

SUPPLIER QUALITY REQUIREMENTS (SQR'S)

Q01 MANDATORY AMRO SOURCE INSPECTION

When specified on individual Purchase Orders, AMRO Source Inspection shall be performed at supplier's facility prior to shipment to AMRO, and at required process operations, as directed by AMRO.

Q02 OPTIONAL AMRO SOURCE INSPECTION

AMRO reserves the right to inspect any and/or all work on this Purchase Order at the supplier's facility. The supplier will be notified in advance of shipping date if AMRO source inspection is required. Source package will include all material certifications, applicable weld certifications, applicable outside processing certifications, FAI data, in process inspection data and 100% final inspection data. All source inspection shall be completed prior to packaging. All product shall be readily available for visual and dimensional inspection if applicable.

Q03 OPTIONAL CUSTOMER SOURCE INSPECTION

AMRO Customer reserves the right to inspect any and/or all work on this Purchase Order at the supplier's facility. The supplier will be notified of shipping date if Customer source is required.

Q04 GOVERNMENT SOURCE SURVEILLANCE

The Government has the right to inspect any or all of the work included in the Purchase Order at the supplier's facility.

Q05 GOVERNMENT SOURCE INSPECTION

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

Q06 PRODUCT ASSURANCE SYSTEM REQUIREMENTS

The supplier shall have Product Assurance system and procedures detailing the following minimum requirements:

1. Safety
2. Training / Certification
3. Record retention
4. Traceability
5. Procurement control
6. Manufacturing, fabrication, process control
7. Metrology control
8. Stamp control
9. Non-conforming product control

The supplier's product assurance system is subject to initial survey and approval by AMRO and its Customer. Subsequent surveys or audits, including Sub tier supplier and processors may be conducted before or after issuance of a Purchase Order. The supplier shall be notified of deficiencies and shall follow-up and ensure that deficiencies are promptly corrected. Corrective action shall be subject to review and approval by AMRO's Quality Assurance.

Q07 QUALITY PROGRAM REQUIREMENTS

The seller shall have developed and maintain a quality program in accordance with the current AS 9100 standard including a measuring instrument calibration system in accordance per Section 7.6 of the AS standard - "Control of Monitoring and Measuring Equipment".

Q08 INSPECTION SYSTEM REQUIREMENTS

The seller shall have developed and maintain an inspection system in accordance with Mil-I-45208, including a measuring system in accordance with Mil-Std-45662.

Q09 NON-CONFORMING DOCUMENTATION

Any deviation to AMRO's requirements set forth in this Purchase Order shall be documented and submitted to AMRO for disposition prior to product shipment from supplier's facility.

Q10 METROLOGY / ACCURACY

All test and measurement equipment used in the performance of this Purchase Order shall be certified against a standard having greater accuracy. Random and systematic error in any article or material measurement process shall not exceed 10% of the tolerance of the parameter being measured. When ASTM, ASA, ISA, Military Standards or other Aerospace Industry recognized standard test methods are used in physical, chemical, analytical, optical and/or environmental measurement processes, the tolerance ratio established in those test standards shall apply.

Q11 RAW MATERIAL CERTIFICATION

Three legible copies of the material certification as furnished by the raw material supplier shall accompany each shipment.

Q12 CHEMICAL TEST REPORTS

Materials furnished in fulfillment of this order must be accompanied by three legible copies of Certified test reports of the chemical properties of the material.

Q13 PHYSICAL TEST REPORTS

Materials furnished in fulfillment of this order must be accompanied by three legible copies of certified test reports of the physical properties of the material.

Q14 CERTIFICATION OF COMPLIANCE

The seller shall include with each shipment legible copies of a certifying statement that attests to the seller's compliance with all the requirements of the Purchase Order. The certificate shall be signed by an authorized representative of the supplier.

Q15 PROCESS / PROCESSOR

Manufacturing and inspection processes and procedures used in the performance of this Purchase Order must be accomplished by process sources and procedures approved by AMRO and AMRO's Customer.

Q16 SPECIAL PROCESS APPROVAL

Special process suppliers are responsible for compliance to the applicable specifications, including customer special process approval, whether the operation is performed within their facility or by subcontractors.

Q17 PROCESS CHANGE

A change is defined as “any change including personnel, equipment, material, tooling, etc., subsequent to the start of production.” The supplier is responsible for supplying AMRO with a list of all personnel performing work on LMET Program and to notify AMRO of additions/deletions to this list. Supplier is also responsible for notifying AMRO of any intended changes to equipment, material, tooling, etc., and obtaining written authorization for said changes from AMRO prior to implementation. Supplier is also responsible to obtain AMRO and LMMSS approval in writing to any deviation and/or exception to procurement specification.

Q18 RIGHT OF ENTRY / CUSTOMER ACCESS

Access to your facility (documents, personnel, equipment, material and facilities) shall be made available to AMRO Fabricating Corporation, its customers and regulatory agencies, to determine and verify the quality of the work, records, and material.

Q19 SUBCONTRACTING WORK

Seller is prohibited from subcontracting any portion of the work to be performed as specified in this Purchase Order, unless authorized by the buyer in writing.

Q20 RECORDS

Seller shall maintain records of manufacturing and traceability of materials used in the fabrication of the product produced in fulfillment of this Purchase Order. The records shall be maintained for a period of 7 years after completion of the Purchase Order and be made available for review to the buyer upon request.

Q21 SPC FLOW DOWN

Seller shall demonstrate the ability to provide statistical evidence of variability for KEY characteristics. Seller to certify that they have a system capable of meeting Boeing’s D1-9000, AQS, or similar quality requirements.

Q22 SERIALIZATION

Each item furnished on this Purchase Order will be identified with a non-recurring serial number. Where the size of the item prohibits identification, the serial number will be marked on an identification tag or label and be securely attached to each item.

Q23 Digital Product Definition (DPD)

Seller is required to obtain Buyer approval as a DPD-capable supplier if Seller receives, downloads, and/or uses Computer Aided Design (CAD) geometry in any format AMRO furnished digital datasets are reference only (not design or inspection authority) until DPD approval status is obtained

Q24 Digital Product Definition (DPD)

The seller shall have developed and maintain a Digital Product Definition program in accordance with Boeing document D6-51991.

Q25 Supplier Inspection Reporting Requirements

Supplier shall submit with each shipment / delivery of Purchase Order items one copy of an Inspection report. Reflecting 100 percent inspection verification of all drawing characteristics and specify the corresponding actual measurement results. Inspection reports will include Purchase Order number, detail or assembly number as indicated per purchase order. Inspection reports shall include signature and/or stamp of person within your organization performing inspection process.

Q26 DFARS Requirements

DFARS Specialty Metal Clause 252.225-7014 Alt. 1 requirements are applicable to this purchase order.

Q27 Bond Control of AMRO property or material

Supplier shall have a designated area with BOND/ MRB that shall retain AMRO product/ properties or materials.

Q28 Material Traceability

Supplier shall maintain material traceability of all materials used (INCLUDING AMRO FURNISHED MATERIAL) throughout process and delivery. Documents related to all processing shall reference heat lot and material purchase order numbers as applicable throughout all processes on process (Shop Traveler) and Certificate of conformance.

Q29 FOD – Foreign Object Detection

Supplier shall insure the following is applied: A Foreign Object (FO) is defined as a substance, debris or article alien to hardware or system which could potentially cause damage. The object may be foreign to an area or system and may be ingested by, or lodged in a mechanism. Foreign Object Damage (FOD) is defined as any damage attributed to a FO that can be expressed in physical or economic terms, which may or may not degrade the product's required safety and/or performance characteristics. Control of this process is required.

Q30 MATERIAL CERTIFICATION / COUNTERFEIT PARTS / MATERIAL PREVENTION &

DEFINITION: Seller shall establish and maintain a Counterfeit Parts / Material Prevention and Control Plan using AS-5553 (Ref. elements of Section 4) and/or AS6174 (Ref. elements of Section 3) to ensure that Counterfeit Work is not delivered to Buyer.

- For purposes of this clause, Work consists of those commodities delivered under this Contract that are the lowest level of separately identifiable items (e.g., articles, components, standard hardware, goods, raw materials and assemblies).
- Seller shall only purchase products to be delivered to AMRO directly from the Original component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), OCM/OEM authorized distributor chain, Aftermarket Manufacturer, or Authorized Reseller.
 - These products shall have verification that Work is traceable to OCM/OEM.

- Each shipment shall be accompanied by complete physical and chemical test data that meet the requirements of the applicable specifications and/or engineering drawings, and identifies the material provider and the original lot or batch number. Serial numbers shall be identified if applicable.
- Seller shall notify the Buyer with the pertinent facts if Seller becomes aware or suspects that it has furnished Counterfeit Work. Seller shall provide to the Buyer, upon request, the supply chain traceability to an Original Manufacturer or authorized distributor chain that identifies the name and location of all the supply chain intermediaries from the part manufacturer to the direct source of the product for the Seller.
- Seller shall include this clause or equivalent provisions in lower tier subcontracts for the delivery of items that will be included in or furnished to AMRO.
- **Counterfeit material is defined as follows:** Fraudulent material that has been confirmed to be a copy, imitation, or substitute that has been represented, identified or marked as genuine; altered by a source without legal right to make the alteration with the intent to mislead, deceive, or defraud; or both.
- **Counterfeit part is defined as follows:**
 - a) An unauthorized copy or substitute part that has been identified, marked, and/or altered by a source other than the part's legally authorized source and has been misrepresented to be from a legally authorized source;
 - b) An item misrepresented to be an authorized item of the legally authorized source;
 - c) A new, used, outdated, or expired item from a legally authorized source that is misrepresented by any source to the end-user as meeting the performance requirements for the intended use.
- **Counterfeit work is defined as follows:** Work that is or contains items misrepresented as having been designed and/or produced under an approved system or an 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. Work consists of those parts delivered under this Contract that are the lowest level of separately identifiable items (e.g., articles, components, goods, and assemblies).

Q31 Counterfeit Avoidance

All (mechanical) parts and materials shall be procured only through Original Equipment Manufacturers (OEMs) Original Component Manufacturers (OCMs) or their franchised dealer or distributors unless pre-approval has been granted by AMRO. The supplier shall employ validation methods which assure parts and materials provided are not counterfeit including customer furnished material which will be traced back to original Raw Material Mill supplier. Supplier shall flow this requirement down to all sub-tier suppliers to prevent the inadvertent use of counterfeit parts and materials.

Q32 Each Use Condition Check

All Government and Customer-owned tooling requires an each use condition check prior to each usage. Tool shall only be used for the specific purpose for which it was intended. Users shall, in their areas of responsibility, ensure that the tool functions correctly and is properly maintained. Typical areas of consideration during each use condition check include but are not limited to the following:

- The tooling is properly identified and identification is legible.
- An acceptance stamp is on the identification tag or near the tool identification.
- The tooling engineering definition/configuration level is identified.
- The instruction, direction, and caution/safety tags are securely attached and legible when applicable.
- All tooling details/parts are available and in good condition:
 - “L” pins, hand knobs, scribes, step pins, etc. are in good condition.
 - Rubber cushions and protective pads are secure and in good condition.
 - Toggle clamps, straps, and other hold-down devices are in good condition.

Q33 Special Tooling (ST):

Special tooling (ST) flow-down for special tooling requirements. The seller shall have developed and maintain a Special Tooling (ST) program in accordance with Boeing document D950-11059-1.

Q34 Special Process Approval:

- **Required Special Process Approval** - Processor shall have current required approval(s) in place at the time of processing. Special Processor Approval by an on-site survey by AMRO or acceptance of third party accreditation. This approval is contingent upon the procedural requirement for an on-site survey to an adequate process specific questionnaire.
 - a) The subcontractor performing special process work shall have an AS 9003 Quality Management System as a minimum, current and approved by at the time of processing.
 - b) The Special Process Approval may be for an equivalent Industry or Government specification. If the Purchase Agreement requires processing in accordance with a cancelled Military Specification or Standard, the determined Special Processor Approval may be for the replacement Industry or Government specification.
 - c) Approval type must be per approved process. If the approved process is not a part of the scope of approved processes by AMRO the process cannot be used until such approval is granted.

Q35 Special Process Certifications:

- **Special Process Certification Process** - Special process certification process includes a method controlled by a contractually required specification where product undergoes a physical, chemical or metallurgical transformation or inspection or where conformance to the specification cannot be readily verified by normal inspection methods and the quality of the product depends on use of specific equipment operated in a specific manner, under controlled conditions.
- a) Subcontractor shall have trained personnel with certifications, instructions, procedures or standards.
- **Special Process Certification Requirements** - A special process certification shall be provided with each shipment of item(s) delivered on this contract. Process certifications may be in supplier format and shall include the following: Customer's order number part number(s) Serial and/or lot numbers, of the hardware processed (if applicable,). Certifications shall conform to all aspects of the AMRO purchase order and where applicable a Statement of Work (SOW) and the results must be recorded on the certification (pass/fail).
- a) Material process specification & revisions. Certification stating the special process was performed per the applicable drawing/specification requirements and processing Organization #'s name and address.
- b) Each certification must be signed and dated by a company official of the Organization and/or Processor attesting to the acceptance of the processes performed to the required specification(s).

Q36 Customer/ Government Access:

- Work under this purchase order/contract is subject to government or customer surveillance/inspection at organization's plant or sub-tier supplier's facility. The organization will be notified if a surveillance/inspection is to be conducted

Q37 DPD/MBD Control Agreement:

- External Providers performing work using digital product definitions or model based definitions from AMRO must be specifically approved for such work by AMRO Fabrication Corporation. The External Provider agrees, upon termination, cancellation, expiration, or other conclusion of purchase order contract, within 30 days to return to AMRO and/or destroy (whether digital or hardcopy) of any DPD/MBD data provided that is in the Vendor's possession. Any use of data (drawings or datasets) listed in this contract outside the requested duty is strictly prohibited.

Q38 Product Safety:

- External Providers shall plan, implement, and control the processes needed to assure product safety during the entire product life cycle, as appropriate to the organization and the product. **Including all applicable statutory and regulatory laws and standards of the external supplier.**
 - a. These processes may include:

- a. Assessment of hazards and management of associated risks;
- b. Management of safety critical items;
- c. Analysis and reporting of occurred events affecting safety;
- d. Communication of these events and training of persons.
- e. Injury Illness Prevention Programs (IIPP).
- f. OSHA complaint safety program;

Q39 Chain of Custody:

- Suppliers shall not disguise the pedigree of material or chain of ownership by removal of a previous suppliers name, nomenclature or identification. There must be a clear chain of custody (Sold to – Sold From) on each step and each form documenting the material process. Raw Material certifications shall show clear traceability to the manufacturer(s) of the raw material including;
 - a. Ingot Source
 - b. Thermal Mechanical processing (forging, rolling, drawing)
 - c. Heat Treatment
 - d. Chemical processing
 - e. Subsequent inspections that are applicable to raw material specification requirements.
 - f. Final destination of raw material

Q40 Trade Control Compliance:

- Suppliers shall comply with all export and import laws, regulations, decrees, orders and policies of the United States Government and the Government of any country in which the parties conduct business pursuant to this contract, including but not limited to the Export Administrative Regulations (EAR) of the U. S. Department of Commerce, the International Traffic in Arms Regulations (ITAR) of the U. S. Department of State, the U. S. Customs and Border Protection Regulations the Harmonized Tariff Schedule and the antiboycott and embargo regulations as set for the in the EAR and in the U. S Department of the Treasury, Office of Foreign Assets Control. Drawings/ Models/ Data that are transferred via e-mails or any other type of data transfer are confidential and contain information proprietary to AMRO fabricating Corp. that may be covered by legal, professional or other privilege. Further, the information listed herein may contain or be controlled by the International Traffic in Arms Regulations (ITAR), 22 CFR 120-130, and may not be exported, or disclosed to a foreign person, whether in the United States or abroad, without prior U.S. Government written approval. Recipient may use such information only in the context of the terms of the existing agreements in effect between both parties within the Purchase order contract.

Q41 Notice of Escapement (NOE):

- Notice of Escape (NOE) - If Supplier suspects (or is aware) that an undocumented / unapproved customer nonconformance has been shipped to Purchaser, Supplier must notify KARMAN (AMRO) purchasing of the condition in writing within three (3) business days of the discovery. Supplier must promptly notify Purchaser if Supplier becomes aware or reasonably suspects that any Product is, or contains a component that is, subject to a recall notice, warning alert, Government-Industry Data Exchange Program (GIDEP) Alert, or any other type of notification or concern regarding Product authenticity, quality, safety, process integrity, or specification compliance. If the nonconformance affects safety of flight or is mission critical; Seller shall immediately provide the NoE Submittal and all required information within Buyer's Supplier Quality supplier data system within 24 hours of discovery.