Calibration and Certification Requirements

Federal Aviation Administration

Certification Procedures for Products and Parts

Part 21 § 21.303(h)(5)C: Tool and gauge control. "This system should provide control over periodic inspection and calibration of inspection tools, gauges, testing equipment, production jigs, fixtures, templates, etc. which are depended upon as media for inspection product acceptance. **The description of the means utilized for tool and gauge control should include a schedule of periodic or usage inspection and calibration intervals to ensure that tools, gauges, etc. are inspected, adjusted, repaired, and/or replaced prior to their becoming inaccurate.** The inspection system description should also describe the procedures for implementing the tool and gauge control schedules."

Quality Control Program Requirements

FAA-STD-013d: 3.3 Measuring and test equipment. **"The contractor shall establish a calibration system and maintain all measuring and test equipment in accordance with MIL-STD-45662."**

Military Standard 45662 - Calibration Systems Requirements

5.1 Calibration system description. "The contractor shall provide and maintain a written description of the calibration system covering M&TE and measurement standards."

5.5 Calibration procedures. "Procedures shall be available and utilized for the calibration of all M&TE and measurement standards**. As a minimum, calibration procedures shall specify the measurement standards and equipment to be used (manufacturer and model and generic description), the required parameter, range, and of the measurement standard and the acceptable tolerance of each instrument characteristic being calibrated.** **Calibration** procedures shall provide instructions to enable calibration personnel to adequately calibrate each **instrument characteristic or measurement parameter of concern."**

5.8 Calibration sources. "M&TE and measurement standards shall be calibrated by the contractor or another calibration facility utilizing measurement standards whose calibration is traceable. **All measurement standards used in the calibration system shall be supported by certificates, reports, or data sheets attesting to the description or identification of the item; the calibration source; date of calibration; calibration assigned value; statement of uncertainty and environmental or other conditions under which the calibration results were obtained."**

American National Standard for Calibration

5.3.3 ANSI/NCSL Z540.3 – ISO 17025 Measurement uncertainty and traceability. "The uncertainty and traceability of all measurement results associated with processes included in the calibration system shall meet the requirements of their applications. Measurement uncertainty components which have an influence on such measurement results shall be included in the estimates of measurement uncertainty."