




Specific Accreditation Criteria

Manufactured Goods ISO/IEC 17025 Annex

Acoustic and vibration performance testing

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Acoustic and vibration performance testing

This document provides interpretative criteria and recommendations for the application of ISO/IEC 17025 for both applicant and accredited facilities conducting acoustic and vibration performance testing.

Applicant and accredited facilities must also comply with ISO/IEC 17025 and the NATA ISO/IEC 17025 Standard Application Document (SAD).

The clause numbers in this document follow those of ISO/IEC 17025 but since not all clauses require interpretation the numbering may not be consecutive.

5.3 Accommodation and environment conditions

Anechoic and reverberant rooms

Such rooms must be evaluated in terms of the requirements of relevant test procedures. Reports of evaluations must be available and must include a description of room size, volume and construction, ambient noise and vibration levels, environmental conditions, microphone placements and measurement techniques and must also provide a statement of uncertainty of measurement and the frequency range over which measurements can be performed satisfactorily.

Note: Refer to ISO 3741 and ISO 3745 for additional information.

Field sites

Sites used for acoustic performance tests will be inspected and must comply with the requirements of the test procedures. Sites used for measurement of sound and vibration levels must be adequately described, preferably with an attached map of the site location. Measurement sites must be identified, the period of measurement reported and temperature, humidity and weather conditions recorded.

5.6 Measurement traceability

Acoustic calibrators

To be accredited for field acoustics measurements, a suitably calibrated sound calibrator or pistonphone must be available to perform checks on a sound level meter before and after a set of field measurements.

Microphones

Microphones should be stored in a dry ambient environment (e.g. in boxes with sachets of drying agents or in a desiccator).

Pistonphones

When using a pistonphone to check a sound level meter's acoustic sensitivity, ambient air pressure must be measured with a calibrated barometer.

Vibration calibrators

To be accredited for field vibration measurements, a suitably calibrated vibration calibrator must be available to perform checks on a vibration transducer set before and after a field measurement.

Accelerometers

Accelerometers are to be calibrated at a minimum of 2 frequencies and 2 levels that cover the range of use (as far as practical). Triaxial accelerometers must be calibrated for each axis.

References

This section lists publications referenced in this document. The year of publication is not included as it is expected that only current versions of the references shall be used.

ISO 3741 *Acoustics -- Determination of sound power levels of noise sources using sound pressure -- Precision methods for reverberation rooms.*

ISO 3745 *Acoustics -- Determination of sound power levels of noise sources using sound pressure -- Precision methods for anechoic and hemi-anechoic rooms*

Amendment Table

The following amendments were made to the Annex.

AMENDMENT TABLE	
Section	Amendment
New Document	This document represents an extract from the former PAT Appendix A – Acoustic and vibration testing as circulated for Public Comment in December 2016. The technical content is unchanged.