

PROCUREMENT QUALITY REQUIREMENTS

Approvals				
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Revision Records			
Rev	Description	Date	Prepared by
N/C	Initial Release	12/10/2013	J. Delgado
A	Revise section 2.0, also section 4.0. Add clause 124 Boeing Material Certification and Clause 125 Boeing Process Certification.	01/29/2014	S. Fall
B	Revise clause 102 for supplier to send a copy of First Article Inspection Report when required by AS9102.	03/13/2014	S. Fall
C	Added logic to Quality Clause numbering. Incorporated 400-412 clauses specifically for Brea facility. Delete internal QA clauses located in section 7.0. Revise clause 103 to include MSDS when applicable. Revised 109 to "Reserve".	4/4/2014	J. Delgado
D	Correct typographical errors. Revise 102 for clarity, including 103. Added 414 to reflect Brea Customer standards and 415 for certification packages, including clause 114	10/17/2014	J. Walker
E	Revised approval list to ensure each division is represented. Revise Clause 114 to clarify the intent for the supplier, and receiving inspection responsibilities. Revise 116 to reflect 252.225-7009 requirements.	12/8/14	J. Delgado
F	Add clause 109 for Net Inspect profiling requirement. Also added clause 416 for Bell controlled items.	01/23/2015	S. Fall
G	Revise clause 101 to remove ISO9001 and require supplier to flow applicable requirements of AS9100 to sub-tier supplier.	03/10/2015	S. Fall
H	Revise referenced procedures on section 3.0	05/22/2015	S. Fall
J	Added Clause 417 - FAR 52.245-01 and FAR 45 Government Property and Tooling Requirements	07/24/2015	S. Fall
K	Remove Clause 114, redundant of Clause 103 requirements.	10/30/2015	J. Delgado
L	Add section 10.2 to clause 100. Revise section 6.0 to add EnCore International and Seats. Minor update on clause 103. Revise clause 123. Change clause 412 to 126. Clause 123 and 126 applies to Boeing programs at all sites. Add clause 127 for raw certification. Changes are in green italics.	04/05/2016	S. Fall
M	Add clause 128 for flammability and 600 for notification of change	09/23/2016	S. Fall
N	Update scope section 2.0. Revise clause 100 to update link to EnCore website. Revise clause 123 to meet recent changes of Boeing Q31 clause. Changes are in green italics.	03/08/2017	S. Fall
P	Revise section 5.2. Revise clause 100 to include section 8.10 of EC-SM110. Revise clause 126 to add access link to the Boeing website. Changes are in green italics.	06/13/2017	S. Fall
Q	This document replaces EC-SM210. Updated company name throughout this document from EnCore Composite Structures to Applied Composite Structures. Removed EnCore specific 200, 300, 500, 600 series clauses. Renamed section 6.0 and on. Updated Boeing link to X31764 form in clause 126. Added note to clause 408.	5/11/2018	T. Crismundo
R	Add note for QA clause 103: Counterfeit Part	8/20/2018	D.Beaulieu
S	<i>Add note to clause 103. Reference "8.2.1 SELLER'S DISCLOSURE" and web link in section 5.2 and 6.0.</i>	<i>10/02/2018</i>	<i>D. Beaulieu</i>

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1.0 PURPOSE

This document describes quality requirements assigned on purchase orders for all products and materials.

2.0 SCOPE

This document applies to all Purchase Orders generated at Applied Composite Structures. If there is any conflict between this document and customer contractual and/or legal requirements the latter will take priority.

3.0 REFERENCE DOCUMENTS

Number	Description
AS9100	Quality Management System Requirements for Aviation, Space and Defense Organization
ACS-MA300	Purchasing Process
ACS-SM110	General Terms and Conditions

4.0 DEFINITIONS AND ABBREVIATIONS

Competence: Application of knowledge, skills, and behavior demonstrated in performance.

Abbreviations	Description
ACS	Applied Composite Structures
CFR	Code of Federal Regulation
FAA	Federal Aviation Administration
PO	Purchase Order
SPC	Statistical Process Control
BMS	Boeing Material Specification

5.0 RESPONSIBILITIES

5.1 Quality Assurance

Quality Assurance is responsible for ensuring that all purchase orders contain the correct quality requirements and conforms to all customers, FAA, ACS Engineering and Quality requirements.

Quality Assurance will update the quality clauses within the database during the PO requisition approval process. It shall be the responsibility of the designated Quality Assurance personnel to determine if any additional clauses are required. Consideration will be given in regard to the complexity of the product and the control exercised at the supplier facility. Quality Assurance will verify compliance to Quality Clauses upon receipt of product.

5.2 Supplier

It is the supplier responsibility to ensure that clauses are being processed as required by the purchase order. To ensure supplier is performing to the latest QA clauses revision, it is supplier responsibility to periodically access ACS website <https://www.appliedcompositestructures.com/engineering-quality/vendors/>.

6.0 PURCHASE ORDER REQUIREMENT QUALITY CLAUSES

100 General Requirements

By accepting this order, it is the supplier responsibility to meet the terms and conditions sections outlined in the table below. The general terms and conditions document (ref: ACS-SM110) is available at <https://www.appliedcompositestructures.com/engineering-quality/vendors/>.

General Terms and Conditions	
5.0	On-Site Review And Resident Representatives
5.1	Review
6.2	Subcontractor/Supplier Information
8.4	Rights Of ACS's Customers And Regulators To Perform Inspections, Surveillance, And Testing
8.5	Retention of records
8.6	Inspection
8.10	Supplier Control
10.2	Notification of change / work transfer
11.3	Import/Export
18.0	Responsibility For Property
20.0	Proprietary Information And Items
21.0	Compliance
21.1	Compliance With Laws
21.2	Government Requirements
21.4	Code of Basic Working Conditions and Human Rights
21.5	Environmental Health And Safety Performance
26.0	Publicity
27.0	Property Insurance
27.1	Insurance
28.1	Subcontracting

101 Quality Management System

Supplier shall implement, document and maintain a Quality Management System in accordance with applicable requirements of 9100 series standards and additional requirements specified on Buyers contract or purchase order. The applicable requirements set forth in AS9100 shall be flowed to the sub-tier supply chain involved with this order or contract. The Quality Management system shall be appropriate to the products the Supplier designs, manufactures, repairs or sells and shall cover all activities concerned by ACS contracts or purchase orders.

102 First Article Inspection (FAI) by Seller

When applicable, First Article Inspection (FAI) shall be performed and provided by the Seller in accordance with the requirements of AS9102. Refer to AS9102 Aerospace Standard "Aerospace First Article Inspection Requirement" to determine applicability. When documenting the FAI, the Seller may use the forms contained within AS9102 or their equivalent, so long as the forms contain all the information required by AS9102.

Seller will deliver with the initial shipment of the FAI item a copy of the First Article Inspection Report (FAIR). Additionally when a partial or re-accomplished FAI is performed as required by AS9102, Seller will provide a

copy of such FAIR with the initial shipment of the FAI item.

Note: FAIR does not apply to procured standard catalogue hardware or deliverable software as defined in the AS9102 Standard Applicability Section.

103 Certificate of Conformance

Each shipment shall be accompanied by one (1) legible and reproducible copy of a Certification Document (Certificate of Conformance, Shipper, Packing List, etc.) that includes the identification (signature, electronic signature, stamp, etc.) of the person authorizing release of product assuring the items ordered were produced in accordance with and conforming in all respects with all applicable requirements set forth in Buyer's Standard Purchase Order Terms and Conditions and/or its contract with Seller, including specifications, drawings, revision, marking requirements, physical item identification and electrical characteristics when applicable. When the parts are serialized, serial numbers shall be included on the certification.

When applicable, supplier will issue a copy of the SDS (Safety Data Sheet) for hazardous material in addition to the certificate of conformance.

In addition, distributors will also provide manufacturers certifications included in the shipment that lists the nomenclature and latest revision as of the date of the purchase order.

Note: Counterfeit Parts, reference AS9100

Definition Counterfeit Part:

An unauthorized copy, imitation, substitute, or modified part (e.g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer.

Examples of a counterfeit part can include, but are not limited to, the false identification of marking or labeling, grade, serial number, date code, documentation, or performance characteristics

Prevention of Counterfeit Parts

Supplier must ensure that counterfeit product received are controlled by:

- Ensuring parts are properly identified and;
- Ensuring paperwork received are traceable to the manufacturer and;
- Validating raw material test reports.

When a product is suspect or detected counterfeit parts, it must be reported and controlled.

Note: When a counterfeit product has been released to ACS, Supplier must notify ACS within one day of the discovery. Refer to ACS-SM110 (GENERAL TERMS AND CONDITIONS) section 8.2.1 "SELLER'S DISCLOSURE".

104 Chemical and Physical Test Reports

Each shipment must be accompanied by one (1) legible and reproducible copy of all chemical and physical test reports identifiable with materials ordered. The reports must contain the signature and title of the authorized representative of the agency performing the test and must assure conformance to specification requirements.

105 Shelf Life Controlled Material

Time sensitive material shall be furnished with a minimum of 80% of its shelf life remaining at date of receipt.

Shelf life duration, date of manufacture and date of expirations shall be listed on material certification.

106 Out Time Requirements

Supplier must record the “out-time of exposure sensitive material on packing list.

107 Raw Material Identification (as applicable)

A. Sheet or Plate Stock – Metallic or Non-Metallic

Each sheet or plate shipped shall be identified by continuous stenciling, of sufficient size to be readily legible, applied by permanent ink or dye of contrasting color, non-injurious to metal surfaces and not obsolete.

B. Rod, Bar or Tube – all shapes – ½ inch cross section or larger

Each length of Rod, Bar or Tube shipped shall be identified at one end or by continuous stenciling, of sufficient size to be readily legible, applied by permanent ink or dye of contrasting color, non-injurious to metal surfaces and not soluble in cutting and coolant oils. If continuous, spacing between groups of stencil letters shall not exceed twelve (12) inches. Information shall include material type or designation, material specification and temper.

C. Rod, Bar or Tube – all shapes – Smaller than ½ inch cross section

Rod, bar or tube shipped shall be bundled together; each bundle containing materials from the same (manufacturing/heat treatment) batch, and shall be identified as follows: An adhesive label or identification tag shall be securely attached to each bundle. This label or tag shall be permanently marked to indicate material type or designation, material specification and temper.

D. Castings / Forging – Ferrous or Non-Ferrous

Material shipped shall be identified with the part number, “melt” number, heat treat lot (if applicable) and serial number (if applicable). Identification of parts shall be in accordance with applicable drawings/specifications. Where drawings or specifications do not define method of identifications, such identification shall be effected in accordance with MIL-STD-130.

E. Extrusions

Each length of extrusion shall be identified at one end or by continuous stenciling, of sufficient size to be readily legible, applied by permanent ink or dye of contrasting color, non-injurious to metal surfaces and not soluble in cutting and coolant oils. If continuous, spacing between groups or stencil letters shall not exceed twelve inches. Information shall include material type or designation, material specification, temper and heat lot number.

108 Process Certification

Each shipment shall be accompanied by one (1) legible and reproducible copy of a certificate that must include the signature and title of the person authorizing release of product certifying all processes used, such as heat treating, welding, NDT, surface preparation and treatment, etc. The certificate shall include the processing used, the specification to which they conform including revision level and the name of the agency that performed them if other than the seller (i.e. sub-vendor). When the parts are serialized, serial numbers shall be included in the certification.

109 Use of Net Inspect First Article System Required

First Article with required inspection results and reports must be submitted through Net Inspect. It is the supplier’s responsibility to ensure that data provided through Net Inspect is correct and complete. To get access to the tool and get training, contact Net-Inspect at: <http://www.net-inspect.com>.

110 First Article Inspection (FAI) By ACS at Seller’s facility

FAI and/or test shall be accomplished at the Seller’s facility before the balance of order may be shipped. ACS

will conduct or witness inspections and/or tests and the results will be on a report form identified as "First Article Inspection Report" in compliance to the AS9102 requirements.

111 Government Source Inspection (GSI)

Government inspection is required prior to shipment from your plant. Evidence of such inspection must be indicated on the packing sheet accompanying each shipment. On receipt of this Purchase Order, promptly contact the Government Representative who normally services your plant, or if not available, or the representative or office cannot be located, ACS buyer should be notified. Drawing(s), test document(s) and specifications, as applicable, covering material on this order shall be available for inspection at your plant.

112 ACS Source Inspection

ACS (designated) inspection is required prior to shipment from your facility. Evidence of such inspection must be included in your packing documents accompanying each shipment. You must contact ACS's buyer and establish verification arrangements and the method of product release. Drawings, inspection/test documents, and specifications, as applicable, covering material on this order shall be available for inspection at your facility

113 Statistical Process Control

The supplier must apply Statistical Process Control (SPC) to this purchase order. A CPK of 1.33 or greater is required. Each shipment must be accompanied with a signed copy of the applicable SPC Control Plan(s). The Control Characteristic listed in SPC control Plan shall be approved by ACS Quality Assurance prior to connecting with production / processing.

114 [Reserved]

115 Priority DX-A1

Priority DX-A1; This is a rated order certified for national defense use. You are required to follow all the provisions of Defense Priorities and Allocations System regulation (15 CFR 350).

116 DFARS Clause 252.225-7009

DFARS Clause 252.225-7009, Preference for domestic specialty metals, prohibits the contractor (E.G. the Boeing Company) from incorporating into military aircraft "Specialty Metals" (Such as Titanium and Stainless Steel) which have been melted outside the United States, unless certain limited exceptions set forth in the clause apply. Even if one of the exceptions applied, the source for specialty metals melted outside the United States must also be listed in the qualified products list (QPL) or applicable to 252.225.7003 requirements.

117 Boeing Digital Product Definition

Seller shall follow the requirements noted in the latest published Boeing Document Number D6-51991, "Quality Assurance Standard for Digital Product Definition at Boeing Suppliers".

118 Export Control

Any technical data you receive from ACS, in any form, in fulfilling this purchase order is EXPORT-CONTROLLED DATA. It contains information governed by the U.S. International Traffic in Arms Regulations (ITAR) under the U.S. Department of State, or the U.S. Export Administration Regulations (EAR), under the U.S. Department of Commerce. This information may not be exported, released, or disclosed to a foreign person/entity without proper authorization by the U.S. Departments of State or Commerce. Violations may result in administrative, civil, or criminal penalties.

119 Boeing Processing

Seller shall assure that any process work to be performed on Boeing design and/or part numbers by the Seller or its suppliers, shall be performed only by sources noted in the latest published Boeing. Document Number D1-4426 listed in the Boeing web site at <http://active.boeing.com/doingbiz/d14426/GetAllProcessors.cfm>. Documentation or certification that D1-4426 Sources were used shall be submitted with AS9102 First Article Inspection Report and as requested by ACS.

Confirm current approved source with ACS Quality prior to processing if you do not have access to the procurement websites.

120 AS9015, Requirements For Delegation Of Product Verification

Seller is required to maintain conformance with AS9015, "Supplier Self Verification Process Delegation Programs" as may be amended from time to time. When delegating product verification Seller shall conform to the requirements of AS9015. Buyer reserves the right to conduct surveillance at Seller's facility to determine that Seller's quality system conforms to the requirements of AS9015. AS9015 establishes minimum requirements for Seller's delegation of product verification.

121 Boeing D6-1276 compliance

BOEING DOCUMENT D6-1276 IS REQUIRED BY ENGINEERING DRAWING FOR THIS MACHINED PART. BOEING APPROVAL OF YOUR MANUFACTURING PLANNING IS REQUIRED THROUGH THE PROCUREMENT REPRESENTATIVE PRIOR TO SHIPMENT OF COMPLETED PARTS.

Boeing requires that the provisions/requirements set forth above be included in Sellers direct supply contracts as well as the obligation that they be flowed to the sub-tier supply chain.

122 Boeing D33200 compliance

The Seller must comply with the requirements of D33200, Boeing Suppliers' tooling document. It is the Seller's responsibility to comply with the latest revision of these documents.

123 Procurement Under Boeing's Federal Aviation Administration (FAA) Issued Production Certificate 700 Quality System Supplier Control Program

THE SELLER WILL PLACE THE FOLLOWING STATEMENT ON THE SHIPPING DOCUMENTATION OF ALL SHIPMENTS THAT WILL BE ULTIMATELY SHIPPED TO BOEING:

'Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700 and no articles (or constituent parts thereof) or the accompanying paperwork (e.g. packages, shippers, etc.) contain any Federal Aviation Administration – Parts Manufacturer Approval (FAA-PMA) markings.'

APPLICATION NOTE FOR SUPPLIER: THE PREFERRED LOCATION FOR THE STATEMENT IS ON THE SHIPPING DOCUMENT, NEXT TO, OR FOLLOWING, THE CERTIFICATE OF CONFORMANCE (C of C). THE STATEMENT MAY BE PRINTED, STAMPED OR ATTACHED AS A LABEL OR STICKER TO THE SHIPPING DOCUMENTATION. IT IS ALLOWABLE TO REPLACE 'Seller' WITH THE COMPANY NAME OR 'WE'.

UNLESS EXPLICIT CONTRACTUAL DIRECTION IS GIVEN TO THE CONTRARY, NO ARTICLES (OR CONSTITUENT PARTS THEREOF) ORDERED BY BOEING COMMERCIAL AIRPLANES SHALL CONTAIN MARKINGS AND THE ACCOMPANYING PAPERWORK (E.G. PACKAGES, SHIPPERS, ETC.) SHALL NOT CONTAIN ANY FAA-PMA MARKING.

124 Boeing Material Certification

Material must be received with certification along with test reports (as applicable) documenting compliance to all requirements of the applicable Type and Class of the BMS (Boeing Material Specification) or BACB / BACN's. This order requires items to be procured from Boeing approved sources noted in the standards.

125 Boeing Process Certification

Each shipment shall be accompanied by one (1) legible and reproducible copy of a certificate that must include the signature and title of the person authorizing release of product certifying all processes used are in accordance with applicable Boeing Process Specification. The certificate shall include the processing used, the specification to which they conform and the name of the agency that performed them if other than the seller (i.e. sub-vendor). When the parts are serialized, serial numbers shall be included in the certification.

126 Quality Purchasing Data Requirements (BCA) - Boeing Form X31764

Supplier shall meet the Boeing Company's provisions/requirements set forth in FORM X31764, as well as the obligation that they be flowed down to its sub-tier supply chain. The latest revision of FORM X31764 is accessible on Boeing website <http://www.boeingsuppliers.com/quality.html>. It is supplier responsibility to periodically access Boeing website.

127 Certificate of Conformance for Raw Material Used on Ordered Product

Each shipment must be accompanied by one (1) legible and reproducible copy of raw materials certification used to manufacture the product ordered. The raw material certification must contain the signature and title of the authorized representative of the agency and must assure conformance to specification requirements.

128 Flammability Test

Each shipment shall be accompanied by one (1) legible and reproducible copy of Test report/data sheet, showing the actual test results, for the specific lot(s)/batch(es) used on this order. The flammability test shall meet the requirements of 14 CFR Part 25.853 (a) and signed by a responsible party.

Two Component Shelf Life Information

400 Materials made up of two components, (i.e., Base components & Catalyst components), where a shelf life date has been established for each individual component, the shelf life dates cannot be shipped if the shelf life dates are more than 30 days apart, without the written approval of the ACS Purchasing Agent.

401 QMS – Honeywell

The supplier must be able to maintain a Quality System that meets the requirements of Honeywell (SPOC 002), as flowed down by ACS.

402 QMS – Bell

The supplier must be able to maintain a Quality System that meets the requirements of Bell (SQRM-001), as flowed down by ACS.

403 QMS – Airbus

The supplier must be able to maintain a Quality System that meets the requirements of Airbus (AP1013 Modules 3-5), as flowed down by ACS.

404 QMS – Rolls Royce

The supplier must be able to maintain a Quality System that meets the requirements of Rolls Royce (RR9000-SABRe), as flowed down by ACS.

405 Honeywell Hardness SPOC 140

Hardness shall be re-validated through a secondary test from a representative sample – one piece from each raw material heat lot if no further heat treatment operations are performed, or for each subsequent heat treatment lot when a hardness value is specified on the engineering drawing, material or heat treatment specification contained in and including all Honeywell, Government, or Industry material specifications (AMS, ASTM, etc.). The re-validation (second hardness verification) shall be performed prior to shipment and documented by the supplier by qualified personnel – impartial and independent of the original

verification.

Note: This is required to substantiate that raw material and/or final product has achieved the FINAL hardness or temper as specified on the engineering drawing or referenced specification, before delivery of the product. If no further heat treat is required per the engineering drawing or material specification, then the raw material specification hard ness requirement must be re-verified.

406 As Furnished Identification

All parts or raw materials furnished by ACS shall maintain the “as furnished” identification. Do not substitute materials without written authorization from the ACS Purchasing Agent. All documents for Vendor supplied parts and/or materials must be traceable to their origin i.e. heat lot numbers, lot/batch numbers and/or serial numbers.

407 Tooling Requirements

The Supplier must provide an inspection report for all critical dimensions that affect the part produced by the tooling in accordance with the ACS Purchase Order and/or the Statement of Work. When required the supplier must provide:

- A copy of a CMM Report and/or Computer Measurement Systems for critical tool features.
- A tool proof as part of the tooling inspection package
- Conform to Boeing Document D950-11059-1 IDS Seller Special Tooling Requirements and shall flow down the requirements of this document to its subcontractors with ST responsibilities, if required

Any tooling or tool detail that weighs more than 30LBS must have the weight stamped on the tool or on the tool ID plate and the weight must be recorded in the Certificate Of Conformance.

408 Detailed Inspection Report

The Supplier shall furnish an inspection report for either/and based on Purchase Order:

- Each lot of parts submitted, based on the parts most critical features (Key Characteristics)
- All secondary operations performed on parts supplied by ACS (metal forming, welding, etc.)

All sampling inspection plans must meet the requirements of ANSI/ASQC Z1.4.

Note: An inspection report is required when KCs (Key Characteristics) are specifically called out in the PL/Drawing.

409 Airbus AP2091 Chromate Ban

The use of materials containing chromate is prohibited on this part per Directive 2002/95/EC. Contact ACS Engineering if the specification contradicts this statement.

410 Priority DO-15

Priority DO-15; This is a rated order certified for national defense use. You are required to follow all the provisions of Defense Priorities and Allocations System regulation (15 CFR 700).

411 Priority DO-A1

Priority DO-A1; This is a rated order certified for national defense use. You are required to follow all the provisions of Defense Priorities and Allocations System regulation (15 CFR 700).

412 [Reserved]

413 Customer Approved Special Process

This order requires Customer approval prior to Order acceptance. (Honeywell, Bell, Rolls Royce, etc.) Confirm current approved source with ACS Quality prior to processing if you do not have access to the

procurement websites.

414 Customer Approved Manufacturers – Fasteners

This order requires items to be procured from customer approved sources noted in the standard. [Bell, Honeywell, etc.] Certification to reference the latest revision level.

415 Certification Package

This order requires a copy of all manufacturer certification traceable to lot, batch, heat lots, or block numbers in accordance with the applicable specification called out from engineering drawing or ACS purchase order. Certification to reference the latest revision level.

416 Bell Controlled Items

The supplier must meet the requirements of Bell (SQRM-001 Appendix VI “Controlled Item Program “ Supplier Requirements)

417 Government Tooling Requirements – FAR 52.245-01 and FAR 45

The supplier must meet the requirements of FAR.52.245-01 and FAR 45 Government Property and Tooling Management Requirements.