

MK Services Inc.

Aerospace Supplier Quality Requirements (ASQR)

QUALITY REQUIREMENTS

General Requirements applicable to all Purchase Orders

A. SURVEILLANCE

MKS reserves the right to conduct periodic audits of Seller's Quality Assurance inspection system, and to witness and/or conduct inspections and tests to assure materials or supplies satisfactorily meet procurement document requirements; review Corrective Action activities and other records that reflect on hardware or service quality. MKS will monitor suppliers for on time delivery and quality of product supplied.

B. CHANGES

Supplier shall not accept verbal changes to the Specifications, Drawings or Purchase Order Requirements without supporting documents from MKS.

C. DISCREPANCIES

Any deviations from established drawing or specifications intended for shipment must be reported to the MKS Buyer immediately. No deviations will be considered approved without written confirmation from the buyer. Repairs are not to be undertaken without prior written approval from the buyer. Unless otherwise specified in this Purchase Order, the Supplier and/or any of their Suppliers/Subcontractors DO NOT have authority to process "USE-AS-IS", "REPAIR", "STANDARD REPAIR PROCEDURES (SRPS)" or "NON-SRPS" via their Material Review Board (MRB). These dispositions, as well as deviations and request for waivers, requiring MRB disposition shall be submitted to MKS for approval. This does not include REWORK or SCRAP. The Supplier/Subcontractor shall utilize its appropriate nonconforming material disposition form and submit it to the Buyer for MKS approval.

D. CORRECTIVE ACTION

Acceptance of this Purchase Order obligates the supplier to perform, upon request, a Corrective Action investigation when discrepant material is received at MKS. A written report shall be furnished, within a stipulated time period, which is specific and conclusive to prevent a recurrence of the discrepancy.

E. DOCUMENTATION

MKS shall not accept items delivered under the Purchase Order if the supplier fails to submit certifications or other documentation specified in the purchase order. Good Documentation Practices shall be used. Including requirements that data are readable, understandable and allow a clear picture of the sequencing of steps or events in the record. Any corrections to documentation shall be lined out with a single Line, initialed and dated. No correction fluid (i.e. white out) shall be used on documentation.

F. PRESERVATION AND PACKAGING

Unless special packaging requirements are referenced in the Purchase Order, the supplier shall use best commercial practices for preservation and packaging of articles supplied to MKS, and shall identify each package with the Purchase Order number, date shipped and packing sheet number.

AEROSPACE SUPPLIER QUALITY REQUIREMENTS / CLAUSES

The following requirement / clauses become a part of the purchase order when specified by number or letter code on the Purchase Order.

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SQR-1 QUALITY MANAGEMENT SYSTEM

Supplier shall provide and maintain a quality system that complies with the requirements of **ISO9001** or **AS9100D**, unless otherwise directed by MKS. Immediate notification is required in case of non-compliance to Quality System Requirements, e.g. loss of third party certification.

SQR-2 GOVERNMENT SOURCE INSPECTION

Government Inspection is required prior to shipment from your facility. Upon receipt of this order, promptly notify the Government Representative normally servicing your facility so that the appropriate planning can be accomplished. If a government representative does not service the Suppliers' facility, notify the nearest Defense Contract Administrative Office for direction, or MKS.

SQR-3 SOURCE INSPECTION

Source Inspection shall be conducted by MKS at the Supplier's facility or where designated in the Purchase Order prior to shipment. Inspection/test of the items shall be performed by the Seller, and shall be subjected to witness by MKS. MKS shall elect to do 100% or sample of the units. If sample is elected, the sample will be selected by MKS. Seller shall have available and present upon request, documented evidence of in-process and/or final inspection/test data. Required documentation for shipment must be completed and signed by its Quality Assurance Manager, or authorized designee, and available for MKS review.

SQR-4 CERTIFICATE OF CONFORMANCE

A certificate of conformance shall accompany each shipment signed by its Quality Assurance Manager, or authorized designee, stating the product supplied is in full conformance with all physical configuration and functional test specifications; that all raw material used conforms to applicable specifications. Inspection and test data, physical and chemical analysis, and in-process inspection data are on file subject to review by MKS upon request. The certificate of conformance shall be legible and include

- MKS Purchase Order number, part number, and revision letter (unless otherwise specified on the purchase order), quantity and if applicable, serial numbers.
- MKS Job Order number and the mill heat number when supplier supplied material, at a minimum.
- When multiple lots of material are used in completing a shipment, parts shall not be mixed and all material lot numbers or mill heat numbers shall be reported.
- When processing is performed against a MKS job order, parts shall not be mixed and traceability shall be maintained to the work order.
- Material or process specifications

- Manufacturer's name, address, Country of Origin, and Date.

SQR-5 CHEMICAL AND PHYSICAL TEST REPORTS

For raw material shipments, or where material was supplied by the supplier, physical and chemical test report certifications shall be supplied with each shipment. Test reports shall be legible and include the material designation, specification and revision letter (material must be certified to the latest revision in effect at the time of shipment), results of all specified testing requirements, the mill heat number, and any other requirements specified on the Purchase Order and must be traceable to the material.

SQR-6 INSPECTION SHEETS AND TEST REPORTS

With each shipment the supplier shall submit inspection reports, data sheets, test reports, etc... as applicable. Reports shall be identified with the applicable drawing / specification number, revision, MKS Purchase Order number, and the Supplier's lot identification number.

- A.** Inspection Reports shall cover all physical and dimensional characteristics for the item as called out on the drawing, or in the applicable specification. The Supplier shall report the actual dimensions of each part inspected. The inspection results shall be traceable by serial number or other identification method to the actual part inspected.
- B.** Inspection Reports shall cover all physical and dimensional characteristics for the item as called out on the drawing, or in the applicable specification. The Supplier shall report the dimensional range and average of parts inspected. The inspection results shall be traceable to the lot of parts inspected.
- C.** Inspection reports shall list the physical and dimensional characteristics of the items. Sample inspection shall be performed to verify critical dimensional characteristics of the lot of parts are within drawing specification limits. Actual dimensions do not have to be reported except where specific dimensions are requested.
- D.** Test reports for special tests such as vibration, shock, rain, sand and dust, pressure, environmental, EMI, ATP and others shall be supplied by the Seller.
- E.** Destructive Testing Analysis (DTA) report is required. The Supplier is to permanently identify the parts that have gone through DTA and are no longer suitable for intended use. The tested parts shall be delivered to MKS.

NOTE: Out of tolerance dimensions shall be identified on an inspection report. The Supplier shall not deliver parts that are out of tolerance to MKS without approval from MKS.

SQR-6A RECORD RETENTION AND RIGHT OF ACCESS– NON-AEROSPACE

Supplier shall retain all records pertaining to material, manufacturing processes, special

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processes, testing, and inspection for a minimum of three (3) years as applicable. Supplier shall notify MKS prior to destruction. Supplier shall provide MKS, our Customers, and regulatory authority access to all applicable records.

SQR-6B RECORD RETENTION AND RIGHT OF ACCESS - AEROSPACE

Supplier shall retain all records pertaining to material, manufacturing processes, special processes, testing, and inspection for a minimum of ten (10) years as applicable. Supplier shall notify MKS prior to destruction. Supplier shall provide MKS, our customers, and regulatory authority access to all applicable records.

SQR-7 FIRST ARTICLE INSPECTION

Supplier shall perform and document a comprehensive inspection and test of the article to assure the items conform to all specification requirements. First Article Inspections shall be performed in accordance with Aerospace Standard AS9102. First Article Inspection is required on a part representative of the production process used in the manufacture of the parts. The First Article Inspection Report (FAIR) must accompany the first shipment of parts. If two years have elapsed since the last shipment of this part number, a new First Article Inspection is required. If an AS9102-compliant FAIR is not required, an equivalent supplier form may be used and shall include the following:

- MKS part number, revision level,
- All print requirements including, Notes, Feature, Tolerance,
- Actual measured value, Method of Gauging, Accept/Reject indication

Where physical testing is required, the results of the test must be recorded. Where special processes are required, verification of each special process must be recorded, applicable certifications retained, and available for review (or submitted with the FAIR if requested by MKS). The signature and title of the person performing the inspection and date of inspection must also be included.

SQR-8 SURVEY/AUDIT RIGHTS

MKS customers and/or regulatory agencies shall have the right to conduct surveys and perform surveillance and have access of supplier facilities to evaluate their capability to comply with contractual requirements.

SQR-9 SPECIAL PROCESS APPROVAL

Heat treating, welding, electroplating, laser cutting, EDM, ECM, Non-Destructive Testing, etc. are considered special processes and require approval by MKS prior to use. The Certificate of Conformance shall include the specification number and revision of all special processing performed. Special processes, once approved, may not be changed without MKS approval of the changes.

SQR-10 APPROVED INSPECTION PLAN

When requested; suppliers shall submit a detailed inspection plan to MKS Facility for approval before manufacturing begins. Supplier inspection shall be in accordance with the MKS approved inspection plan for the part number ordered.

SQR-11 APPROVED SOURCE OF MATERIALS

All material used in fulfilling this order must be supplied by a supplier approved by MKS unless specifically authorized in writing to the contrary.

SQR-12 SHELF LIFE DATA

The Supplier shall furnish the date of manufacturer, useable shelf life, expiration date of useable shelf life, any special storage conditions, and any safety warnings for each item shipped. Material Safety Data Sheet must be included with each shipment. Items will not be accepted by MKS where shelf life remaining is less than 75% of total shelf life.

SQR-13 IDENTIFICATION AND CONTROL BY LOT

Traceability of items shall be by lot number rather than individual serial number. Seller shall assign a common lot number to all items in a specific manufactured lot.

SQR-14 IDENTIFICATION AND CONTROL BY SERIAL NUMBER

Seller shall identify individual serial numbers, to all items shipped to MKS and shall appear on the certification. Serial numbers shall be assigned by MKS. The method of marking will be specified in the Purchase Order or on a furnished manufacturing drawing. The Seller shall maintain traceability of each serialized item to raw materials used in its manufacturing processes.

SQR-15 TEST AND INSPECTION REPORTS

Test and inspection reports, with measured data as required by the applicable procurement specification, must accompany each shipment.

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SQR-16 SPECIALTY METALS

DFARS 252.225-7014 Preference for Domestic Specialty Metals (Apr 2003) applies to this order if specialty metals are being furnished. Contact MKS Purchasing for clarification or applicability if necessary.

SQR-17 BUYER FURNISHED MATERIAL

When MKS furnishes material, the Seller's System shall provide for the following:

- Examination upon receipt for transit damage,
- Verification of quantity,
- Storage against damage,
- Improper use or disposition.

The Seller must furnish certification that the parts used were those furnished by the Buyer and no un-authorized substitution was made.

SQR-18 APPROVED SUPPLIERS

As required, MKS "Approved Suppliers" are responsible for maintaining a list of their approved suppliers, and shall have it available upon request for review by MKS. Information shall include name, address, nomenclature of parts or services provided, part numbers and other pertinent information requested by MKS. Suppliers shall only purchase aircraft related parts from their suppliers which are controlled by MKS by approval or inspection.

SQR-19 CHANGES TO WORK

The Supplier shall make no Changes to Work under this Purchase Order or Contract including any change in design, manufacturing process, materials, or otherwise which may affect form, fit, or function of the Work without prior notification to and approval by MKS. Such notification shall consist of detailed drawings clearly defining such Changes and the date such changes are proposed to be effective. Such notification shall not constitute approval of the proposed change nor relieve the Supplier of the obligation to comply with requirements contained in the Purchase Order or Contract. If the proposed Change is approved, the Change Approval shall be documented.

SQR-20 MOVEMENT OF WORK

The Supplier agrees that the manufacturing and/or fabrication of Work being delivered under this Purchase Order will not be moved to another production facility without the express written approval of MKS.

SQR-21 CALIBRATION SYSTEM COMPLIANCE OF INSPECTION, MEASURING AND TEST EQUIPMENT

A system for the maintenance and calibration of inspection, measuring, and test equipment shall be maintained. ANSI/NCSL Z540-1 applicable to calibration activities. Acceptable alternative: MIL-STD-45662A "Calibration System Requirements" All calibration standards must be traceable back to NIST (National Institute of Standards and Technology) and the NIST test number shall be included on the certificate of conformance. If any measuring equipment is found to be out of tolerance, "As Found, As Left" data shall be included.

SQR-22 FOREIGN OBJECT DEBRIS (FOD)

Supplier shall comply with NAS412 to prevent Foreign Object Damage (FOD) to manufactured products. Supplier shall establish and maintain an effective FOD prevention program through a Continual Improvement approach that proactively addresses and controls the events (conditions and actions) leading to FOD.

SQR-23 EXPORT/IMPORT CONTROLS (ITAR)

Supplier shall control the disclosure of, and access to, technical data, information, and other items including hardware received under this purchase order in accordance with U.S. export control laws and regulations, including but not limited to the International Traffic in Arms (ITAR) and the U.S. Department of Commerce, Bureau of Industry and Security (BIS), and Export Administration Regulations. Contact MKS Purchasing for clarification or applicability if necessary.

SQR-24 COUNTERFEIT PARTS AVOIDANCE

Supplier shall ensure that controls are in place to reduce and mitigate the risk of counterfeit components and/or assemblies from MKS in compliance of AS5553 and their Quality Management System. This Procedure outlines the process of procuring parts from reliable sources, assure authenticity and conformance of procured parts, to control parts identified as counterfeit and report counterfeit parts to MKS and Government Investigative authorities. Any questionable items should be referred to MKS.

SQR-25 Employee Awareness

Supplier shall ensure that persons performing work under their scope are aware of their contribution to product conformity, contribution to product safety, and the importance of ethical behavior.

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SQR-26 Malpractice, Fraud and Falsification

Malpractice is any intentional or inexcusable deviation from established engineering, production, certification or inspection requirements. These acts are grave and serious matters. Due to the nature of our business, the act of malpractice, fraud or falsification has the potential of severe and costly damage, and could involve product functional failure causing loss of life on land or sea. Consequences may also include severe dollar loss to MK Services, you and the Government due to lengthy investigations, disqualification from future contracts, production shutdown, and loss of employment. These acts may be subject to federal criminal prosecution for violations of laws under Title 18 of the U.S. Code, Chapter 47, Section 1001.