



## QUALITY CLAUSES

This document contains the Arété Quality Clauses in full text. The specific Quality Clauses incorporated in and applicable to the purchase order are referenced in the purchase order notes, prefaced with the letter “Q”. The clauses as referenced are incorporated with the same force and effect as if they were given in full text.

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## **Q1 REV C – Purchase Order Specifications**

All Specifications referred to in this purchase order or in drawings or other documents made a part hereof, shall mean those specifications and revisions and amendments thereto in effect on the date of this purchase order.

## **Q2 REV C – ISO 9001 Quality System REV C – Non Aerospace**

The Supplier shall establish and maintain a Quality System which is acceptable to Areté Quality Operations for all product offerings associated with this procurement including hardware, software, processed materials and services. The Quality System established shall be certified to ISO 9001:2000. Third party certification or registration to ISO 9001:2000 is required.

## **Q3 REV C – ISO 9002 Quality System REV C – Aerospace**

The Supplier shall establish and maintain a Quality System which is acceptable to Areté Quality Operations for all product offerings associated with this procurement including hardware, software, processed materials, and services. The Quality System established shall be certified to ISO AS9100. Third party certification or registration to ISO AS9100 is required.

## **Q4 REV C – Best Commercial**

Items to be supplied under this contract shall be built and inspected to a workmanship level of "Best Commercial Practices" as defined in the IPC Standards and Specifications. The Supplier's own standards of workmanship may be substituted provided that they meet or exceed the requirements of the IPC Standards and Specification.

## **Q5 REV C – ESD for Manufacturing Facility**

The Supplier shall take adequate Electrostatic Discharge (ESD) precautions for all electrical and electronic parts, assemblies, and equipment associated with the performance of this contract. Elements to be addressed for the prevention of ESD damage include 1) design criteria, 2) parts susceptible to ESD and their failure mechanisms, 3) handling precautions, 4) protected work areas including grounded work benches, 5) personnel training, 6) marking of documentation and hardware, and 7) protective covering/packaging precautions. Supplier shall comply with EIA 625.

## **Q6 REV C – Calibration Requirements**

The Supplier shall establish and maintain a Calibration System which is acceptable to Areté for all product or service offerings associated with this purchase order. The Calibration System established shall be meet the requirements of ANSI Z540 or be accredited to ISO 17025.

## **Q7 REV C – ESD for Non Manufacturers**

Supplier shall comply with EIA 625 current revision, when supplying electronic components which are categorized as Electrostatic Sensitive Devices.

## **Q8 REV C – Areté and Customer Access to Supplier's Facility**

Areté, Areté's customer, and/or their authorized inspection agency shall have the right to send representatives to the Supplier's facilities to determine contract compliance by performing such

activities as pre-award surveys, quality audits, inspections, test witness, or other evaluations and verifications as necessary. Areté reserves the right to reject non-conforming products and/or disapprove the Quality System, or portions thereof, when the Quality System fails to meet contract requirements. The type, necessity, and degree of demonstration of conformance will be based on Areté confidence in the Supplier's Quality System and other factors such as product complexity, the environment where the product is used, the ability to judge product quality after receipt, degree of "non-developmental design," past Supplier performance, and the current status of partnership or supplier commitment relationships. Without additional charges, the Supplier and/or their subcontractor shall make his facility available for these activities and provide all reasonable support for the safety and convenience of those representatives during their stay at the Supplier's and/or their subcontractor's plants and facilities.

### **Q9 REV C – Government Surveillance**

During performance of this purchase order, your manufacturing and associated processes, products, and inspection and/or test data are subject to review, verification, examination, test, and/or analysis by authorized Government representatives. Government inspection or release of product prior to shipment is not required unless you are otherwise notified.

### **Q10 REV C – Government Source Inspection**

Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the government representative who normally services your plant so that appropriate planning for government inspection can be accomplished

### **Q11 REV C – Required Order Information**

Each packing slip, certification and test report must be marked with the ordered part number, purchase order number, lot/batch numbers and serial numbers (if applicable). Failure to comply can result in the rejection of the material.

### **Q12 REV C – Areté Source Inspection**

Supplies on this order are subject to Areté inspection at source. Supplier shall notify, by FAX (520) 571-8232, Areté Procurement Department, one week in advance of final and/or functional test, stating location, purchase order and part numbers. Evidence of Areté inspection must accompany each shipment.

### **Q13 REV C – Failure and Repair Documentation**

Supplier must supply one (1) copy of failure reports/repair documentation detailing all non-conformances found, and the actions taken to correct them, during the repair cycle with each item shipped. This requirement also applies for items that are repaired by sub-tier suppliers. Failure to provide the above may result in non-payment of invoices against the repaired item.

### **Q14 REV C – Best Commercial for Electronic Assembly**

Items to be supplied under this contract shall be built to a workmanship level of "Best Commercial Practice" as defined in ANSI/IPC-A-610 "Acceptability of Electronic Assemblies." Suppliers own standards

of workmanship may be substituted provided they meet or exceed the requirements of IPC-A-610A and that copies of Supplier's standards are forwarded to the Contractor for review and approval prior to use.

### **Q15 REV C – First Article Inspection**

First piece inspection to be performed by Supplier prior to first shipment. Actual findings of the dimensional characteristics are to be recorded by the Supplier and a copy of record included with the first shipment. A limited first piece inspection is required for any subsequent configuration/drawing changes.

### **Q16 REV C – Multilayer Board Requirements**

For all multilayer printed wiring board production where the Contractor supplied master pattern contains quality conformance test circuits, the supplier shall conform to the following requirements:

- (a) The supplier shall incorporate within the confines of each production panel, quality conformance test circuitry as contained in the master pattern.
- (b) The quality conformance test circuits may be relocated on the panel from the position defined by the master pattern only for the purpose of reducing material loss. However, all test coupons shall appear on each panel.
- (c) The number of layers of the test circuits shall be identical to the number of layers in the associated board.
- (d) Surface and internal layer copper clad shall be of the same density as respective layers of the associated board.
- (e) Unless otherwise specified, plated through holes in accordance when within the test circuits shall be dimensionally the same as the smallest plated through hole of the associated board.
- (f) Each test circuit shall be identified with a permanent marking material to include the associated board part number, the manufacturer's identity code, week and year of manufacture, and panel serial number. Each associated board shall also contain the panel serial number so that if separated, a test circuit can be correctly traced to the board(s) produced from the same panel.
- (g) Test circuits shall be delivered in the same container with associated production board(s).

### **Q17 REV C – Traceability of Materials**

Material used to manufacture a part must be traceable back to its origin (Manufacturer and heat lot, or batch number).

### **Q18 REV C – Copy of Test Data**

Supply one copy of final inspection acceptance test data, with each shipment. In those instances when test data is not generated, such as diagnostic testing, your letter of certification stating unit has successfully passed all required testing, and signed by the individual who performed and/or verified the testing of the unit, is acceptable.

### **Q19 REV C – Certification for Calibrated Equipment**

Supply Certificates of Compliance, or calibration data, attesting to conformance with calibration requirements for each quantitative measuring device contained in the equipment. Applicable documentation shall accompany each shipment.

## **Q20 REV C – Certificate of Compliance**

Each shipment shall be accompanied by a signed certification indicating that the material or product meets the requirements of all applicable drawings, specifications, standards, and purchase order.

## **Q21 REV C – Special Processes**

Special processes shall be certified by Supplier throughout the performance of the contract and Supplier shall qualify and approve their subcontractors for special processes which are performed on Areté-procured products. The Supplier shall maintain adequate Controls for the processes being performed internally and externally. Areté reserves the right to send representatives to the Supplier's facility to determine contract compliance by performing process evaluation surveys and reserves the right to reject nonconforming processes which fail to meet the contract requirements. Supplier shall supply a copy of each subcontractor's certification for all special processes performed outside of their facility with each shipment.

## **Q22 REV C – Raw Material Traceability**

Supplier shall maintain a raw material traceability system for Areté manufactured products. Raw materials used to manufacture products shall be documented and traceable to the manufacture lot/batch/heat and certification of analysis/ composition or specification. Supplier is responsible to ensure the integrity of the materials and certification.

## **Q23 REV C – Shelf Life**

Products shall have no more than 25% of the usable shelf life expired when delivered. Certification shall indicate compliance with above limitations. A signed certification shall be supplied with each shipment and cure and/or manufacture date shall be physically marked on product or packaging and invoice.

## **Q24 REV C – Delivery**

For purposes of the Subcontractor Performance Evaluation, delivery performance will be tracked against the delivery schedule set forth in this purchase order. Notwithstanding the F.O.B. point herein, delivery shall be deemed to have taken place only when the supplies have been received on dock at Areté's facility or other destination as specified in this purchase order.

## **Q25 REV C – Warranty**

Warranty period for all products shall be for five years from time of customer receipt unless previously negotiated during the request for quote (RFQ) process.

## **Q26 REV C – Areté Documentation**

The Areté Associates drawing shall be the governing document in all cases. Any electronic file (s) provided by Areté Associates, are provided for reference only. In the event of any conflict or missing information, the drawing shall govern.

### **Q27 REV C – First Article Inspection Report AS9102**

First piece inspection to be performed by Supplier prior to the first shipment. Actual findings of the dimensional characteristics are to be recorded by the Supplier on the form defined in AS9102. A copy of First Article Inspection Report shall be included with the first shipment.

### **Q28 REV C – Specialty Processes**

All Specialty processes must be completed by an Areté approved source. This includes any Process where it is not possible to assure, by typical verification techniques, that product integrity is achieved by the process. The supplier completing processes shall furnish a Certificate of Conformance stating the process name, type, class and revision for each shipment delivered. Specialty processes include but are not limited to plating, chemical films, painting, brazing, welding and heat treating.

### **Q29 REV C – Specialty Metals**

All Specialty Metals must be certified to be DFARS 252.225-7014 compliant. This requirement includes fasteners, dowel pins, and other specialty metal attachments. Certificates of Conformance to the DFARS requirements must be received with each shipment. Each item must be individually certified. Specialty Metals are defined in DFARS 252.225-7014.