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Australian Standard®

Acoustics—Noise labelling of machinery and equipment

This Australian Standard was prepared by Committee AV/6, Acoustics, Machinery Noise. It was approved on behalf of the Council of Standards Australia on 26 April 1990 and published on 17 September 1990.

The following interests are represented on Committee AV/6:

Australian and New Zealand Environment Council
Australian Coal Association
Australian Compressed Air and Mining Equipment Institute
Australian Federation of Construction Contractors
Confederation of Australian Industry
Construction Equipment Importers and Manufacturers of Australia
Council of the City of Sydney
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PREFACE

This Standard was prepared by the Standards Australia Committee on Acoustics, Machinery Noise. It is identical with and has been reproduced from ISO 4871—1984, *Acoustics—Noise labelling of machinery and equipment*.

For the purpose of this Australian Standard, the ISO text should be modified as follows:

References: The references to International Standards should be replaced by references to Australian Standards.

Reference to International Standards		*Australian Standard*	
ISO		AS	
3740	Acoustics—Determination of sound power levels of noise sources—Guidelines for the use of basic standards and for the preparation of noise test codes	1217	Acoustics—Determination of sound power levels of noise sources Part 1: Guidelines for the use of basic Standards for the preparation of noise test codes
3741	Acoustics—Determination of sound power levels of noise sources—Precision methods for broad-band sources in reverberation rooms	1217.2	Part 2: Precision methods for broad-band sources in reverberation rooms
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0 Introduction

In order to cope with the problems of noise from machines and its disturbance of people, useful information on noise emission of machines is needed by users, authorities, planners, etc.

Legal or voluntary codes for noise reduction purposes make use of three principally different approaches. The first is to specify maximum immission (exposure) limits at the work place and for residential, industrial and traffic areas; the second is to specify the maximum emission (output) limits from machines; the third is to give information on the noise emission of a machine through a labelled value. There exists a need to coordinate at least the general procedures on a world-wide basis in order to avoid the development of technical barriers to trade.

The following conclusions have been reached:

a) Consumers, purchasers, authorities and manufacturers need a uniform system for characterizing the noise emission and for labelling the machinery or equipment with the acoustical characteristics of a product giving the following:

— information on the noise output from a product for the purpose of noise regulations, acoustical planning and comparison of different noise sources of the same kind or different kinds;

— uniform ways of presenting noise performance to prevent barriers to trade resulting from differences in measurement methods, limit values and designations of noise, thus providing a clear, universal guideline for the choice between noise characteristics of a product.

NOTE— Information on the noise output from a product in relation to the noise output from other similar products having the same performance, output or function, that is, a relative classification, which may facilitate the choice of noise performance in relation to other characteristics is difficult to establish and implies a knowledge of the level of the noise of a whole family of machines at a given time. Those levels also change with technical progress. Therefore, a relative classification is not dealt with in this International Standard, although provisions are given in the annex, so that the information required is provided for by the relevant labelling code.

b) The purpose of this International Standard is to establish requirements for the use of measured noise emission values for the purposes of noise labelling machines or equipment.

In order to avoid confusion between values for sound pressure level (which are highly dependent on the distance of measurement and on the environment) and values for sound power level determined under specified mounting and operating conditions, levels in terms of the emitted sound power are basically used for labelling purposes in this International Standard, because sound power levels are independent of the measurement distance used.

Use of sound power for labelling purposes permits comparison of noise emissions between machines or equipment of different types. Information as to the absolute noise emissions of equipment or machines facilitates the preparation of noise regulations and legislation.

c) It is the responsibility

— of other appropriate authorities or committees to decide which noise limits they consider acceptable;

— of ISO and IEC, on the basis of this International Standard, to establish their specific labelling documents for specific families of machines or equipment under their responsibility.

NOTES

1 Sound pressure levels at any specified position near the machine which depend essentially on the installation of the machine, its use, the environment, the directivity of noise radiation and the measurement distance, are excluded for the sake of a uniform method for labelling.

In special cases, for example where the operator's positions are well-defined, such measurements as described in documents related to the specific use of a machine (see ISO 6081) may also be of interest.

2 For assessment purposes, the value of the sound power level may be modified by corrective values for temporal or spectral characteristics. Since such corrections will generally be similar for a family of machines, corrections for assessment are not dealt with in this International Standard for the sake of simplicity.

1 Scope and field of application

This International Standard

— prescribes a manner in which the noise emission of machinery and equipment shall be expressed for labelling purposes;

— prescribes the minimum information to be given in a label attached to the machine or in commercial or technical documents supplied to consumers by the manufacturer.

This International Standard applies to machinery and equipment which is essentially stationary in nature. Traffic vehicles are excluded.