

## Procurement Quality Assurance Requirements (PQAR)

### 1. REQUIREMENTS

#### 1.1 Quality System

This document provides the minimum Quality System Requirements to externally provided processes, products and services to Superior Thread Rolling (STR). Suppliers must maintain a Quality Management System that conforms to **MIL-I-45208, AC7004, ISO 9001** or **AS9100**. This document also provides the contractual requirements being flowed to the suppliers from the customer contracts of STR.

Additional specific STR supplier Quality Requirements may appear on individual purchase orders. It is the responsibility of the suppliers to review this document as well as the purchase order to ensure all supplier Quality Requirements are complied with.

Notify STR of changes to processes, products, or services including changes of their external providers or location of manufacture and obtain STR's approval.

All or any part of the quality control system may be disapproved by STR when the system does not accomplish its objectives.

#### 1.2 Materials

The supplier is responsible for furnishing articles which meet all requirements of the contract or purchase order and produce conforming product in accordance with specified requirements.

Age control & life limited products shall be identified with the date of manufacture, test time or cycle at which useful life will be expended. (I.e. shelf life or cycle life). Products supplied to STR, shall have a minimum of 75% of its life expectancy remaining.

#### 1.3 Nonconforming Material

Should any inconsistency occur between these requirements and any other contractual document, the supplier is responsible for notifying STR Purchasing or Quality Assurance for resolution prior to commencing work.

STR's suppliers do not possess Material Review Board (MRB) authority. Therefore, should any nonconformance be detected, at any stage of processing, STR shall be immediately notified such that the condition can be evaluated and forwarded to STR's customer, as applicable.

The supplier shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for the identification, documentation, evaluation, segregation, disposition of nonconforming product, and for notification to the functions concerned. Supplier's may not disposition product "Use-As-Is" or "Rework" without the concession of STR.

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All non-conforming supplies shall be positively identified to prevent use, shipment and intermingling with conforming supplies. Holding areas, mutually agreeable to the supplier and the Government or STR representative, shall be provided by the supplier.

### 1.3.1 Deviation Requests

Requests for deviation from the requirements of the contract or purchase order shall be submitted, in writing, to the STR Director of Quality Assurance. Product accepted on deviation STR and its customer, shall be shipped with all certifications and shippers referencing the applicable deviation number.

Authorization to ship discrepant or substitute material must be obtained in writing by the supplier prior to shipment. Discrepant material shipped without approval will not be accepted.

### 1.3.2 Returned Material

STR will furnish the supplier with information detailing reasons for rejection, disposition of material and corrective action requirements.

### 1.3.3 Rework of Returned Material

The supplier's quality control procedures shall prevent rework methods which will degrade quality characteristics below specified levels.

## 1.4 Performance Expectations

Supplier Quality Metrics are reviewed quarterly to determine if suppliers are performing at the expected level. If a supplier fails to perform the following actions will take place:

1.4.1 A warning letter/email will be issued if a supplier receives three or more NCs in a single quarter for poor part quality.

1.4.2 A Supplier Corrective Action Request (SCAR) will be issued if a supplier receives five or more NCs in a single quarter for poor part quality, or if a supplier receives warning letters of a similar nature in two consecutive quarters.

1.4.3 A warning letter/email will be issued if a supplier receives below a 95% rating for On-Time Delivery (OTD) in two consecutive quarters.

1.4.4 A Supplier Corrective Action Request (SCAR) will be issued if a supplier receives below a 95% rating for On-Time Delivery in three consecutive quarters.

1.4.5 A recommendation for removal from STR's Approved Supplier list will be issued if a supplier is issued a SCAR for overall part quality in two consecutive quarters, or if a supplier receives below a 95% rating for OTD in six consecutive quarters.

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### 1.5 Right of Access

STR, their customer, and regulatory authorities to the applicable areas of facility and to applicable documented information, at any level of the supply chain.

### 1.6 Proprietary Information

All specifications, blueprints, and other material provided by STR, are considered proprietary information. Copies of STR's customer drawings, specifications and/or procedures supplied by STR shall not be reproduced except for internal use. Such proprietary items shall be controlled to preclude their use for other than contract work with STR and shall be returned upon completion of the contracted work.

### 1.7 Certifications

All certifications shall contain a signature and title of an authorized representative of the supplier.

The supplier shall provide a Certificate of Conformance (C of C) attesting that the process performed and related materials complies with drawings and/or specifications imposed by the purchase order or contract.

When required by the applicable specification, each shipment of product must be accompanied by legible and reproducible copies of all chemical and/or physical test reports, traceable to the product furnished. These reports must contain the information required by the applicable specifications. Additionally, the certifications shall clearly represent the inspection status of the product.

Certifications for shelf life controlled items shall include the date of manufacture and the expiration date of the product.

Where tests and/or inspections are performed to establish conformance to requirements, the actual results shall be reported with the certification.

### 1.8 Sampling Inspection

Sampling inspection procedures used by the supplier to determine quality conformance of supplies shall be as established in **ANSI/ASQC Z1.4 SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES** or specifications applicable to the product being supplied.

Regardless of specification allowances no nonconforming material shall be accepted at any time. The entire lot shall be rejected on the detection of one (1) nonconforming piece (c=0).

- Key characteristics
- Approved Supplier Lists
- Flight Safety/Critical

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### 2. DOCUMENTS, RECORDS AND CORRECTIVE ACTION

#### 2.1 Records

The supplier shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations, the number and type of deficiencies found, the quantities approved and rejected and the nature of corrective action taken. These records shall be available to, and copies of individual records furnished, upon request, to STR representatives. Records shall be kept for a period of fifteen (15) years after final payment for goods or services and properly destroyed (i.e. shred) documented information after retention period.

#### 2.2 Corrective Action

The supplier shall take prompt action to correct assignable conditions which have resulted or could result in non-conforming products or services being offered to STR for acceptance which do not conform to (1) the quality assurance provisions of the item specification, (2) inspections and tests required by the contract or purchase order, and (3) other inspections and tests required to substantiate product conformance. Documented corrective action statements shall include the nature of the defect, immediate corrective action, root cause and root cause correction taken to prevent recurrence.

#### 2.3 Drawings and Changes

The supplier's quality control system shall provide for procedures which will assure that the latest applicable drawing, specification and instructions required by the contract or purchase order, as well as authorized changes thereto, are used for fabrication, inspection and testing. STR will provide the supplier with the latest copy of the applicable drawing or customer specification. STR will not provide a copy of an industry standard specification (i.e.: AMS, MS, AS, etc.). These are the responsibility of the supplier.

### 3. INSPECTION, MEASURING AND TEST EQUIPMENT

The supplier shall provide and maintain sufficient gauges and other measuring and testing devices which are of sufficient accuracy to ensure product compliance, these devices shall be calibrated at established intervals against certified standards which have known valid relationships to national standards. If production tooling, such as jigs, fixtures, templates, and/or patterns are used as a media of inspection, such devices shall also be of proven accuracy at established intervals. Calibration of inspection equipment shall be in accordance with ANSI (NCSL) Z540-1 and/or ISO 10012. When required, the supplier's measuring and testing equipment shall be made available for use by the Government or STR representative to determine conformance of product with contract or purchase order requirements. In addition, if conditions warrant, the supplier's personnel shall be made available for operation of such devices and for verification of their accuracy and condition.

### 4. PROCESS CONTROLS

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The supplier shall provide for documented process controls when required by applicable Federal, Military, STR or other specifications. The supplier shall assure that special manufacturing processes, including required inspections and tests conform to requirements, including Government, STR customer or STR approval where applicable.

### 5. SOURCE SURVEILLANCE

STR and its customers, including regulatory agencies, reserve the right to conduct inspection and/or surveillance of the supplier system, procedures, facilities and products. The government has the right to inspect any or all of the work included in this order at the supplier's plant.

### 6. GOVERNMENT/STR PROPERTY

When material is furnished by the Government or STR the supplier's procedures shall include as a minimum the following:

- Examination upon receipt, consistent with practicability, to detect damage in transit.
- Inspection for completeness and proper type.
- Periodic inspection and precautions to assure adequate storage conditions and to guard against damage from handling and deterioration during storage.
- Functional testing, either prior to or after installation, or both, as required by contract to determine satisfactory operation.
- Identification and protection from improper use or disposition.
- Verification of quality.
- Damaged Government/STR Property. The supplier shall report to the Government or STR representative any property found damaged, malfunction or otherwise unsuitable for use. In the event of damage or malfunction during or after installation, the supplier shall determine and record probable cause and necessity for withholding material from use.

### 7. COUNTERFEIT PREVENTION

The supplier must prevent the use of counterfeit parts and entry into the supply chain and should be capable of providing full supply chain traceability for the products being purchased, including names and addresses of prior sources (if any). Both buyer and seller should maintain records containing date and/or lot codes, and any serialization associated with the purchase order and invoice.

### 8. CHEMICAL AND/OR PHYSICAL TEST REPORTS

### 9. PREPARATION FOR SHIPMENT

The supplier's quality control system shall assure that the quality of supplies is protected, preserved and packaged during shipment in accordance with best commercial practice unless otherwise specified on the purchase order or contract. These practices shall ensure no degradation of the quality of product.

### 10. FOREIGN OBJECT DAMAGE/FOREIGN OBJECT DEBRIS

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The supplier shall establish and maintain a (FOD) Prevention Program, and shall perform due diligence to prevent, detect and remove foreign objects. The (FOD) program shall be in accordance with ***AS9146 Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations***.

### 11. ADDITIONAL QUALITY ASSURANCE PROVISIONS

The following requirements form a part of the purchase order when specifically referenced.

#### 11.1 SOURCE INSPECTION

The item specified on the face of this purchase order require inspection by STR Quality Assurance representative(s) prior to shipment of supplies or performance of tests at supplier's facility. Notify STR purchasing department seventy-two (72) hours in advance to permit schedule of source inspection.

The selection of material for source inspection may be random sampling, or 100% of the lot, at STR representative's discretion. The supplier shall, in accordance with this provision, provide all necessary facilities, equipment, documentation and personnel required to perform this inspection at no additional cost to STR.

Records of processing, process control, conformance verification, and other evidence of quality system operation may be required.

Objective evidence of STR source inspection must accompany each shipment of material. When the requirements of this clause are to be waived, it shall be at STR's discretion and written authorization of such waiver must accompany each shipment. Acceptance of material shall be accomplished at STR's facility unless otherwise specified in writing. Evidence of inspection at the supplier's facility does not constitute acceptance, and transfer of ownership of the material shall be as specified by the purchase order.

#### 11.2 GOVERNMENT SOURCE INSPECTION

Government source inspection is required prior to shipment of supplies or performance of test at supplier's facility. Upon receipt of this order, the supplier shall promptly notify the Government Representative who normally services his plant so that appropriate planning for Government inspection can be accomplished prior to shipment. In the event the representative or office cannot be located, contact STR purchasing agent. Evidence of Government Inspection must be indicated on the shipping documents. The selection of material for source inspection may be random sampling, or 100% of the lot, at the Government Representative's discretion.

The supplier shall, in accordance with this provision, provide all necessary facilities, equipment, documentation and personnel required to perform this inspection at no additional cost to STR. Records of processing, process control, conformance verification, and other evidence of quality system operation may be required.

When the requirements of this clause are to be waived, it shall be at STR's discretion and written authorization of such waiver must accompany each shipment.



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Acceptance of material shall be accomplished at STR's facility unless otherwise specified in writing. Evidence of inspection at the supplier's facility does not constitute acceptance, and transfer of ownership of the material shall be as specified by the purchase order.

Government inspection shall not constitute STR acceptance; nor shall it in any way relieve the supplier of its responsibility to furnish an acceptable end item.

### 11.3 DIMENSIONAL DATA SHEET

Each lot of material must be inspected by the supplier and results of inspection recorded on a dimensional data sheet. One (1) copy of the data sheet which records objective evidence of acceptance must accompany each lot. As a minimum, lot size, sample size and results (accept or reject) must be recorded. Dimensional Data Sheet must reflect STR purchasing order number, specification number, drawing number and revision, lot number or any other identifying number, i.e. heat, batch, serial numbers, etc. For traceability. The form used for documentation of data shall be optional.

### 11.4 SPECIAL PROCESSES OR PROCESSING APPROVAL

Special processes or processing, which may be, but not limited to; welding, brazing, heat treating, metal forming, surface preparation, film or plating applications, non-destructive testing, approval of processing equipment, procedures or personnel, must be approved prior to the initiation of any task required in the completion of this purchase order.

The supplier is responsible for obtaining such approval for his and all his supplier's processes as required by the purchase order. The certification of conformance which must accompany each shipment of the material required by this purchase order must specify the processes, the specification and revision to which they conform, the name of the agency which performed them (if other than the supplier) and contain the name and title of the authorized representative signing the form. When items provided or treated by the supplier are serialized, the serial numbers shall appear on the certification.

### 11.5 PLANNING

No changes to processes, materials or procedures are allowed without written permission from STR. A copy of the approved process, Material or Procedure shall be kept on file at the supplier and shall be subject to review upon request. Any changes shall be submitted to STR for review and approval prior to implementation.

### 11.6 FIRST ARTICLE REQUIRED

First Article Inspection Report required. Unless otherwise indicated, a copy of the report shall be submitted to STR with the initial shipment. The report should also be maintained on file by the supplier and furnished to STR when requested.

### 11.7 FLOW DOWN REQUIREMENTS

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The supplier is required to flow down to external providers applicable requirements including customer requirements in their purchasing documents including key characteristics, where required. The supplier will require that appropriate controls are in place for their direct and sub-tier external providers to ensure that requirements are met.

### 11.8 AWARENESS

The supplier shall ensure that persons are aware of their contribution to product and service conformity, product safety, and the importance of ethical behavior.

### 11.9 REGULATORY REQUIREMENTS

The supplier shall comply with all applicable regulatory requirements including but not limited to:

#### ***40 CFR Part 82 "Ozone Depleting Substances" Class I & II***

All local and international laws regarding "Human Rights Violations" including basic working conditions, human trafficking, and slavery

#### ***"Conflict Mineral Reporting" per 2010 Dodd-Frank Act***

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