

SURFACE ENHANCEMENT TECHNOLOGIES (SET) PURCHASE ORDER QUALITY CLAUSES

100 QUALITY MANAGEMENT SYSTEM (ISO 9001)

The supplier shall provide and maintain a Quality Management System that complies with ISO 9001. Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified in the purchase order. A Quality Program per MIL-Q-9858A may be utilized in lieu of this requirement. SET reserves the right to audit the supplier for compliance to this requirement. During the audit, the supplier shall provide reasonable facilities and resources to effectively conduct the audit.

101 QUALITY SYSTEM (ISO 9002)

The supplier shall provide and maintain a system that complies with ISO 9002. Compliance with this clause in no way relieves the seller of the responsibility to furnish acceptable supplies or services as specified on the purchase document. An Inspection System per MIL-I-45208A may be utilized in lieu of this requirement. SET reserves the right to audit the supplier for compliance to this requirement. During the audit, the supplier shall provide reasonable facilities and resources to effectively conduct the audit.

102 MEASUREMENT CONTROL SYSTEM (ISO 10012-1)

Inspection/calibration measuring equipment utilized in the manufacture/calibration of this item must be calibrated and traceable to NIST per ISO 10012-1. A calibration system per MIL-STD-45662A may be utilized in lieu of this requirement. SET reserves the right to audit the supplier for compliance to this requirement. During the audit, the supplier shall provide reasonable facilities and resources to effectively conduct the audit.

103 QUALITY MANAGEMENT SYSTEM (ISO 9001:2000)

The Supplier's Quality Management System shall conform to the requirements of the elements described in ISO 9001:2000, Quality Systems- Model for Quality Assurance in Design, Development, Production, Installation, and Servicing. Third party registration by an accredited registrar will be accepted. Contractor declaring system compliance to ISO 9001:2000 with no formal accredited registrar, will be reviewed. The Supplier's system will be subject to review and approval at all times by SET. SET reserves the right to audit the supplier for compliance to this requirement. During the audit, the supplier shall provide reasonable facilities and resources to effectively conduct the audit.

104 SPECIAL PROCESS CONFORMANCE

When special process specifications (e.g. heat treat, soldering, welding, anodizing, chemical film treatment, NDT, etc.) are a purchase order and/or drawing requirement, the supplier is responsible for maintaining a system to control special processes performed at its facilities. SET reserves the right to audit the supplier for compliance to this requirement. During the audit, the supplier shall provide reasonable facilities and resources to effectively conduct the audit.

105 SPECIAL PROCESS APPROVAL

When SET's purchase order requires special processing, the supplier and/or its subtiers shall accomplish such processing only after receiving approval after an on-site survey or process questionnaire has been administered by SET.

The supplier and/or its subtiers shall have required approval(s) in place at the time of processing. SET's approval of special processing does not relieve the Contractor of the responsibility to ensure that work performed by its subtiers is in accordance with specification requirements.

200 SURFACE ENHANCEMENT TECHNOLOGIES (SET)/GOVERNMENT INSPECTION

Surface Enhancement Technologies (SET)/Government reserve the right of access to supplier's facility for review of quality systems, records and facilities. The right to inspect any or all work included in this order is also reserved.

Verification by SET/Government does not absolve the supplier of the responsibility to provide an acceptable product or service, nor shall it preclude subsequent rejection by SET/Government.

201 SET SOURCE INSPECTION

Source Inspection shall be conducted by SET at the supplier's facilities or where designated in this purchase order subcontract prior to shipment. The supplier shall contact SET Quality Assurance Department at least five (5) working days prior to date items will be ready for the mandatory inspection/test performance, including in process and/or final test. Required documentation for shipment must be completed and signed by the supplier-authorized quality personnel, and available for the SET Quality Assurance representative.

Verification by SET/Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by SET/Customer/Government.

202 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/subcontract, promptly furnish a copy to the Government Quality Assurance Representative (QAR) who normally services your plants or if none, to the Defense Contract Management Area Office in your locality. In the event the QAR or DCMA office cannot be located, contact SET Quality Department.

Verification by the Government does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the Government.

203 FIRST ARTICLE INSPECTION (FAI)

On the initial production run, a comprehensive inspection and test is required of the first article piece to assure conformance with all drawing requirements and specifications. The First Article Inspection (FAI) for assemblies shall include inspection of all detailed parts.

A new FAI is required if any of the following occur:

- 1) A significant design or process change has been made that affects the original FAI and is applicable only to the characteristics affected by the change.
- 2) The item has not been produced for a period of 12 months.
- 3) A change in facilities or equipment used to produce the item has taken place.

The supplier assumes full responsibility for production prior to and after the approval of first article, piece and/or assembly from SET.

The supplier is required to:

- 1) Submit the first article and inspection results to SET for approval. At a minimum, inspection results shall include the actual value or dimension for each specified characteristic and drawing note.
- 2) Submit the first article item to SET for inspection by SET personnel.
- 3) The First Article Inspection must be documented on the supplier's inspection forms.

204 100% INSPECTION REQUIREMENT

The supplier must perform 100% inspection of all items on this purchase order to ensure compliance to drawing and specification requirements. Objective evidence of such inspection must be maintained on file and available for review by SET.

205 STATISTICAL PROCESS CONTROL

The supplier shall submit a statistical process control plan detailing how dimensions and processes will be controlled for items under this purchase order. SET approval of this plan is required. Objective evidence of statistical process control is to be maintained on file and available for review by SET.

206 INSPECTION BY SAMPLING

The supplier may substitute sampling inspection in lieu of 100% inspection if inspection is performed in accordance with ANSI Z 1.4. Other inspection plans may be used with SET approval.

300 CHANGE OF CONFIGURATION, DESIGN, PROCESS

The supplier shall notify SET of any proposed changes to design, parts, materials, fabrication methods, or processes, and obtain written approval from SET Engineering Department prior to change incorporation. The supplier shall immediately notify SET of changes to ownership, manufacturing or processing location. The supplier shall notify SET as soon as it is apparent that an interruption of 90 or more days is anticipated in the production of an item.

301 CONTROL OF SET/GOVERNMENT FURNISHED MATERIAL/TOOLS/GAGES

- A. Material supplied by SET to be used in the supplier's delivered products shall be to the following:
 1. Inspected upon receipt for evidence of acceptance, shipping damage and lot identification.

2. Material traceability shall be maintained throughout the manufacturing process, assuring that items manufactured by the supplier are identifiable to the material lot provided by SET.
- B. Tools and gages supplied by SET to be used in the supplier's delivered products shall be to the following:
1. Inspected upon receipt for evidence of acceptance, shipping damage, lot identification and valid calibration status.
 2. Provide adequate protection to preclude damage or deterioration during use, handling and storage.
 3. Provide periodic calibration of gaging or request SET to perform calibration at least thirty (30) prior to the expiration date shown on the calibration status tag.
 4. Support SET periodic audits of SET/Government furnished tools and gages.

400 MANUFACTURING LOT OR BATCH NUMBER CONTROL

All parts on this order will be traceable to/identified with a lot or batch number. Where size and shape do not permit stamping, the smallest package shall be labeled. A lot or batch will be defined as material or parts produced by a single type, grade, class, size or composition under unchanged manufacturing conditions in accordance with the same drawing and/or specification revision unless otherwise defined in the purchase order.

401 TRACEABILITY

The supplier shall establish a system for the identification, traceability and control of materials, parts and assemblies from acquisition through fabrication, assembly, test and delivery. The supplier shall provide for the ready identification of suspect lots when individual items are found discrepant.

When parts are joined in an assembly, the seller shall prepare an "Assembly History Log" identifying each part in the assembly. Fabricated parts shall be identified with serial number, material type, heat number, blueprint and specification with applicable change letter or number.

Components in the assembly shall be traceable to records of acceptance by part number, serial number and lot number of material from which the components were fabricated by the supplier, and shall accompany the parts they represent to SET.

No two parts that have the same part number shall be identified with the same serial number.

402 MATERIAL IDENTIFICATION

Material on this purchase order must be marked with the melt or heat number. Bar stock must be marked at both ends as a minimum. Chemical/physical material certifications shall be on the producing mill's letterhead and shall include the signature of an authorized representative of the mill, their typed name, title and date.

403 MATERIAL IDENTIFICATION INSTRUCTIONS

- A. Apply part number and revision letter per applicable drawing note.
- B. Bag and tag parts.
- C. Tag parts.
- D. Identify per purchase order instruction requirements.
- E. Identify parts in accordance with MIL-STD-130F.

404 HANDLING, STORAGE, PACKAGING, PRESERVATION AND SHIPPING

- A. Unless otherwise specified, preservation, packaging, handling and shipping of items shall be in accordance with best commercial practices to prevent damage and ensure that original quality is maintained.
- B. The container shall be clearly marked: packing slip, certifications, and test reports, etc. enclosed.

500 CONTROL OF NONCONFORMING MATERIAL

The supplier, or sub tier suppliers are not authorized to disposition nonconforming materials as "repair" or "accept as is". For this purpose, material shall be defined as all material and components of the supplier and sub tier supplier products that are under SET design control. Any nonconforming materials, components or parts shall be segregated and withheld from shipment to SET unless negotiated in advance. SET reserves the right to return nonconforming material to the supplier at supplier's expense. When authorized to ship nonconforming material, components or parts, the supplier shall insure that the nonconforming items are identified (e.g. tagged) and specifically referenced as being nonconforming on certification statements. Materials or parts rejected by SET shall not be returned to SET without appropriate corrective action having been taken and then only with reference being made to the discrepancy report on the certification statement.

501 MATERIAL REVIEW AUTHORITY

The supplier is delegated material review authority for all article characteristics contained in supplier drawings that are not specified requirements of the SET drawings or purchase order and do not have a direct effect on such specified requirements. If the supplier is uncertain as to the effect on specified requirements, the concurrence of the SET Quality Department shall be obtained. This authority does not extend to the use of Material Review Board (MRB) for the purpose of changing engineering criteria, which can only be accomplished by drawing change. This delegation is contingent on SET's approval of the supplier's capability to meet the intent of Mil-Std-1520 and is subject to review at any time by SET. Material Review records, reports, documentation and qualification of personnel will be made available to the SET Quality Representative upon request. This delegation of material review authority can be rescinded at any time by written notification from SET.

502 PRODUCT FAILURE FEEDBACK

The supplier shall have a system for rapid feedback to SET of information concerning product failure of items covered by this purchase order, which occur during any phase of qualification and/or acceptance testing. This feedback system shall include, as a minimum, the following:

- A. FAX or email notification to SET Quality Department within 24 hours after occurrence of failure.
- B. An outline of the failure investigation to be conducted within five (5) working days of the failure.
- C. A failure analysis report which will completely describe the specific cause, the analysis method and the action taken to eliminate the cause within 30 days of the failure.

SET, with its customer, reserves the right to participate in any or all of the failure analysis investigation

600 CONTROL OF NONDESTRUCTIVE TESTING (NDT)

Items requiring NDT shall be submitted, complete with drawing or document establishing NDT requirement, to a laboratory acceptable to SET Quality. Test results shall be reported in writing to the SET Quality, identifying the laboratory and the certified technician who performed and/or evaluated the tests, signed by a responsible laboratory representative. An adequate method of identifying and cross-referencing each report and item must be provided. When parts are serialized, serial numbers must appear on the report.

601 NDT CERTIFICATION PROGRAM MIL-STD-410

Personnel performing NDT must be certified in accordance with the requirements of MIL-STD-410 Nondestructive Testing Personnel Qualification and Certification. A copy of each Qualification and Certification record is to be submitted.

700 CONTROL OF LIMITED SHELF LIFE MATERIALS

- A. Cured elastomeric items that exceed the cure date by more than 30% of the specified shelf life shall not be furnished.
- B. Non-elastomeric materials exceeding 25% of the specified shelf life shall not be furnished unless written approval from SET Quality is obtained.

701 IDENTIFICATION OF SHELF LIFE MATERIALS

Seller shall identify each item, package or container, with the cure date of manufacture date, expiration date and special storage or handling conditions, in addition to the normal identification of name, part or code number, specification number, type, size, and quantity. This identification, including special storage and handling conditions shall be recorded on the certification and signed by an authorized representative of the seller.

800 STATEMENT OF WORK

Articles defined in this purchase order are subject to additional requirements per a statement of work, which must be met to achieve compliance to contract requirements. Articles will not be accepted by SET if supplier fails to comply with the requirements of the statement of work.

801 USE OF SET APPROVED SUPPLIERS

The supplier is required to use SET/Government approved suppliers for performance of all special processes/NDT. The use of SET/Government suggested/approved suppliers does not relieve the supplier of the responsibility for product/service quality.

802 SPECIFICATION/DOCUMENT REVISIONS

Specifications referenced shall be of the revision/issue in effect at contract award unless otherwise specified in the contract/purchase order.

803 DPAS RATING

Purchase orders having a government priority rating shall be identified and scheduled in accordance with the Defense Priorities and Allocation System (DPAS).

900 QUALITY RECORDS

Quality records, including raw material certifications, work instructions, inspection and test data shall be retained at the supplier facility for a minimum of seven (7) years after shipment. These records shall be made available for review upon request. All documentation, including signatures, dates and stamps, must be legible. Documents requiring corrections shall comply with the following requirements:

1. Each error must be diagonally lined through once.
2. The correct information must be entered near the error.
3. Each entry must be initialed/ stamped and dated.
4. Use of correction tape/fluid is prohibited.

901 INSPECTIONS AND TEST SUBMITTAL

The supplier is required to ship one (1) copy of the following data with each item shipped:

- A. Inspection and test data
- B. Objective evidence of 100% inspection.
- C. Objective evidence of statistical process control.
- D. Test report

Inspection/Test Reports must include the requirements of Clause 904.

902 RECORDS

The supplier shall maintain records that summarize the work or service performed. Records shall include name of supplier, date of manufacture, and other pertinent information.

903 DOCUMENTATION ACCEPTANCE (Drop Shipment)

Parts/Data ordered under this purchase order are to be drop shipped to a destination other than SET. Final acceptance is contingent on the submittal and approval of the Quality data required by this purchase order at SET.

904 CERTIFICATION OF COMPLIANCE

Manufacturers, dealers, distributors, and sub-contractors shall certify that all parts, materials, and services meet SET and other referenced design, quality, and specification requirements.

Each shipment made against this purchase order must be accompanied, at time of receipt, by a minimum of one (1) copy of the certifications, inspection data, or test data satisfying all imposed Quality Assurance clauses with the signature and title of an authorized quality assurance official. Certifications, inspection data, or test data must include, where applicable:

SET's part/drawing number and drawing revision

Special process specification and revision as referenced on the drawing, purchase order or statement of work

Material traceability (serial number, or lot/batch/heat number)

905 CERTIFICATION OF MATERIAL

Each shipment must be accompanied by one (1) legible copy of a certification meeting the applicable requirements of Clause 904 stating that materials used on this order meet all specifications and drawing requirements, and that physical and/or chemical test reports or manufacturer's certification of material used are available at your facility.

906 CERTIFICATION OF COMPLIANCE

Each shipment must be accompanied by one legible copy of a certificate meeting the applicable requirements of Clause 904 that states that the items supplied were made from parts or material furnished by SET.

907 PROCESS CERTIFICATION

Each shipment must be accompanied by one (1) legible copy of a certification meeting the applicable requirements of Clause 904 that is signed by a responsible representative of the supplier performing the process. When applicable, the supplier is to maintain and have available for examination, records reflecting certification of personnel, equipment and process.

908 CHEMICAL/PHYSICAL TEST

Each shipment must be accompanied by one (1) legible copy of test reports, identifiable with purchase order number, the specification including revision, material heat, batch and/or lot number. Report must contain:

A. Original Mill Certification

B. Chemical/Physical Analysis

C. Typical Test Results

Reports must contain the signature and title of a responsible representative of the organization performing the test.

909 CERTIFICATION OF MANUFACTURER

The supplier (distributor) shall provide the manufacturer's name and the purchase order number under which the distributor acquired the material.

910 CERTIFICATION OF CALIBRATION

Each item shall be accompanied by a signed certification of calibration stating that the item(s) have been calibrated and are traceable to nationally recognized standards.

- A. The certification shall reference the National Institute of Standards and Technology (NIST) test number for the calibration standard(s) used, where applicable.
- B. The certification shall reference the NIST test number and accuracy of the calibration standard (s) used, where applicable, including as-found and as-delivered data for the equipment being calibrated.

911 MATERIAL SAFETY DATA SHEET

The supplier is to supply one (1) copy of the MSDS document.

912 ACCEPTANCE TEST PROCEDURES

The supplier shall prepare separate detailed test procedures, encompassing tests required for acceptance. Each item or assembly that requires acceptance testing, shall be covered by an Acceptance Test Procedure. Acceptance Test Procedures require SET approval prior to the delivery of the first unit of hardware. Subsequent changes are subject to SET's approval prior to incorporation.

913 NONDESTRUCTIVE TESTING (NDT) CERTIFICATION

Each shipment must be accompanied by one (1) legible copy of a certification signed by a responsible representative of the supplier performing the NDT. When applicable, the supplier is to maintain and have available for examination, records reflecting certification of personnel, equipment and processes.

914 CMM REPORTS

Coordinate Measuring Machine (CMM) reports shall be prepared and submitted with each part as required. CMM reports shall include the part number, serial number, date, drawing revision, and verification as a minimum.

915 SHOT PEENING

The items on this purchase order require shot peening and shall have almen test strips, identified to the applicable part number, accompany each shipment.