SECTION II.11 – CONTROL OF INSPECTION, MEASURING, & TEST EQUIPMENT

PURPOSE: To establish and maintain the documented procedures used to control, calibrate, and maintain inspection, measuring, and test equipment.

SCOPE: This applies to all suppliers of purchased production intent parts to HTNA.

EXPLANATION:
The supplier shall develop procedures for the proper use and validation of inspection equipment.

SUPPLIER RESPONSIBILITIES:

1. General:

HTNA Supplier Quality System Requirements reflect TS 16949 Section 7.6 Control of Monitoring and Measurement Devices.

The supplier shall establish and maintain documented procedures to control, calibrate, and maintain inspection, measuring, and test equipment (including test software) used by the supplier to demonstrate the conformance of product to the specified requirements. Inspection, measuring and test equipment shall be used in a manner which ensures that the measurement uncertainty is known and is consistent with the required measurement capability.

Where test software or comparative references such as test hardware are used as suitable forms of inspection, they shall be checked to prove that they are capable of verifying the acceptability of product, prior to release for use during production, installation, or servicing, and shall be rechecked at prescribed intervals. The supplier shall establish the extent and frequency of such checks and shall maintain records as evidence of control.

Where the availability of technical data pertaining to the inspection, measuring, and test equipment is a specified requirement, such data shall be made available, when required by HTNA, for verification that the inspection, measuring, and test equipment is functionally adequate.

Note: The term “measuring equipment” includes measurement devices.

2. Control Procedure:

HTNA Supplier Quality System Requirements reflect TS 16949 Section 7.6 Control of Monitoring and Measurement Devices.

The supplier shall:

A. Determine the measurements to be made and the accuracy required, and select the appropriate inspection, measuring and test equipment that is capable of the necessary accuracy and precision.

B. Identify all inspection, measuring and test equipment that can affect product quality, and calibrate and adjust them at prescribed intervals, or prior to use, against certified equipment having a known valid
relationship to internationally or nationally recognized standards. Where no such standards exist, the basis used for calibration shall be documented.

C. Define the process employed for the calibration of inspection, measuring and test equipment, including details of equipment type, unique identification, location, frequency of checks, check method, acceptance criteria and the action to be taken when results are unsatisfactory.

D. Identify inspection, measuring and test equipment with a suitable indicator or approved identification record to show the calibration status.

E. Maintain calibration records for inspection, measuring and test equipment.

F. Assess and document the validity of previous inspection and test results when inspection, measuring or test equipment is found to be out of calibration.

G. Ensure that the environmental conditions are suitable for the calibrations, inspections, measurements and tests being carried out.

H. Ensure that the handling, preservation and storage of inspection, measuring and test equipment is such that the accuracy and fitness for use is maintained.

I. Safeguard inspection, measuring and test facilities, including both test hardware and test software, from adjustments which would invalidate the calibration setting.

3. Inspection, Measuring, and Test Equipment Records:

HTNA Supplier Quality System Requirements reflect TS 16949 Section 7.6.2 Calibration/Verification Records.

Records of the calibration / verification activity on all gages, measuring, and test equipment, including employee-owned gages, shall include:

- Revisions following engineering changes (if appropriate).
- Any out of specification reading as received for calibration.
- Statement of conformance to specification after calibration.
- Notification to customer if suspect material has been shipped.

4. Measuring System Analysis:

HTNA Supplier Quality System Requirements reflect TS 16949 Section 7.6.1 Measuring System Analysis.

Appropriate statistical studies shall be conducted to analyze the variation present in the results of each type of measuring and test equipment system. This requirement shall apply to measurement systems referenced in the Process Control Plan (See SQM Section II.11.1, Measurement System Analysis). The analytical methods and acceptance criteria used should conform to those in the Measurement Systems Analysis reference manual (i.e. - bias, linearity, stability, repeatability, and reproducibility studies). Other analytical methods and acceptance criteria may be used if approved by HTNA.