

Quality Assurance Procurement Requirements – QAPR’s
Revision: K, Dated: 5/18/18

QAPR # 001 - Shelf life and temperature sensitive materials:

Seller shall identify all materials and articles that have definite characteristics of quality degradation with age or environment. Such items will be individually labeled with the expiration date. If environment is a factor, environmental limitations shall be so noted on the product. Items received by MISTRAS must indicate a minimum of 70 % of the rated shelf life remaining, or the product will be returned to the seller.

QAPR # 002 – MSDS Sheets:

Materials noted on this purchase order must be supplied with OSHA’s hazard communication standard 29CFR1910-1200. Materials not compliant will be returned.

QAPR # 003 - Certificate of Conformance:

Each shipment of materials or parts so designated shall be accompanied by a legible Certificate of Conformance bearing the signature of the responsible representative stating that the product meets the requirements of specifications noted on the purchase order.

QAPR # 004 - Material Test Reports:

Material test reports shall contain the specification(s), heat, batch or lot numbers. The report shall contain actual numerical values for the characteristic(s) tested.

QAPR # 005 – Subcontracting:

No use of subcontractors is allowed without prior written approval from MISTRAS.

QAPR # 006 - Report of discrepancy:

Any deviation from drawing or specification will be documented by the supplier and reported to MISTRAS.

QAPR # 007 - Certificate of Calibration:

The requirements of 100-QC-008.0, Supplier Quality Requirements apply.

Required specification(s), services, tolerances, and frequencies are listed in this document

The certificate of calibration, in accordance with ANSI /NCSL Z540-1 shall include the following:

- The name and address of the organization performing the calibration.
- The part name, manufacturer, model number and serial number
- Condition of item “as received”
- Date of Calibration
- Date current calibration expires
- Specification(s) or procedure(s) calibrated in accordance with.
- Any standards used and a statement describing standard traceability.
- Any adjustments or repairs required.
- The name and signature of the person performing the calibration.
- Actual numerical values and deviations for all tests performed.

QAPR # 008 – Magnetic Particle Yokes must meet the requirements of ASTM E1444 and T9074-AS-GIB-010/271

QAPR # 009 - Dry Visible Magnetic Particles will be certified to AMS 3040

QAPR # 010 - Magnetic Particle inspection vehicle certified to AMS 2641

QAPR # 011 - Wet Visible Magnetic particles will be certified to AMS 3042

QAPR # 012 - Wet Fluorescent Magnetic Particles will be certified to AMS 3044

QAPR # 013 - Wet Fluorescent Magnetic Particles, Aerosol packaged, Oil based particles will be certified to AMS 3046

QAPR # 014 - Wet Visible Magnetic Particles, Aerosol packaged, Oil based particles will be certified to AMS 3043

QAPR # 015 - All Penetrant materials will be certified to AMS 2644 and/or MIL-I-25135

QAPR # 016 - Radiographic penetrameters will be certified to one of the following specifications:
T9074-AS-GIB-010/271
ASTM E1742 (*Previously MIL-STD-453*)
ASTM E1025

QAPR # 017 - Radiographic film will be classified in accordance with ASTM E1815

QAPR # 018 - Radiographic survey instruments must be in compliance with 10CFR part 34, paragraph 34.25. The as received value shall be in the calibration data.

QAPR # 019 - Film badges must be processed by a member of the National Voluntary Laboratory Accreditation program.

QAPR # 020 - Pocket dosimeters must comply with 10CFR part 34. Paragraph 34.47

QAPR # 021 – All eddy current reference standard certifications must reflect the following information:

- Reference standard part and serial number
- Material alloy and/or temper
- The surface finish
- Dimensional data
- Traceability to NIST
- The signature of the individual certifying the data.
- The date of the certification.

QAPR #022 – All materials and services received under this purchase order are subject upon arrival to MISTRAS Receiving Inspection with certification of conformance required.

QAPR #023 – Acceptance of this Purchase Order authorizes MISTRAS Inspection full right of entry. Such right of entry shall extend to our customers or their representatives and regulatory Agencies to any place necessary to determine and verify the quality of contracted work, records and material, and further, to verify the contracted product conforms to the specified requirements. Sub-contracting cannot be done without prior written approval of MISTRAS Quality Assurance.

QAPR #024 – Boeing approval or certification required.

QAPR #025 – Ultrasonic Transducers require the following:

1. Shall be serialize and identified with frequency and Part Number
2. Certification shall be per ASTM E1065, data on Center Frequency response, Bandwidth, Focal length, and Beam Profile (note: Beam Profile is applicable to Focused beam search units).
3. Paint Brush or Array Transducer shall have a beam uniformity of 10%
4. Addition requirements will be noted on the purchase order as required.

Note: Failure to satisfy these requirements will result in return of transducers and non-payment of all charges including freight both ways.

QAPR #026 – Three-point calibration requirement. All equipment that require calibration, shall have at least 3 reference points that are above, below and ‘in the middle’ of Instruments operating range depending on the instrument in use. The calibration data issued shall clearly contain as received or as found data as well as calibrated data.

QAPR#027 – Equipment requiring calibration shall comply with Procurement of Equipment and Services procedure(s) 100 / 591-QC-008

P.O. Number: _____ *The requirements of 100-QC-008.0, Supplier Quality Requirements apply.
All certification documents must include reference to the purchase order number listed above

- List your Mistras Approved Quality Manual, revision: _____ dated: _____ on the certification report.
- 10 CFR Part 21 is imposed

The supplier shall provide certification that indicates compliance with the latest revision of the following (as noted)

1.0 Liquid Penetrant Material

- ASME Sec. V Article 6
- ASTM E165
- ASTM E1417
- NAVSEA T9074ASGIB010/271
- MIL-SRD-132
- Other: _____

Sulfur, halogen test results, as applicable. Statement confirming no mercury contamination. Statement confirming no chlorofluorocarbons.

2.0 Magnetic Particle Materials

- ASME Sec. V Article 7
- ASTM E709
- NAVSEA T9074ASGIB010/271
- MIL-STD-2132
- MIL-STD-949A
- Other: _____

Statement confirming no mercury contamination. Statement confirming no chlorofluorocarbons.

3.0 Ultrasonic Couplant

- ASME Sec. V Article 23
- NAVSHIPS 250-1500
- Other: _____

Sulfur and Halogen test results as applicable

4.0 Ultrasonic Transducers

- ASTM E1065

Other: _____

Type, Frequency, Size, and Serial Number must be clearly and permanently marked on the casing.

5.0 Radiographic Penetrators (IQI)

- ASME Sec. V Article 2
- NAVSEA T9074ASGIB010/271
- MIL-STD-453
- API 1104
- Other: _____

6.0 Reference Standards

- ASME Sec. V Article 4
- ASTM E797
- AMS-STD-2154
- AWS D1.1
- ASTM E164
- Other: _____
- Tolerances: _____

7.0 Calibration Services

- Compliant to ANSI/NCSS Z540 and/or ISO 17025
- Specify "As-Found" condition
- Calibrate to manufacturer's specification using standards traceable to NIST

- See page 2 for Technical Calibration Requirements
- Other: _____

TECHNICAL CALIBRATION REQUIREMENTS

Equipment/Material	Frequency	# of Points	Range (Min / Max)	Tolerance
Black Light Intensity	6 Months	3	960 – 4650 mw/cm ²	+/- 5%
White Light Intensity	6 Months	3	1 – 190 Fc	+/- 5%
Water Thermometer	6 Months	5	32° - 230°F	+/- 5%
Water Pressure Gauge	6 Months	5	10 – 90 psi	+/- 3/2/3%
Dryer (Controller)	Quarterly	3	100 - 200°F	+/- 15°
(Monitor)	Quarterly	3	100 - 200°F	+/- 10°
(Internal)	Quarterly	3	100 - 200°F	+/- 10°
Air Temp / Humidity	Annually	3	32°- 115°F & 10-90% RH	+/- 3%
Timer	Annually	3	30 Sec. to 60 minutes	+/- 3%
Calipers	Annually	12	0 – 6"	.002"
Surface Thermometer	Annually	5	40° - 900° F	5%
Gauss Meter	6 Months	3	-3, 0, +3	+/- .5 Gauss
Hall Effect Gauss	6 Months	3	.5, 50, 100	+/- 2%
Ammeter	6 Months	3	300 – 4000	Greater of +10% or 50 amps
Shot Timer	6 Months	N/A	.5 +/- 0.1	+/- .1 Sec.
Gould Bass DLM 1000 / 1500	6 Months	3	25000-150000	+/- 5%
Quick Break	6 Months	On/Off	Pass/Fail	N/A

Additional Requirements: At least one point between the range of use

Liquid Penetrant System Dryer Certificate Requirements: The calibration certificate at a minimum shall indicate the set point, the minimum and maximum temperature reached during a cycle. In addition the variation shall be recorded from the set point and shall meet the required tolerance. This is a calibration of temperature variation with time. The dryer temperature shall not vary more than +/- 15° F (8.3° C) from the set value. The minimum test period used for the calibration shall be representative of the duration of a drying cycle

Additional Requirements: _____

Completed By: (Sign)

Date



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Revision: K Date: May 18th, 2018

INTERNAL INSTRUCTIONS FOR MISTRAS BUYERS:

When ordering inspection media, equipment calibration, standards etc, we must list the appropriate specification, where applicable. A list of such specifications should be provided.

When ordering, you must be specific as to what you are ordering: For instance, do not order red mag powder. Order: Magnaflux 8A Red Powder in accordance with AMS 3040 and ASTM E1444-01. Specify the amount ordered and how packaged, if applicable; for example, 25 pounds in 5 each five pound containers, or, 1 each 25 pound bucket.