limited to, supplier organizational changes, manufacturing processes, machining procedures, machine or plant relocation, or any changes to supplier controlled features which may affect performance requirements as specified by Pre-Tech Precision.

200 Right of Access

Pre-Tech Quality Assurance may elect to impose on-site source surveillance/inspection due to product complexity, customer requirements and/or nonconformance history. In the advent that the seller has failed to take preventative action of notified nonconformances, all costs associated with continued source inspection by Pre-Tech or a Pre-Tech approved inspection provider will be borne by the seller without impact to existing pricing. The seller shall permit representatives of Pre-Tech, its customers, the FAA, and any government regulatory agency, to conduct quality system and/or product audits as may be requested by Pre-Tech to evaluate quality compliance at the seller's facility and/or any sub-tier suppliers' facilities. The seller shall make available all contracts, specifications, instructions, procedures, records, inspection and test equipment and/or special requirements as may be directed by Pre-Tech. The seller shall include the substance of this clause in contracts to sub-tier suppliers.

210 Outsourcing

Purchase Orders may not be outsourced to sub-tier suppliers without Pre-Tech consent.

212 Counterfeit Material Risk Mitigation

The supplier shall maintain a counterfeit item risk mitigation process internally and with its suppliers and shall provide evidence of this process upon demand. Any counterfeit products suspected during Pre-Tech parts production must be reported to Pre-Tech within 24 hours.

216 Right to Cancel

Pre-Tech Plastics, Inc. reserves the right to terminate this purchase order, in part or in whole at any time and at no cost to Pre-Tech Plastics, Inc., if the seller does not maintain acceptable quality and/or delivery performance.

217 Conflict Minerals

Suppliers of raw materials containing Gold, Silver, Tantalum or Tin must comply with the Dodd-Frank Wall Street Reform and Consumer Protection Act, HR 4173, Section 1502.

218 Accident Prevention Program

The Seller shall maintain a comprehensive accident/incident prevention, reporting, and record keeping program compliant with national, regional, and local regulations.

219 FOD Program

The supplier shall develop and maintain a foreign object debris/damage ("FOD") prevention program for manufacturing areas to prevent introduction of foreign objects into any item delivered under this purchase order. The supplier shall employ appropriate housekeeping practices to assure timely removal of residue/debris generated, if any, during manufacturing operations and/or normal daily tasks. The supplier shall determine if sensitive areas that may have a high probability for introduction of foreign objects should have special emphasis controls in place appropriate for the manufacturing environment. The supplier shall determine the need for, and implement, FOD prevention awareness training programs.

220 Employee Training

The supplier shall develop and maintain a training program specifically targeting their awareness to ethical behavior, product safety, personal safety and their contributions to their organization reflecting on their position's contributions to the product or services performed.

300 Nonconforming Material

The supplier shall not submit nonconforming material unless previously authorized in writing from Pre-Tech. If non-conformances are detected during the manufacturing process a waiver shall be submitted prior to shipment. Furthermore, any process found to be defective, inadequate or rejected, must have a containment statement prepared as it pertains to the escape affecting the scope of the work. Any non-conformance found must be reported to Pre-Tech within 24 hours of determining a non-conformance exists.

301 RoHS compliance required

302 Defense Priority Allocation System

DPAS rated orders must follow the Federal Acquisition Regulations and Department of Defense FAR Supplements are incorporated into this purchase order as required to be flowed down by the denoted prime contract number. FAR 52.225-13, 52.232-16, 52.232-17.

310 Government Contract

Supplier shall comply with the Defense Federal Acquisition Regulation for contracting with qualifying country sources. Refer to DFAR supplement clause 252.225-7014, Preference for Domestic Specialty Metals. Alternate 1 applies. Qualifying countries are listed in 225.872-1 (a). <http://www.acq.osd.mil/dp/dars/dfars.html>

311 Pre-Tech Property

Any material, tooling, fixtures, gages, or programs which are property of Pre-Tech must be protected against damage or unintended use. Pre-Tech shall be notified of any property that is lost or damaged. The supplier shall ensure property is retrievable in any condition.

312 Drop Ship

In the event of a material drop shipment; forward all packing slips and material certification upon receipt to the Materials Manager. Do not use any material until it has been released for production. You will receive written or e-mail notification for release.

313 Tooling control

The manufacture of this part requires the use of tooling, which has a direct impact on the quality of the product. The supplier is required to verify the condition of the tooling is acceptable to provide a part compliant to the drawing requirements. A tool inspection plan must be in place to have a frequency based on the production levels or other key features. This plan shall be available to Pre-Tech upon request. Parts that can not be made compliant to print specifications shall have a solution offered to make the part compliant to print. Parts that can not be made compliant to print shall not be quoted to Pre-Tech. No quotes must be accompanied with an explanation of the non-compliance.

314 Artwork

Art works and/or masters shall be supplied with each order for verification to customer's requirements and returned upon completion of said order.

315 Expiration date requirements

Products requiring any wet paint process must have the raw material expiration date current to within 4 months of your offering of any quotation presented using those products.

316 Revision Levels

All specifications drawings, process requirements, inspection/verification instructions and other relevant data shall be to the current revision level.

317 Flow Down Requirements

All providers of external services or products shall flow down all applicable customer requirements and quality clauses to the appropriate entities within your supply chain. Specific requirements for all work pertaining to Raytheon SM3 and SM6 equipment are subject to the Quality Control document 981-151-816 attached herein.



981-151-816 issue
2.pdf

All Q-Notes can be found at: <http://qnotes.raytheon.com/AC7004> where applicable.

All providers of external services or products shall monitor their supply chains for compliance to their specific regulations, terms and conditions and supplier performance and must review on a periodic basis the performance of their supply chain.

Proof of compliance can be audited at any time.

318 Test Specimens

When required by purchase order nomenclature, requirement for test specimens to prove production methods, identification/ numbering & storage conditions, for design approval, inspection/verification, investigation or auditing shall be provided by the supplier upon demand.

319 Records

Suppliers must maintain records for facilities and equipment approval and personnel training for qualification to relevant processes.

320 Fixed Processes

All work performed must have fixed processes. These shall be Identified as such on the supplier's manufacturing router or shop traveler. These processes shall not be changes without Pre-Tech prior approval. This pertains to all process parameters, equipment, tooling or plant layout as well as a change of sub-tier supplier. Requests for fixed process change approval must be submitted to the Pre-Tech buyer. The supplier shall flow this requirement to applicable sub-tiers. All changes to any fixed processes will required a new first article inspection report in accordance with AS9102 and this document.

321 Customer Designated Sub-Tier Supplier/External Provider/Processor Selection.

Purchase order nomenclature will direct the instruction of use of a Pre-Tech customer designated supplier or external provider of product or process to be used if required.

322 Supplier/External Provider/Processor

All Suppliers and external providers and processing vendors shall maintain a quality system that contains a release procedure for their product and services.

350 RESTRICTED SUPPLIERS

The following companies must not be utilized to fabricate product supplied on this purchase order:

ANCO TECH INC. / ANCO TECH ACQUISITION.
WEST COAST ALUMINUM / TEMPERFORM.
HYDROFORM USA.
WESTERN TITANIUM.
AIR CAPITOL PLATING.
GROSS INSTRUMENT CORP.
M&M INTERNATIONAL AEROSPACE.
A & P ALLOYS, INC.

SHIPPING REQUIREMENTS

900 Shipping Quantity Tolerance: Any over shipment must be agreed upon prior to delivery. No short shipments.

901 Shipping Delivery Tolerance: 5 days early, no days late. Pre-Tech Plastics, Inc. reserves the right to delay payment by the number of days the shipment arrives ahead of the allowable delivery window.

902 General Packaging Guideline Requirements:

- a) Standard Practice for Commercial Packaging per ASTM D3951 to the latest revision is invoked.
- b) Parts must be packed so as not to break through the foam/paper/bubble.
- c) Parts cannot come in contact with one another with minimal exception such as: small mass parts with no critical dimensions, stacked parts.
- d) Parts must be separated by layers of cardboard, foam, or bubble wrap.

PRE-TECH STANDARD QUALITY CLAUSES

- e) Parts cannot rest up against the outside edge of the box. Shipping boxes must be lined with bubble wrap on all six sides.
- f) Package securely. If there is movement inside the box when shaking, you need more packing material.
- g) Do not over pack boxes. Over packed boxes are stressed when traveling through the shipping carriers and become weak, which can cause damage to the contents.
- h) There must be layers of packing material on both the bottom and top of the box to fill the box flush.
- i) While it's o.k. to reuse packing materials or boxes, packing materials and boxes with excessive wear cannot be used.
- j) Tape securely enough to insure the package does not open during transit.
- k) Pad or cover precision machined of parts such as outside threaded parts.
- l) Pad or cover all sharp edges or corners or parts.
- m) Ensure labels are fastened securely and are legible.
- n) All packages shipped through carriers such as U.P.S. or Fed-Ex must be limited in weight to no more than 35 pounds.
- o) All packaging shipped from special processors must be packed and shipped in the same fashion as the parts arrived at your facility
- p) Corrosion preventative measures must be taken when shipping product.

If you are not sure how to pack an order, ask your supervisor!

Note: thin white paper is fine for separation but does not provide protection.