




Specific Accreditation Criteria

ISO/IEC 17025 Application Document

Infrastructure and Asset Integrity - Annex

Acoustic and vibration monitoring and analysis

July 2018



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Acoustic and vibration monitoring and analysis

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

Applicant and accredited facilities must comply with all relevant documents in the NATA Accreditation Criteria (NAC) package for Infrastructure and Asset Integrity (refer to NATA Procedures for Accreditation).

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.

6 Resource requirements

6.2 Personnel

6.2.2

Acoustic measurements in the field

Field testing staff must have practical ability in the applicable measurements and assessment.

The staff should be prepared to demonstrate their competence in a field exercise during a NATA assessment.

Community noise assessment

Staff responsible for supervising field measurement of sound relating to a community noise assessment, as described by AS1055.1, shall be eligible for corporate membership of a society in a related field (e.g. Australian Acoustical Society, Institution of Engineers, Australia).

Alternatively, supervising staff shall hold an appropriate degree or diploma in a related area and have acceptable practical field experience with a good practical knowledge of instrumentation and understanding of community noise measurement and assessment.

In exceptional circumstances, persons without formal qualifications or eligibility of corporate membership of a society may be acceptable. The acceptability of supervision arrangements will be reviewed at NATA assessments.

6.2.5

Acoustic measurements in the field

Staff approved to authorise test results must ensure that field testing staff have received relevant training and provide adequate technical control over testing before allocating work to them.

6.4 Equipment

6.4.1

Acoustic calibrators

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.

Vibration calibrators

A suitably calibrated vibration calibrator must be available to perform checks on a vibration transducer set before and after a field measurement.

6.4.3

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.

6.4.6

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.

Standards

AS 1055.1	Acoustics - Description and measurement of environmental noise
ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories

NATA publications

NATA Accreditation Criteria (NAC) package for Infrastructure and Asset Integrity

Amendment Table

The table below provides a summary of changes made to the document with this issue.

Section or Clause	Amendment
Whole document	Clauses have been aligned with ISO/IEC 17025:2017. No new interpretative criteria or recommendations have been included other than editorial changes.